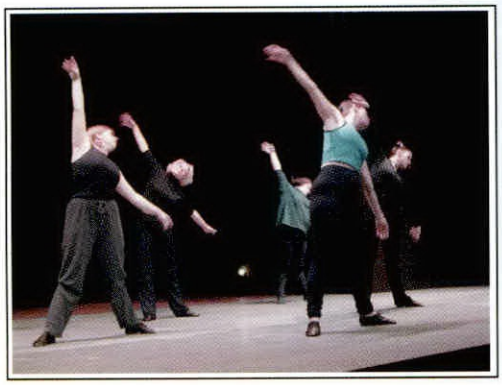
Clatsop Community College



2000 - 2001
Catalog

Statement of Mission and Objectives

The mission of Clatsop Community College is to provide high quality learning opportunities for individuals in Clatsop County and beyond, and to lead in meeting the changing needs of our community.

In order to fulfill this mission, the Board and College staff are committed to the following objectives:

Students: To provide a student-centered learning environment with faculty and staff who are accessible and supportive. To help students develop a sense of responsibility to self and society by providing guidance, counseling, and career planning that inspires student success and a commitment to lifelong learning. To maintain our open admission policy with equal educational access and opportunity, and to continue our support of the reciprocal tuition program as long as it serves community and student needs.

Educational Offerings: To provide lower division transfer courses that will enable students to transfer to Oregon State System of Higher Education institutions. To provide a variety of professional technical courses and programs that prepare individuals for entry level employment or occupational advancement, and meet the needs of business and industry. To provide developmental and remedial assistance for those who need to develop competencies in basic skills or who are pursuing a GED. To provide an extended learning program that responds to the cultural, social, recreational, and general self-improvement needs of district patrons.

Staff: To attract and retain the best qualified faculty and staff who are dedicated to our mission and goals. To provide a congenial, cooperative atmosphere, and a variety of employee development and wellness programs which promote employee job satisfaction, performance, and advancement. To maintain a firm commitment to affirmative action and equal opportunity.

The Community: To foster positive and productive relationships with community residents, local businesses, and public agencies in order to develop and improve College programs. To participate in the activities of community-based organizations. To encourage public input through advisory committees, follow-up studies, community surveys, and other appropriate means. To promote and maintain a commitment to the concept of the College as both cultural and educational center for the community.

Planning: To continuously review the educational and facilities needs of the College district through ongoing strategic planning. To continue student recruitment and long range planning processes that will enable us to achieve our goals and improve our services. To ensure the public's trust by effectively managing the human, financial, and physical resources of the College. To adapt our programs to educational and technological advancements.

Affirmative Action Policy

It is the policy of Clatsop Community College not to discriminate on the basis of race, color, religion, national origin, age, gender, sexual orientation, marital status, or disability in admission and access to, or treatment or employment in its programs or activities as required by Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990 and their implementing regulations. Questions, complaints or requests for a copy of the College's Discrimination or Harassment Grievance Procedure may be directed to Affirmative Action/EEO Officer or Human Resources Director.

The College reserves the right to change any provision or requirement at any time within the student's term of registration. The College further reserves the right to withdraw a student from a class, deny enrollment in a class, or demand full withdrawal of a student from all classes for cause, using due process.

To receive general information about the College, write or call:

Clatsop Community College
Admissions Office
1653 Jerome, Astoria, OR 97103
(503) 338-2411
FAX (503) 325-5738
admissions@clatsop.cc.or.us
www.clatsopcollege.com

Specific inquiries about the Affirmative Action Policy
should be directed to the:
Affirmative Action/EEO Officer or Human Resources Director

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Welcome to Clatsop Community College

"Welcome to one of the most people-centered colleges in the nation! At Clatsop Community College we are constantly striving to make you–our valued students and customers–feel at home. Our faculty demonstrate a truly caring approach toward their students. You will enjoy getting to know them as fascinating individuals as well as knowledgeable professionals in their fields.

Some of our outstanding students can tell you better than I about Clatsop Community College:

"Compared to other colleges I have attended, Clatsop Community College seems to value students more as individuals, recognizing the reason they provide education: the students. I would recommend Clatsop Community College to anyone interested in attaining a quality education in a learning environment rich with opportunity."
Dan Berger

"The atmosphere here at CCC is very nurturing and caring. I would like to thank all of the wonderful instructors, counselors, and the workers in every department and to tell them how much I appreciate their help and encouragement."
Suzanne Roberts

At Clatsop we provide many special services to students to help them be as successful as possible. Here are just a few:

- √ Financial aid resources and scholarships
- √ TRIO Programs (guidance and support services)
- √ Assessment and academic advising
- √ Counseling
- √ Tutoring
- √ Assistance with basic learning and study skills
- √ Cooperative work experience (earning while learning)
- √ Disabled student services

Since 1958 Clatsop Community College has demonstrated its commitment to active participation in the lives of its communities, providing a variety of educational opportunities and leadership in the business, social, and cultural life of the North Coast.

Clatsop Community College is accredited. Our graduates transfer successfully to colleges and universities or enter the job market with excellent preparation for the demands of a changing workforce. We provide over 350 different educational offerings to nearly 2500 students each term.

Our commitment is to continuing improvement in everything we do so that you--our students and community members--ultimately benefit."

– John Wubben, President

Clatsop Community College

Clatsop Community College is a public, two-year coeducational institution serving northwest Oregon and southwest Washington since 1958. It has grown to an enrollment of nearly 8000 students. Instruction and training in liberal arts and sciences, professional technical fields, extended learning, developmental education, and general education are offered.

Located at the mouth of the Columbia River in historic Astoria, the College enjoys the mild, if wet, climate that has helped make the Oregon coast famous for its lush, green beauty and rugged, undeveloped shoreline. Its high-quality, low-cost education serves a district that covers all of Clatsop County in Oregon and Pacific and Wahkiakum Counties in Washington.

At Clatsop you may:

- Earn a two-year degree.
- Take up to two full academic years of lower division instruction which can be transferred to a four-year college or university.
- Take courses that lead to occupational, social, and personal competence.
- Enroll in classes, workshops, and seminars which offer avocational as well as occupational benefits.

Accreditation

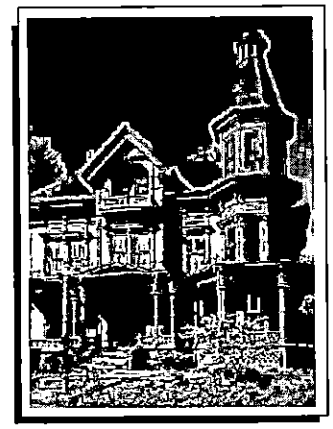
Clatsop Community College is accredited by the Northwest Association of Schools and Colleges. This accreditation assures Clatsop Community College students that their work will receive appropriate recognition from prospective employers and other colleges and institutions. You may receive information regarding accreditation by contacting the Office of the President.

Convenient For Students

The Astoria campus is convenient. It is an easy walk to most classes. The student center, library, classrooms and laboratories, and administrative offices are nestled comfortably together on the city's northern hillside just below the historic Astoria Column. From this vantage point at the edge of Oregon's coastal mountain range there is a bird's eye view of the beautiful Columbia River estuary.

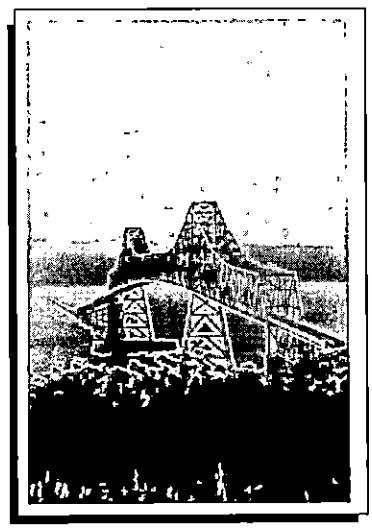
In addition to the main campus facilities, the College has a performing arts center and a waterfront Marine and Integrated Manufacturing Technology training facility. The South County Center in Seaside serves south Clatsop County including the cities of Seaside, Gearhart, and Cannon Beach. Other communities which the College serves include Warrenton, Knappa, Clatskanie, Ranier, and Westport, as well as Long Beach, Ilwaco, Seaview, and Naselle in Washington.

The Area



The College district covers all of Clatsop County which records a population of about 35,000. Astoria, the county seat of government with a population of 10,000, boasts industries in forestry and fishing with a growing tourism trade and maritime shipping rounding out the local economy. Steeped in Northwest history, Astoria is said to be the oldest settlement west of the Rocky Mountains. Its beautiful, Victorian-era homes and commercial buildings, many constructed before the turn of the century, speak to the craftsmanship of a bygone age. Many of these have been placed on our nation's official register of historic places. They attest to the importance of this area to Oregon and Northwest history.

Northwest Oregon claims a century and a half of colorful history in which explorers, fur traders, fishermen, and lumbermen played active roles. Seagoing traders visited the Columbia River soon after the United States became a nation. The city of Astoria sprang from John Jacob Astor's fur trading post in 1811, five years after Lewis and Clark explored the area. Coastal streams, lakes, and waterfalls bear the names of early explorers. Within the district are numerous Oregon state parks. Nearby, across the renowned Astoria-Megler bridge, can be found some of Washington's parks, as well as the beautiful Long Beach Peninsula with its miles of continuous, sandy beach. The area offers many clear streams and lakes teeming with trout and steelhead, and of course the mighty Columbia River with its important commercial and sports fisheries.



ADMISSION

Admission To A Degree or Certificate Program

If you are planning to earn a Clatsop degree or certificate or you plan to transfer coursework to another institution, you must apply and be admitted to Clatsop as a certificate or degree seeking student. In addition, many of the special program funding sources such as financial aid, veterans benefits, and some scholarships require your admission before any funds can be released.

Admission Criteria: Clatsop is an open-door, equal-access institution. To qualify for admission, you must be 18 years of age or older, or possess a high school diploma or GED.

Application Dates: As a prospective student, you are encouraged to apply early to be eligible for early registration dates. The first day of class of any given term is the last day to begin the admissions process. You may visit, call, or write the Admissions Office, located in Room 200 of Towler Hall, for specific application dates and for assistance beginning the admissions process. You may call at 503-338-2411, write to Office of Admissions, Clatsop Community College, 1653 Jerome, Astoria, OR, 97103, or reach us by e-mail at admissions@clatsop.cc.or.us. The following steps have been established to insure that you begin your experience at Clatsop with ease and confidence.

Step 1: Admissions/Financial Aid Workshop If you are planning on or thinking about attending college but have questions about how to get started, this workshop is designed for you. Information about careers, degrees & certificates, majors, financial aid & scholarships and more is provided. While not required, it is highly recommended. You will complete an application and receive transcript request forms. If you are not transferring from another institution and have been out of high school or have obtained your GED within the last five years, you should request that your high school transcripts be mailed to the CCC Admissions Office. You may request your GED transcripts from the Department of Education in the state where you took your GED test. If you are not able to attend the workshop, you may request an application and transcript request forms from the Admissions Office. The application should be returned to the Admissions Office as soon as possible. You must then contact the Admissions Office to schedule an appointment for the next step, the ASSET assessment.

Step 2: ASSET Assessment A placement evaluation called ASSET helps identify your readiness levels in writing, reading, and math. This is required for admitted students. If you have been successful in previous college classes, you may ask about an exemption from the ASSET. The data from ASSET will not be used to deny admission to Clatsop.

The assessment consists of three basic areas:
1. Writing Skills measures your skills in punctuation, grammar, sentence structure strategy, organization, and style.
2. Reading Skills measures your ability to read and understand factual material.
3. Numerical Skills measures your ability to understand and work with whole numbers, decimals, fractions and basic word problems involving arithmetic. If you have additional mathematics experience, an algebra assessment may also be recommended to determine your appropriate class placement.

During the ASSET session, you will be asked to schedule and sign up for the next step, New Student Orientation.

Step 3: New Student Orientation All new students attend New Student Orientation. At the orientation, you will receive information about the results of your ASSET assessment, degree requirements, the role of academic advisors, registration, college resources, and be assigned an academic advisor.

After attending the orientation, you will meet with your academic advisor. Your advisor will provide you with assistance in selecting your courses, interpreting degree requirements, understanding institutional policies and procedures, and monitoring your progress through the use of the degree checklist.

Transfer Admission: If you are transferring from another institution, you should follow the steps listed above. Your official transcript will be submitted for evaluation to the Records and Registration Office after you schedule a New Student Orientation session. Both lower and upper division credits in which you earned a "C" or better will be considered for evaluation. Upper division credits may be transferred to Clatsop to meet group and elective requirements when it is determined that the upper division course content is essentially equivalent to Clatsop course content. Transfer credit for work done in nonaccredited collegiate institutions will not be granted at the time of admission. However, such transfer credit may be considered based upon review by faculty. If you have attended a nonaccredited institution, contact the Admissions Office for more information.

Readmission: If you have been admitted and attended Clatsop before, but have been absent for one or more terms (excluding Summer term), contact the Admissions Office to update your status as an admitted student.

The College reserves the right to deny admission to applicants whose admission is judged to be potentially detrimental to the institution.

NURSING PROGRAM

Enrollment in the nursing program is limited. Acceptance into the program is determined by a weighted point system from a pool of qualified applicants. After evaluation and determination of total points, the top ranking individuals will be offered admission to the program. Remaining qualified candidates are placed on a ranked alternate list which expires after Fall term commences. Fall term admission applications must be submitted the preceding Spring term. If you are interested in applying for the nursing program, you should read about the program requirements listed in the Applied Science section of this catalog, and contact the Admissions Office at 338-2411 or stop by Towler Hall, Room 200 for an application, program information packet, and specific application dates.

For complete information on nursing program admission requirements, refer to page 54.

Re-Entry and Advanced Placement

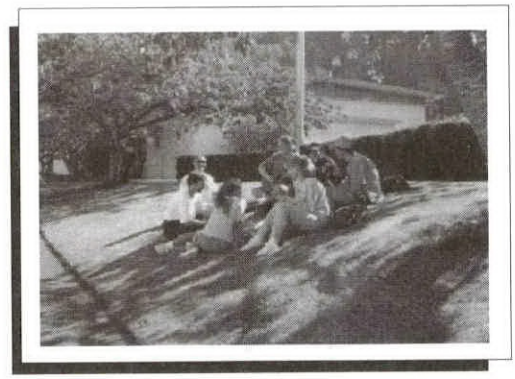
Re-Entry: If you were previously enrolled in the CCC Nursing program and have signed and met the terms of your Re-Entry Agreement Form, you have one opportunity to reenter the Nursing program within one year after the term you withdrew, provided space is available in the program. If it has been longer than a year since you exited the Nursing program, or if you withdrew from the program more than one time, you may apply for Advanced Placement into the program. If you are interested in applying for Re-Entry, contact the Admissions Office for a "Re-Entry & Advanced Placement Application Packet."

Advanced Placement: If you are a licensed practical or vocational nurse (LPN/LVN) or have been previously enrolled in a nursing program at Clatsop or another college, you may be considered for Advanced Placement, provided space is available in the program. If you have been withdrawn from the CCC nursing program for more than a year, if you failed or withdrew from the program more than one time, or if you did not qualify for Re-Entry, you may also apply for Advanced Placement, provided space is available in the program. If you are interested in applying for Advanced Placement, contact the Admissions Office for a "Re-Entry & Advanced Placement Application Packet."

INTERNATIONAL STUDENTS

To be admitted, you must meet the following requirements: 1) A score of 520 or above on the International Test of English Language (TOEFL), or successful completion of and recommendation from an English Language Institute in the United States, or 30 quarter hours or 20 semester hours of transferable credits with a 2.5 grade point average or better from American colleges or universities, 2) The equivalent of a U.S. high school diploma, and 3) a financial statement verifying that you have at least $11,100 to pay the normal expenses for one year's enrollment. You will be required to submit one year's tuition before final papers for immigration and college admission are issued.

Applicants are accepted to begin in the fall, winter, or spring terms. The application process must be completed two months prior to the term you plan to attend. If you are interested in applying for admission, you should request an "International Student Packet" from the Admissions Office. The packet outlines the application procedures and application deadlines. A $50.00 non-refundable international student application fee must be submitted with your application.



Taking a break - Main Campus, Astoria

Special Admissions

MONEY MATTERS

Tuition

Fees

Tuition		2000-2001 In-state*	Out-of-State
1	credit hour	$39	$100
2	credit hours	$78	$200
3	credit hours	$117	$300
4	credit hours	$156	$400
5	credit hours	$195	$500
6	credit hours	$234	$600
7	credit hours	$273	$700
8	credit hours	$312	$800
9	credit hours	$351	$900
10	credit hours	$390	$1,000
11	credit hours	$429	$1,100
12	credit hours	$468	$1,200
13	credit hours	$507	$1,300
14	credit hours	$546	$1,400
15	credit hours	$585	$1,500
15+	credit hours	$585	$1,500

Rates are subject to change without notice. All monies owed to the college for previous terms must be paid before you can register for the current term.

***OR, WA, ID, NV, CA**

Late Registration Fee

A late registration fee of $10 will be charged to you if you enroll after the first week of the term for regular term-length credit classes.

Refundable Fees (in addition to or in lieu of tuition)

Some classes such as art, integrated manufacturing technology, computer science and physical activity have additional fees. You should check the current class schedule to determine which classes have fees and the amounts. Depending upon circumstances, these fees may be refundable.

Non-refundable Fees

The following fees are non-refundable:

	2000-2001
Academic transcripts	$3 each
Faxed transcripts	$6 each
Schedule change form (after the 2nd week of term)	$5 each
Late registration fee	$10
Late payment fee	$25
GED testing fee	$70
GED retake fee	$9 per test
ASSET testing fee (per battery)	$10
(per individual test)	$5
Installment Payment Plan processing fee	$15
Returned check fee	$25
International student application fee	$50
Graduation petition fee	$20
Technology Fee	$2 per credit**

**CCC is providing leadership in access to the latest in technology. For example, all students have access at CCC to:

1. the internet
2. up to date software
3. state of the art computer hardware
4. current instructional equipment
5 MERTS facilities described as the "Best in the West"

The College is able to provide and update this technology through the use of technology fees. Technology fees for non-credit classes are pro-rated.

Residency (out-of-state tuition)

Residents of Oregon, Washington, Nevada, California or Idaho will be charged the in-state tuition rate.

If you wish/need to retain residency in a state other than those listed above, you will be charged the out-of-state tuition rate. Declaration of intent must be made at the time of registration. Per Oregon Revised Statute, exception is made for the following students:

- military personnel on active duty and their dependents.
- veterans enrolling within one year of separation from services.
- dependents of parent or guardian who qualifies as Oregon resident.

International students will be charged the out-of-state tuition rate.

Gold Card Status

Each term, Clatsop Community College students 62 or older are entitled to a 50% tuition discount (discount is not applicable to fees). Free admission is also granted to all College-sponsored performances and activities (unless advertised otherwise). Examples of such activities are cultural events, lectures, dramatic presentations, films, etc.

The first time Gold Card Status is requested, proof of age must be presented. Thereafter, proof of age is not required.

Gold Card Status, which is valid for one term, must be renewed through enrollment in at least one class per term.

Payment Obligations

By registering for a class(es) at the College, you have incurred a legal obligation to pay all tuition, fees, and any other charges relating to your enrollment, even if your charges are being paid by another party. Unless you officially withdraw from your courses, you are obligated to make payment by the due date published in the relevant class schedule.

If you do not make payment, make arrangements for deferred payment, provide proof of payment in full by another party, or withdraw from your courses by the required date, you will also be responsible for payment of additional late charges and any collection costs and attorney fees.

You are responsible for keeping the College informed of any changes in your mailing address or name.

If you are under 18 years of age, you will be held liable for all charges incurred under Oregon Revised Statute 348.105.

Payment Options

Payments may be made by any of the following methods:

Cash: US funds only.

Checks: Local personal checks, non-local personal checks (with check guarantee card), travelers checks, cashiers checks and money orders are accepted. Make payable to Clatsop Community College.

A $25 charge and all collection costs, including court costs, will be charged on returned checks. After the college has received two returned checks from you, all future payments must be made by cash, credit card, or cashiers check. Personal checks will not be accepted. Returned checks of any nature, including NSF and stop payment, do not cancel your financial obligation for payment.

Credit Cards: VISA, Mastercard, and CollegeCard are accepted. CollegeCard is a credit card that can be used to pay for tuition and fees and related charges at Clatsop or any other participating college or university. Contact the Business Office for more information on how to apply for a CollegeCard.

Financial Aid/Scholarship: A signed Clatsop Community College financial aid or scholarship award letter reflects your acceptance of this funding source. A copy must be presented to the Business Office as proof of funding.

Alternate Funding Source: It is your responsibility to ensure that official payment authorization is received by the Business Office by the payment due date or late charges will be assessed and/or the account will be sent to collections.

MONEY MATTERS

Payment Plan

Refunds

Financial Aid

Installment Payment Plan

Any student may participate in the Deferred Payment Plan, except those noted below. If you qualify, the following conditions apply:

- you must register using your social security number.
- a $15 processing fee will be charged.
- a downpayment must be made equal to the application fee and one-third (1/3) of the out standing balance - after applying all financial aid, scholarships, and alternate funding source payments.
- the remaining balance, after downpayment, will be divided into two equal installments. A late payment charge of 10% or $20, whichever is less, will be added to the outstanding balance for each installment that is not made by the due date.
- any balance remaining at the last day of the term may immediately be referred to a collection agency, the Oregon Department of Revenue, or an attorney for collection. Collection and/or attorney fees will be added to the outstanding balance.
- any balance due may be deducted from all financial aid or scholarships awarded to you.
- you will not be allowed to register for subsequent terms until your account is paid in full.

NOTE: The college's Installment Payment Plan is not available to: 1) students receiving full funding from financial aid, scholarships, or alternate source, 2) students owing less than $100, or 3) international students.

REFUNDS

Before dropping or withdrawing from a class, it is a good idea to see an advisor or student services representative to discuss support services that may make it possible for you to remain in classes.

General: Refunds are calculated from the date and time the Student Records and Registration Office receives a completed schedule change or withdrawal form. Refunds will be processed by the Business Office, as soon as possible, beginning the third week of each term.

Regular Courses: Students withdrawing from a course more than two days in length, and who comply with regulations concerning withdrawals, may receive a refund of tuition and fees. Withdrawals made within the first 10% of instruction time will qualify for a full refund. Withdrawals made within the second 10% of instruction time will qualify for a 90% refund.

Short Courses: If you withdraw from classes two days or less in length, you will receive a full refund if the action is initiated prior to a special preregistration deadline or if no such deadline, prior to the beginning of the class. No refunds will be issued after those times

Course Cancellations

If a class is canceled by the College, there will be a 100% refund of the tuition and fees.

Special Provisions

Refunds to financial aid students in the first term of their first year at the College will be pro-rated in accordance with federal regulations. Details are available at the Financial Aid Office.

If you withdraw due to circumstances beyond your control such as job relocation or a medical emergency, you may file a petition for additional refund. The date of receipt of the petition, length of class attendance, and cost of course materials and services may be considered in denying or reducing the amount requested.

FINANCIAL AID

Clatsop Community College has a comprehensive financial assistance program that includes grants, loans, and part-time employment for students who qualify. The primary purpose of financial aid is to provide financial assistance to students who would be unable to attend Clatsop Community College without such help. Financial aid is available to help bridge the gap between the annual educational expenses and the student's ability to meet them. Each student and his or her parents (if applicable) bear the primary responsibility for meeting educational costs.

Eligibility

To be eligible to receive financial aid, a student must be a U.S. citizen or permanent resident, have a United States high school diploma or GED, or pass an "Ability to Benefit" test, and be admitted to and enrolled in a program leading to a degree or certificate. Students applying for financial aid must also submit official copies of all previous post-secondary grade transcripts to the Admissions Office for evaluation. Financial aid (with the exception of some scholarships) is determined by careful analysis of financial resources from information furnished on the "Free Application for Federal Student Aid" (FAFSA). A federal formula calculates a student's financial need. Every effort is made to ensure fair distribution of the resources available to the college. At Clatsop, campus-based funding is distributed first based on need and then on a first-come, first-served basis.

Financial Aid (cont.)

A student who is in default on any federal student loan is not eligible to receive additional financial aid until the default has been cleared (See the Financial Aid Office if you need assistance in clearing up a defaulted loan). A student who owes a repayment of Title IV Financial Aid funds is not eligible to receive additional financial aid until full repayment (or satisfactory arrangements for repayment) have been made.

A student may have no federal or state drug convictions as an adult for possession or sale of illegal drugs. Students who have been convicted for the first time of possession (within the last year), for the second time of possession (within the last two years), or for the first time for sale (within the last two years) of an illegal drug may establish eligibility by completing a qualified drug rehabilitation program. Students convicted more than once for sale or more than twice for possession of illegal drugs are ineligible for federal funding.

Applying for Financial Aid
Financial aid forms are available in January for the following academic year (fall through summer terms). Students should begin the application process as soon as possible after January 1 regardless of the term they plan to attend. It is important to file early as the awarding process can take two months or more and some funding sources will run out of available funds early in the year. Forms are available through high schools and colleges.

Renewal Application-If you were in college last year and meet certain conditions, you will receive a Renewal Application in the mail in early January. The Renewal application will allow you to update the information you submitted last year.

Internet filing-If you have Internet access, you can file a FAFSA (or a Renewal Application, if you are eligible and still live at the address you last listed) at http://www.fafsa.ed.gov

FAFSA Express-You may also use FAFSA Express software that allows you to fill out your application on a computer with a modem. Check at your high school, college, public library, or Educational Opportunity Center for FAFSA Express, or download the FAFSA express software from this Web page: http://www.ed.gov/offices/OPE/express.html **Do not submit more than one application!**

Financial Need
Financial need is the difference between the cost of education and the amount the student and his/her family are expected to contribute, known as the Expected Family Contribution (EFC).

Cost of education
-Expected Family Contribution
=Financial need

The EFC is determined by the federal processor using the information on your financial aid application. The cost of education at Clatsop is a standard budget that includes regular tuition, fees, books and supplies, housing, transportation and personal expenses. Budgets may be adjusted annually to reflect increased costs and are pro-rated for number of terms you are attending and the number of credits enrolled for each term.

The amount of financial aid offered depends on the student's financial need and the availability of funds. Supplemental Educational Opportunity Grant (SEOG) and Federal Work Study are limited and awarded first based on need and then on a first-come, first-served basis. Oregon State Need Grants are offered as long as state funds are available. Federal Pell Grants, Federal Direct Stafford Student Loans, and Parent Loans for Undergraduate Students (PLUS) are available to eligible students/parents all year.
The amount of funding varies with the number of credits a student takes. Students may enroll full-time (12+ credits), three-quarter time (9-11 credits), half-time (6-8 credits) or less than half-time (1-5 credits).

Financial Aid Refunds and Returns

For any students receiving federal student financial aid, refunds for tuition and fees (excluding non-refundable fees) are returned to the financial aid programs and not to the student. A return of federal student financial aid funds that were received by the student for other costs of education, such as living expenses, may be required if a student completely withdraws from all classes before completing at least 60% of the

Financial Aid (cont.)

term. Any refunds for tuition and fees and any financial aid funds returned by the student will be applied in the following order:

1. Unsubsidized Direct Stafford loans.
2. Subsidized Direct Stafford loans
3. Direct PLUS loans
4. Federal Pell Grants
5. Federal Supplemental Educational Opportunity Grants
6. Other SFA Programs
7. Other federal, state, private, or institutional sources
8. The student

Financial Aid students are required to notify the College of their withdrawal from all classes by completing a *Schedule Change Form* and submitting it to the Registrar's Office for any term in which they receive financial aid funding. For any student who completely withdraws before 60% of the term has been completed, the amount of any refund for tuition and fees, and the amount of federal student financial aid funds that must be returned by the student are calculated based on the student's withdrawal date. A student's withdrawal date is the last date of attendance as indicated on the *Schedule Change Form*. For students who fail to complete a *Schedule Change Form* and submit it to the Registrar's Office, or in cases where no last date of attendance is indicated on the *Schedule Change Form*, the exact withdrawal date will be determined by the Financial Aid Office. (Contact the Financial Aid Office for further details on withdrawal date determination.)

If a financial aid student completely withdraws from all classes before 60% of the term has been completed, the College will determine the refund amounts and the amount of financial aid funds, if any, that must be returned by the student (or parent, if a PLUS loan). The College must calculate these amounts, refund any tuition and fees, and notify the student of any amount due within 30 days of the withdrawal date or the date the College determines the student withdrew, whichever is later. The College calculates the refund amounts and the amount of funds that must be returned by the student based on the percentage of the term completed. For more information and examples of how the College calculates these amounts, contact the Financial Aid Office.

A student/parent must return the entire amount due by the end of the term in which he/she withdraws in order to continue aid eligibility for the next term. A student/parent who cannot immediately return the full amount due may make other arrangements by contacting the College Business Office within 45 days of the date the College notifies the student of the amount due. If satisfactory arrangements are made with the College Business Office, the student will continue to be eligible for aid.

Student-Owed Repayments

Students receiving cash payments from the financial aid programs (funds disbursed to the student after payment of tuition and fees, not including the Federal Work Study or the Direct Loan Program) who completely withdraw from all classes may be required to repay a portion of the cash payment according to the percentage of term completed.

No repayment of financial aid is required for students who complete 70% or more of the term. Students must submit written notification of complete withdrawal from classes by submitting a *Schedule Change Form* to the Records & Registration office. No additional financial aid will be paid to a student who owes a repayment for early withdrawal until full repayment is made.

***The date indicated by the student as the last date of attendance on the Schedule Change Form is the date used to determine the tuition refund to the Financial Aid program and the amount of repayment a student owes. If a student fails to withdraw, the last date of attendance is the mid-point of the term or as determined by information available to the Financial Aid office.*

Satisfactory Progress Guidelines

Clatsop is required by federal and state regulations to define and enforce standards of satisfactory academic progress (SAP) which students must maintain to continue receiving financial aid. SAP is determined annually at the end of Spring term based on your cumulative GPA and the total credits you have earned at Clatsop. Refer to the chart below:

Credit Hours Funded	*Cumulative GPA*	*Percent of Credits*
1-40	1.80	Complete 85% of your funded credits
41 or more credits	2.00	Complete 85% of your funded credits

Students who do not meet the minimum cumulative GPA and/or complete the required number of credits listed above will be disqualified from financial aid.

Maximum Credit Limit Federal regulations require that a school define a maximum number of credits within which a student must complete his/her program. At Clatsop a student is expected to complete a one year certificate within 70 credits (Maritime Science certificate is 77 credits) or a two year degree within 120 credits. All credits at Clatsop and any credits a student transfers from other institutions that apply toward his/her current program will be used in the calculation.

Appeals If you are disqualified for the following: not maintaining the appropriate cumulative GPA and/or not completing the required number of credits by the end of Spring Term; completing zero credits any term; not completing your program within the maximum credits allowed, and you believe you have extenuating circumstances that caused you to be disqualified, you may petition the Academic Issues Committee for a review of your situation. Petitions are available at the Financial Aid office.

SCHOLARSHIPS FOR HIGH SCHOOL STUDENTS

If you are a high school student considering study at Clatsop, you should meet with your school counselor to discuss eligibility and application for the following scholarships: Board Scholarships, Rochester Scholarships, Arthur Fertig Memorial Scholarships, and Talent Grants.

Board Scholarships. The Clatsop Community College Board of Directors gives two kinds of scholarships to students graduating from high school programs in Clatsop County. Merit scholarships are awarded annually to students chosen by the high schools. At least one per high school is awarded. Applications are available from high school counselors. These scholarships are renewable for a second year at Clatsop, based on academic achievement. (3.0 GPA at end of the first year and full-time attendance.)

In addition, all graduating seniors in Clatsop County are given a one-term, half-tuition scholarship to be used at the College for any one term during the year after high school graduation. These are mailed to students in their final term of high school. If you do not receive a certificate in the mail, you should contact the Scholarship Director in Student Services.

Rochester Trust Scholarship: This merit based scholarship is awarded to full-time students majoring in math/science related areas.

Arthur Fertig Memorial Scholarship. Established by friends and relatives of Arthur Fertig, a member of the first Clatsop Board of Directors, this scholarship varies in amount and is available most years to seniors graduating from high schools within the College district. Applications are available from high school counselors.

Talent Grants A limited number of tuition Talent grants are available for area (Astoria, Seaside, Warrenton, Knappa, Jewell, Ilwaco, Naselle, and Clatskanie) high school seniors who show talent or special promise in a specific area.

You must be registered as a full-time student to be eligible (12 credits). Grants are renewable term by term for up to two years if satisfactory progress is maintained. (2.0 GPA and full-time enrollment.)

SCHOLARSHIPS FOR CLATSOP STUDENTS

If you are in a degree program at Clatsop, you may apply for a number of scholarships, and it is possible to be awarded more than one. Most are awarded on the basis of your college academic record, your activities, need, and/or the merit of your goals and plans as shown by the application. Available scholarships and application deadlines are announced in the school newsletter. For complete information about scholarships, including application forms, contact the Student Services office, or call 338-2468. The scholarship office publishes the scholarship handbook each year and scholarships are listed on the college electronic mail service (email) available through your academic advisor. Examples of some of the scholarships are:

AAUW American Association of University Women: Astoria and Seaside branches offer scholarships each year.

Adelaine Sather Memorial Scholarship: This one-year, tuition scholarship is awarded to a student with a declared major in art or music.

Alpha Iota Sorority Scholarship: This sorority provides one $420 scholarship each year to a student majoring in a business program.

Amelia H. Kuitert Memorial Scholarship: This $500 scholarship is limited to full-time students majoring in the sciences.

ASH Housing Fund: This is available to help eligible students with housing costs. Awards range from $100-$300 per month depending on student need and availability of funds.

Financial Aid (cont.)

Scholarships

Scholarships (cont.)

Chet and Edie Hogan Scholarship: A $500 award to a full-time student.

Coast Guard Officers Wives Scholarship: This organization recognizes a full-time student who is a Coast Guard dependent. Amount varies.

Foundation Scholarships: The Clatsop Community College Foundation raises money through projects and donations to award several scholarships available each term to full-time students.

Fort James Foundation: Amount varies.

Jan and Dr. John Swanson Scholarship: This is given to second-year students who are not necessarily at the top of their class nor in particular financial need. One $1,000 or two $500 scholarships are awarded each spring.

Judy Hogan Memorial Scholarship: This one-year scholarship is awarded to a student with a declared major in visual arts. $1,500.

Sally Leino Memorial Scholarship: This is a $500 scholarship in honor of Sally Leino, founding member of the College Foundation Board.

Lower Columbia Chapter TROA Scholarship: This provides one year tuition and is limited to students with a direct uniformed services relationship.

Oregon Chiefs of Police Scholarship: One $1,000 scholarship is offered each year to second year criminal justice majors.

Oregon State Sheriffs' Association Scholarships: One $500 scholarship is offered each year to students majoring in criminal justice.

Oregon School Employees Association: This is a scholarship for Clatsop Community College OSEA members and their dependents.

PEO Scholarships: Clatsop County chapters of this organization award special support in varying amounts to women furthering their education.

Merriam Joan Shawa Memorial Scholarship: Awarded to a nursing student. $2,000.

Sou'wester Garden Club Horticulture, Landscape Scholarship.

Rochester Trust Scholarship: One or two year awards to full-time students majoring in math/science related areas.

WATEC (Waited Awhile to Enter College) Scholarship: This one-year scholarship is awarded annually to a female student over 21 years of age. The private scholarship is awarded by Clatsop Community College graduate, Mickey Bambrick.

Warfield & Elizabeth T. Martin Scholarship: One-year scholarship, full tuition. Education majors preferred.

40 and 8 Scholarship: For nursing students, $500 per term per student.

Other Scholarships: Additional scholarships are awarded in amounts from $150 to $500. These scholarships are created through generous donations from our community. All scholarships are subject to availability of funds.

MEMORIAL SCHOLARSHIP FUND

Clatsop Community College receives numerous scholarship donations, some of which may be named in honor of individuals when the contribution in their name exceeds $5,000. The following one term tuition scholarships are awarded as available; at least one will be offered each term.

Carlyle "Butch" Mahnke Scholarship: Limited to full-time nursing students.

Dorothy Mickelson Scholarship: Available to all full-time students.

Eben H. Carruthers Memorial Scholarship: Awarded to a student with a declared major in Integrated Technology.

Ellen Shannon Scholarship: Limited to English majors.

Lisette Haglund Scholarship: Awarded to students majoring in art.

M. Chenevert Scholarship: Available to all full-time students.

O.J. McGunigal Scholarship: Available to all full-time students.

Alberta McKenna Scholarship: Available to all full-time students.

Phillip Lynch Scholarship: Available to all students

Information

The calendar in the back of this catalog and in term class schedules contains registration dates. These dates are subject to change if necessary.

The college publishes a schedule of classes prior to the beginning of each term. The schedule contains current course offerings, location of classes, and fees charged for each class. Classes and workshops of less than one term in length may be advertised in the schedule of classes or individually as they occur. To register, you need to complete the registration form and pay for tuition and fees.

Degree Seeking Students

If you plan to earn a Clatsop certificate or degree and/or are receiving financial aid, you must complete the admissions process. Admitted students are provided information about college degrees and services, are ensured correct placement in courses, and are assigned to an academic advisor. Your advisor will assist you in making informed decisions concerning career planning, in selecting appropriate courses, and in referrals for help with financial or personal issues. See the admissions section of this catalog for more information about becoming an admitted student.

Admitted students must have their advisor's signature for registration, and should plan to register on campus as early as possible. Returning students are encouraged to register during the announced early registration periods.

A full-time certificate-/degree-seeking student will usually have to complete 15 credits each term in order to complete certificate/degree requirements within three or six terms. If you need college preparatory work, plan to spend an additional term or terms to ensure that you are prepared to meet degree requirements.

Non-Degree Seeking Students

If you do not intend to complete a degree or certificate, you are encouraged to register prior to the beginning of the term. No approval is required except for those courses which require instructor permission for registration; however, you should follow course prerequisites as noted in the college catalog and term schedule. If you are unsure of whether you have the academic skills to be successful in a college course, you may arrange for a reading, writing, or math placement assessment. Contact the Student Services Office or Assessment Center for more information or to schedule an assessment session.

Your registration is complete when you have paid tuition and fees or when other funding arrangements have been completed.

Students Under the Age of 18

The College is part of an array of educational services offered throughout Clatsop County. The College does not usually serve students under the age of 18 unless they are high school graduates. However, provisions have been made, in exceptional circumstances, to allow the enrollment of younger students.

Examples of these unique circumstances include:

1. By special contract with a local school district.
2. Through pre-approval of specific classes which are open to younger students.
3. Simultaneous enrollment.
4. By special petition.
5. For GED preparation.

Specific policies and procedures are available from the Registrar's Office.

Late Registration

If you wish to register for regular term length courses during the second week of the term, you must obtain instructor approval and pay a late registration fee. You may not register for regular term length classes after the second week of the term.

Changes After Registration

You may make course changes at the Registrar's Office. All changes should be approved by your academic advisor. If you are adding a course the second week of the term, you must also obtain the approval of the instructor. A special form, the *Schedule Change Form,* available at the Registrar's Office is provided for adding or dropping classes and for changing from credit to audit or from audit to credit. A fee is charged for schedule changes made after the second week of the term

For information regarding timelines for dropping courses in order to avoid a notation of "W" on your academic transcript, see the "Withdrawal" section of this catalog.

If you are funded by financial aid, scholarships, or an outside agency such as Vocational Rehabilitation or Veterans, please contact the Financial Aid Office prior to making any schedule changes as your aid eligibility may be affected.

REGISTRATION

Withdrawal

You have the responsibility to formally withdraw from courses for which you have registered, but do not intend to complete. Otherwise, you risk receiving an "F" for the course. Instructors do not withdraw students from courses. Withdrawal from one or more courses or a complete withdrawal from all courses will affect your financial aid eligibility. It may also affect funding for students receiving scholarship funds or funds from outside agencies. Contact the Financial Aid Office for more information.

You are expected to withdraw from classes in person at the Registrar's Office, using a *Schedule Change Form.* Under exceptional circumstances, you may withdraw by writing a letter of explanation to the College's Director of Enrollment Services.

No record of the course will appear on your transcript if the withdrawal is done before the fourth week. A notation of "W" will appear on your transcript for the course if the withdrawal is submitted from the fourth through seventh week.

The end of the seventh week of the term is the deadline for withdrawing from an individual course, as well as changing from "credit" to "audit" status.

When circumstances are beyond your control, you may completely withdraw from the term, that is: drop all courses for that term. Withdrawal must be completed by the last Friday of classes prior to final exam week. Contact the Registrar's Office for more information.

Auditing

If you do not wish college credit you may register for audit. A request to audit a course is indicated by circling the course reference number (CRN) and checking the audit column on the registration form. Auditing students are not required to meet specific academic requirements but are expected to participate in their classes. Classes taken for audit require payment of tuition and fees. You may change from audit to credit or credit to audit through the seventh week of a term. Financial aid-funded, scholarship recipients, and students receiving reimbursement from outside agency sources generally cannot use audited classes to meet funding eligibility requirements.

Student Records

You have access to most of your records maintained by the College. Examples of student records are admissions files, transcripts, and financial aid data.

The College may publish and will release directory information. Directory information is defined as your name, address, date and place of birth, major field of study, dates of attendance, degrees and awards received, and the most recent previous educational institution attended. You may request, in a letter to the Director of Enrollment Services, that this information not be released.

Transcripts

Your student transcript lists courses in which you are enrolled each term. This is your permanent, cumulative record of enrollment and grades. Courses dropped prior to the fifth week are not recorded. Honor Roll, Dean's List, and Phi Theta Kappa are also noted on your transcript.

You may obtain an official transcript by submitting a written request with the $3 per transcript fee. Transcripts may be faxed to other Oregon Colleges for a $6 fee. Your transcript will not be issued if you have defaulted on a student loan or have financial obligations to the College including college owned equipment, supplies or library books or materials.

If you retake a course for which you have already received a grade, the later grade will be transcripted and used in computing your grade point average (GPA). The earlier grade is bracketed on your transcript and removed from computation of the earlier term GPA and the cumulative GPA. You will be allowed two retakes to improve your grade. Subsequent retakes will be transcripted, but may not be used to meet degree requirements.

To ensure that your GPA is recalculated, you should inform the Registrar's Office of the retake and request that the GPA be recomputed. Notations of P, I, NC, W, and audit are not used in computation of the grade point average. Retakes of courses for which you previously received non-passing grades, or grades lower than required by your program, can be funded by financial aid; however, retakes of courses for which you previously received a passing or required grade cannot be funded.

DEGREES & CERTIFICATES

Degrees

The College offers three degrees: the Associate in Arts - Oregon Transfer (AA - OT), the Associate in Applied Science, and the Associate in General Studies. Specific information may be found on the following pages: Associate in Arts - Oregon Transfer, page 25, Associate in Applied Science, page 30; and Associate in General Studies, page 29. You may earn more than one degree at Clatsop Community College except that you may not receive simultaneously the Associate in General Studies degree and other degrees at Clatsop Community College unless you complete 24 additional and distinct credits from the previous degree. You must also meet all requirements for each degree. Degrees will be awarded once you have completed the graduation petition process and have participated in graduation ceremonies, unless excused.

Warranty

Clatsop Community College warrants the competencies you develop while obtaining an Associate in Applied Science (AAS) degree. If, during the two years immediately following completion of the AAS degree requirements, you need to upgrade skills or acquire additional training in your vocational specialty, certain eligible courses may be attended tuition free on a space-available basis. All fees remain your responsibility.

Eligible courses include any which meet major requirements in the degree program under which you graduated and occupational supplementary courses determined to be in the applicable occupational specialty. The Vice-President, Instructional Programs/Student Services may approve appropriate Professional-Technical supplementary courses on an individual basis.

One-Year Certificates

The College also offers structured one year certificates in particular Applied Science fields. Specific requirements are listed in the program descriptions in this catalog. A certificate may not be awarded concurrent with or subsequent to a degree in the same applied science program.

Recognizing that the established degree and certificate programs cannot meet every individual's educational needs, the College will develop short-term certificates in specific areas of concentration. You must arrange through the Vice-President, Instructional Programs/Student Services and be pre-approved by the Instructional Council for these individualized certificates which are usually completed in less than two years.

All certificate programs require a minimum of 45 credits. At least 12 of these credits must be earned at Clatsop, and your last term of attendance prior to completion must be at Clatsop. Additionally, there are mathematics, writing, and human relations requirements for all certificate programs. See your advisor and the Vice-President, Instructional Programs/Student Services for details.

Credit

Your credits are earned on the basis of your successful completion of course requirements. The number of credits assigned to each course is usually related to the number of hours you spend in class. One credit is earned for each hour of lecture/discussion class attended per week. Laboratory and studio experience usually require two or three hours of attendance for each credit earned. Most courses have been assigned a definite number of credits per term, but some have been given variable credits. In some variable credit courses, the number of credits will be determined by your progress during the term.

Transfer Credit

Coursework for which you earned a "C" or better grade from an accredited institution may be accepted to meet degree or certificate requirements at Clatsop Community College. Transfer coursework, although it may be used to meet requirements, will not be included in your Clatsop Community College cumulative grade point average.

Continuing Education Units

The college works in conjunction with various professional associations and employers to offer continuing education units (CEUs) as a form of certification for the successful completion of specified occupational instruction. The CEU is a measure of the amount of professional upgrading instruction that you have successfully completed. Contact the Community Education office for more information about specific classes.

You may not earn CEUs and academic credit for the same class. Therefore, you may not pay for classes awarding CEUs with financial aid funds and CEUs do not count toward financial aid satisfactory progress eligibility or toward degree completion.

ACADEMIC INFORMATION

Course Numbering

Grading Policies

Course Numbering/Grading

1. Courses that are fully transferable to Oregon four-year colleges and universities are listed on pages 113 & 114. Most of these courses are graded on the A - F system. A few courses are graded pass or no credit (P/NC). Information regarding grading is available in the course syllabus which the instructor distributes during the first week of class.

2. Courses that are primarily professional-technical in nature are listed on pages 115 & 116. These courses are designed to prepare you for particular skills and trades. Most of these courses are graded on the A - F system. An exception is the Cooperative Field Experience classes which are graded pass or no credit (P/NC).

3. Alpha-numeric courses below 100 are not designed for transfer to other colleges or universities within the Oregon University System. Most of these courses are graded P/NC. A few are graded on the A - F system.

4. Alpha-prefixed courses, such as MUS0511, which have a zero (0) in the fourth place, are non-credit general self-improvement or hobby and recreation courses.

Grading Policies

By Friday of the first week of classes each term, you should receive a course syllabus for each credit class in which you are enrolled. The syllabi should provide criteria on how grades are awarded including the approximate percentage of the term grade to be awarded for completed homework, weekly quizzes, term projects, mid-terms, finals, class participation, etc. Grades should reflect how well you meet course objectives. If you understand the objectives and know how well you have done in achieving them, you will generally not be disappointed with your grades.

Graded work at Clatsop Community College is based on the following guidelines (grade point value is also indicated):

A - Excellent (4.0)
1. Scores superior on examinations and/or assignments.
2. Shows independent thinking in terms of the subject matter of the course.
3. Shows a grasp of the relationships among various parts of the subject.
4. Asks questions which are appropriate and which stimulate relevant discussion by the instructor and/or students.
5. Complies with the stated performance regulations of the instructor.

B - Commendable (3.0)
1. Scores above average on examinations and/or assignments.
2. Presents sound ideas on subject matter of the course.
3. Shows a grasp of the general organization of the subject matter.
4. Asks appropriate questions which clarify the presentation of the subject.
5. Complies with the stated performance regulations of the instructor.

C - Satisfactory (2.0)
1. Scores average on examinations and does average work on assignments.
2. Presents evidence of a grasp of the subject matter of the course.
3. Asks relevant questions.
4. Complies with the stated performance regulations of the instructor.

D - Minimal (1.0)
1. Scores below average on examinations; completes assignments at below average level, or fails to complete them.
2. May follow the course of discussion by others, but contributes little.
3. Shows some grasp of portions of the subject matter but little grasp of the overall picture.
4. Complies with the stated performance regulations of the instructor.

F - Unacceptable (0.0)
1. Scores unsatisfactory on examinations; completes assignments at an unsatisfactory level or fails to complete them.
2. Shows little or no grasp of the subject matter.
3. Does not comply with the stated performance regulations of the instructor.

I - Incomplete

At your request, an instructor may award an incomplete if you have completed at least 70 percent of the course work and shown an intent to finish the required work. An instructor will provide you with a statement describing the work needed to complete the course, and a copy of such statement will be maintained in the Student Records and Registration Office.

An incomplete does not imply an offer of tuition-free re-enrollment in the class. You will be allowed a maximum of one academic term to correct deficiencies noted on the statement of incomplete status. Incompletes received for spring term may be corrected during fall term of the following academic year. Under extenuating circumstances as approved by the Vice-President, Instructional Programs/Student Services, you will be allowed an extension beyond the deadlines noted above for finishing an incomplete. Incompletes are temporary notations. If courses are not completed, an instructor-designated grade will be issued.

W - Withdrawal
A student-initiated withdrawal.

P - Pass
You may earn credit for a course which is graded on a pass/no credit basis. You may apply a maximum of 24 credits of "pass" grades toward a degree.

NC - No Credit
A designation used when you do not do passing work in a pass/no credit class.

Aud - Audit
You may register for audit if you do not wish credit for a course. As an auditing student, you are not required to meet specific academic requirements but you are expected to participate in your classes. You must initiate an audit. Changing from audit to credit will be treated in the same manner as adding a class. If you are receiving scholarships or money from outside agency sources, your funding may be adversely affected by changes from credit to audit.

Academic Standards

In order to graduate from Clatsop Community College with a degree or certificate you must have a cumulative grade point average of 2.0 for all Clatsop Community College coursework.

If you are receiving funding from an external source such as financial aid, scholarships or Veterans benefits you will be required to maintain satisfactory academic progress in order to continue to receive benefits. (Review the Financial Aid, Scholarships, and Veterans sections of this catalog for details on satisfactory progress requirements.)

Credit by Examination

Credit by examination recognizes alternative routes to obtaining college-level knowledge and skills independent of the classroom. The intent of this method for awarding credit is to enable you to proceed through an established program in accordance with your present ability and knowledge. To ensure that you have achieved at the same level as any other student completing the course, the following conditions have been set forth for gaining credit through examination:

1. You must be enrolled in a diploma or degree program before a credit by examination petition (challenge) can be initiated. Exceptions may be granted by the Vice President, Instructional Programs/Student Services.
2. You must submit a formal application approved by the Administrative Assistant to the Vice President, Instructional Programs/Student Services, your advisor, and the instructor who will administer the examination.
3. You may elect to challenge a course in which you are currently enrolled, provided the class is formally dropped prior to the beginning of the fourth week of classes. Courses in which you have previously enrolled and received a grade may not be challenged.
4. You may not challenge more than 24 credits, and credits earned through examination cannot be counted as credit needed for the 24 credit on campus graduation requirement. A maximum of six credits, taken by examination, may be in cooperative work experience.
5. The faculty of the College offering the instruction in the challenged course will be responsible for the formulation, administration, and compilation of the results of the equivalency test in accordance with other provisions of this policy. The examination may be either oral, written, performance, or a combination of these methods of evaluation. Under no circumstances will the requirement for credit by examination exceed the pre-established criteria for the course.
6. Examination for course credit may be taken only once. If successful, you will receive the grade of pass and the letter "P" will be entered upon your transcript. If unsuccessful, you will receive a "N/C" on your transcript. Credits so earned will not be calculated in your grade point average.
7. Courses involving laboratory or shop experience may be challenged in the same method as any other course; however, you must supply written references from qualified individuals indicating your sufficient background experience to cause a waiver of the laboratory or shop time.
8. Credits earned by examination may not exceed the total credits previously earned at Clatsop Community College in regular course work. Should a challenge be approved during your initial quarter at Clatsop, credit for the challenged courses will not be applied until evidence of your successful completion of regular course work is entered into your transcript.
9. You will be assessed a nonrefundable charge for each course challenged. A year-long course series, which must ordinarily be taken in sequence, and which, at the discretion of the instructor, may be evaluated by a single comprehensive examination, may be handled as a single challenge for the standard fee.

Credit by Examination (cont.)

Independent Study

Cooperative Education

10. All the conditions set forth above are applicable to each student requesting course credit through examination. Any waiver of these condition must be at the approval of the President of the College and these conditions are subject to change.
You may also earn credit by successfully completing the College Level Examination Program (CLEP) General Examinations or Subject Examinations. You may take CLEP examinations at any CLEP testing center. CLEP general exams are administered at Clatsop Community College by appointment through the Assessment Center.
Call 338-2426.

Additional information about College policies concerning credit by examination may be obtained by contacting the Instructional Services Office, Towler Hall, room 203, at 338-2440. These procedures are subject to modification by college action.

Independent Study

Clatsop Community College does not promote the use of independent study courses, but will allow, under specific circumstances, your utilization of this mechanism only after all other alternatives have been explored.

It is the prerogative of the instructor to approve these courses. If the instructor genuinely feels that circumstances warrant such an expediency, and after other avenues have been exhausted, the instructor may petition the office of the Vice President, Instructional Programs/Student Services on your behalf, detailing the proposed course. Independent study forms are available in the Instructional Services Office.

Cooperative Education (Work Experience)

Cooperative Education (Work Experience) is a nationally recognized program granting academic credit for various supervised work experiences.

Work Experience staff advise you in the program and assist you with registration.

Work Experience staff work with local employers to find learning and career opportunities and to secure future work stations. In addition, staff meet with you and your employer at the job site at least twice during the academic quarter to discuss your progress toward completing the learning objectives.

There are two different kinds of work experience credits at Clatsop Community College. The basic course, CWE 80 Introduction to Work Experience, grants you credit for learning basic work skills and emphasizes dependability and good work habits. A joint program with local high schools uses this class extensively.

Professional-technical and academic students enroll in a work experience class designated by the alpha code of their program and the course number 280.

Companion Classes
A field experience seminar course is offered to augment the cooperative education experience. If you are enrolled in a cooperative education course, you must take the field seminar course concurrently, unless you have completed it in a previous term.

Job Placement
The cooperative education office receives job opportunities from employers and will contact instructors and students directly or through the student newsletter. The Employment Department has placed a touch screen computer with all job listings for local, state, and national employment opportunities at Fertig Hall and the South County Center in Seaside.

College jobs and local positions are posted on the campus electronic mail system available through your advisor and the Student Government office.

Credit for Prior Learning

You may earn college credit by documenting learning acquired through job experiences, travel, hobbies and family and civic responsibilities. Enrolling in CPL 120, Credit for Prior Learning, will help you learn how to develop a portfolio of your activities. A maximum of 22 credits earned through development of your portfolio and six credits CPL 120 may be applied to an associate degree.

The CPL course is an online course taught by an instructor at another campus. You must have your own computer, modem, internet service provider and web browser software. Call the Learning Resource Center at 338-2341 for information and permission to register. Textbooks are only available through the Chemeketa Community College Bookstore at (503) 399-5131.

Dora Badollet Learning Resource Center

Located in the center of campus, the College Learning Resource Center (LRC) offers a striking view of the Columbia River from every study carrel. The services of the LRC include Distant Education, Media Services, Interlibrary Loan and the collections of the Library. Librarians and technical staff are available to instruct students in research methods, use of information technology and in the location of materials.

The collections of the library are in a variety of formats and cover topics in the liberal arts, technical and vocational fields. Formats include books, periodical, microfilm and non-print (videotape, compact disks, and audiotapes) collections. Access to materials beyond the LRC collections is extended through Internet based services and other computer based search services.

The LRC is continually adding new resources and services. The automated library system is accessible from our website (http://library.clatsop.cc.or.us) which makes research of the LRC collections possible around the clock.

Graduation Requirements

In order to graduate from Clatsop Community College you must file a graduation petition with the Records and Registration Office. Petitions must be submitted to the Records Office one term prior to the term you plan to graduate. Due dates for petitions are printed in the Student Handbook, which is available in Student Services.

No student shall be issued a degree or certificate who has not earned a cumulative grade point average of 2.0 for all Clatsop College coursework and completed a minimum of ninety pre-approved credits for an Associate Degree or a minimum of forty-five credits for a Certificate. Please check specific degree and certificate requirements. You must be admitted to a degree or certificate program to graduate. (See Admissions Office in Towler Hall, Room 200). You must also attend the College at least two terms, including the last term, and complete at least twenty-four credits at Clatsop.

You may graduate under the academic requirements in effect in any year in which you were enrolled in any course which counts toward a Clatsop Community College degree or certificate, but not to exceed five years prior to your graduation date. You may not mix requirements from two or more academic years.

Multiple Degrees
You may earn more than one degree at Clatsop Community College, except that you may not receive an AGS (Associate in General Studies) degree simultaneously with or after receiving any other degree at Clatsop unless you complete 24 additional and distinct credits from the previous degree. You must also meet all requirements for each degree.

Student Responsibility
It is the responsibility of you, the student, to know and to observe the requirements of your curriculum and the rules governing academic work. Although your advisor will attempt to help you make wise decisions, the final responsibility for meeting the requirements for graduation rests with you.

Graduation Fees
A $20 graduation petition fee is payable to the business office, and payment is required prior to submitting your graduation petition to the Records and Registration office.

Learning Resource Center

Graduation Requirements

"I have learned a lot while working in the Cooperative Work Experience program. The more experience I get, the more excited I am about the field that I have chosen for myself."
Lori Gunderson

Honors and Awards

Honors and Awards

Clatsop Community College recognizes superior academic achievement and distinctive service by:

Transcripting term honors and recognition:

- Dean's List (12 or more graded credits; 3.75 to 4.00 grade point average {GPA})
- Honor Roll (12 or more graded credits; 3.5 to 3.74 GPA)
- Phi Theta Kappa eligibility (12 or more graded credits and a 3.50 GPA first term; 3.00 GPA thereafter)

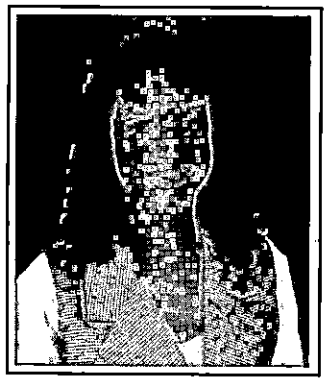
Graduation With Honors/High Honors

At commencement, qualifying students are recognized as meeting requirements for graduation with honors or high honors. To qualify for honors, you must have a cumulative grade point average of 3.50 to 3.74. To qualify for high honors, you must have a cumulative grade point average of 3.75 to 4.00. Transfer work may meet requirements for coursework for which you earned a grade of "C" or better but is not computed in your cumulative grade point average.

Conferring other honors and awards:

- ASBG recognition cords (ASBG Officers at graduation)
- ASBG President's Cup
- Student Body Plaque
- Helen Wheeler Extra Mile Award
- Unsung Student Hero Award
- Instructional Council trophy (highest Clatsop GPA for graduating associate degree recipient)
- Outstanding Club Award
- Certificates of Appreciation
- ASBG and other scholarships
- College President's Cup
- Department awards
- Commencement Marshals (two degree seeking students with 45 or fewer credits with highest cumulative Clatsop GPA as of end of winter term)
- Phi Theta Kappa cords at graduation

Many of the above awards are conferred in a special Awards Convocation held each May to recognize student achievements.



"CCC offers various opportunities for the community. Personal attention to needs and interest in excelling is very evident here. I am proud to be the 1999-2000 ASBG President and wouldn't trade the experience for anything!"

Jennifer Lynne

Academic Advising

When you are admitted to a certificate or degree program, the college provides you an academic advisor to assist with your exploration of career and educational goals; selection of a major and degree; development of a plan for completing degree requirements; and selection of courses each term. Advisors can also provide referrals to help you resolve financial or personal issues, and assist you in understanding institutional policies and procedures.

Career Services

Career assessment, exploration and planning is available if you are interested in discovering how your personal interests, values, and abilities relate to career choice. Your readiness for the workplace or ability to successfully transfer to a four-year college or university may depend on your early identification of career choice and an appropriate educational major. Services available include individualized counseling with a qualified career counselor, a course in career planning, assistance in working with the Oregon Career Information System software, and personality and interest assessments. Career Services is located in the Student Educational Assistance Center (SEA), Fertig Hall room 24.

Counseling

Student Services staff or advisors are available to help and support you. Staff can set up orientations and admission testing; discuss scholarships, financial aid, and personal financial matters; help you with unresolved miscommunications with faculty or college staff; answer general questions about college requirements, academic programs, advising, and various campus services and offices; as well as help you use career planning materials.

In addition, professional counseling is available to help you sort out personal difficulties affecting your college work; for example, family or relationship dilemmas, difficulty making or following through on decisions, or dealing with addiction, abuse, or emotional problems may be addressed. You may also ask counseling staff about campus support groups, self-help courses, and community special services.

Plus Program

This is a federally funded program to help disadvantaged students succeed at Clatsop. If appropriate we also help program participants transfer to four year colleges and universities. Services may include: Academic planning, career assessment, personal counseling, transfer assistance, tutoring for mathematics, and various free classes/workshops from college orientation to four-year transfer planning. Applications and information are available from the Plus Program office in 212 Towler Hall.

Students with Disabilities

The college is committed to providing equal opportunities for students with disabilities throughout the college community. Students with documented disabilities are entitled to reasonable accommodations under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Our philosophy is to maximize your independence and self-reliance, while making available a variety of support options, to assist you in achieving your educational and/or vocational objectives. To receive services you must submit documentation of your disabling condition(s) to the Disabilities Specialist. **To initiate support services, please contact Services for Students with Disabilities in Patriot Hall 330 or call the office at 338-2474.** Official documentation will be reviewed by the Disabilities Specialist prior to receiving accommodations. It is your responsibility to self identify and make the request for services.

Services may include:

- Campus orientation
- Registration assistance
- Academic advising and counseling
- Reasonable and appropriate classroom accommodations
- Test taking facilitation
- Learning style assessment
- Tutorial support
- Student advocacy
- Resource and referral services
- Special adaptive equipment

STUDENT SERVICES

SEA Services Tutoring

Tutoring in almost all subject areas is provided for enrolled students in SEA (Student Educational Assistance) Services located in Fertig Hall room 24. Individual and group tutoring, study groups, computers for word processing and career counseling are some of the services offered in the SEA. Specialized tutoring in math and writing is offered every day with extended hours during finals week. Tutoring in other subject areas is scheduled throughout the term. A qualified staff works closely with college instructors to support students, providing assistance in a relaxed atmosphere. The SEA offers special services for ESOL students and students with learning disabilities.

Students at all levels of study are welcome at the SEA. Appointments are not necessary and all tutoring is free. For more information, contact the College tutor coordinator.

Assessment Center

The Assessment Center is located in SEA Services, Fertig Hall room 24. The Assessment Center administers a variety of tests, including the college placement test (ASSET), pre-GED placement (BASIS), GED tests, and tests of the College Level Examinations Program (CLEP).

Tests for distance education coursework can also be taken in the Assessment Center by making arrangements with both the originating institution and the Assessment Center staff.

Tests are administered by appointment only. For more information call 338-2426.

Volunteer Literacy Tutor Program

The College offers training to students and community members interested in participating in the volunteer literacy tutor program. Trainings are offered twice a year and focus on both adult literacy and ESOL (English for Speakers of Other Languages). Participants in the trainings are qualified to tutor community members through the college program. For more information, call the Director of Developmental Education.

Veterans Services

The Veterans Coordinator in the Student Services Office assists veterans in applying for veterans educational benefits and provides information on Veterans Administration policies, procedures, and approved programs of instruction.

If you are receiving Veterans' Administration (VA) benefits, you are responsible for demonstrating satisfactory progress toward a degree or certificate in a VA-approved program of study. You must maintain a cumulative grade point average of 2.0. The VA will only pay for classes that advance you toward your established program goal.

As a Veteran, you must become an admitted student which requires:

1. Formal application for admission to the College.
2. Completion of the ASSET placement evaluation (unless waived by adequate transfer credit).
3. Having official transcripts of all your college credit earned at other schools sent to the admissions office so that an official credit evaluation can be done.
4. Attending a New Student Orientation and meeting with an academic advisor.

You are responsible for notifying the Veterans Coordinator of any change in courses attempted or credit load (for example adds or drops). Your failure to do so immediately may result in unnecessary overpayments that you must repay or deduct from future benefits.

While your application for Veterans Benefits is being processed by the Regional Veterans Office, you should be prepared to meet the costs of books and supplies, and living expenses. Financial Aid is another form of tuition assistance on campus.

"Maxine's" The Student Center

The cafeteria, bookstore, and ASBG (Associated Student Body Government) are located in the Student Center on the first floor of Patriot Hall. "Maxine's" is the heart of activity for students gathering for coffee breaks, meals, or visits with ASBG officers. The center features student art exhibits and special events each term.

Student Government Leadership Opportunities

The Associated Student Body Government (ASBG) is a nonprofit student organization that coordinates student activities on campus and provides assistance and service to the student population. Student Government consists of a three-member Executive Committee, a six-member Senate, and Representatives who serve as volunteers to Student Government.

Student government provides Clatsop Community College students with the opportunity to gain leadership skills and to help other students. Student government officers plan campus activities, develop the yearly budget, purchase equipment, hold elections, and participate in many community service events. They also serve as members of many of the campus committees to provide advocacy for students in campus decision-making.

For more information on how you can participate in student government, stop by the ASBG office on the first floor of Patriot Hall next to the cafeteria or call them at 338-2495.

Organizations and Activities

Out-of-class activities are as important for education as traditional course work. At Clatsop, there are a variety of recreation and social activities and cultural events throughout the year: films, speakers, concerts, plays, dances, barbecues, and more. If you have a special interest, you are invited to form a club and seek ASBG approval as a recognized student organization.

Such clubs and organizations formed for specific interests include:

- Phi Theta Kappa (national honors society)
- Associated Ceramic Artists (ACACC)
- Clatsop Nursing Students Assn. (CNSA)
- Kung Fu Club
- Foreign Language Club
- Jazz Club
- Student Liberated Art Movement (SLAM)
- Ski Club (Winter Sports)
- Lambada Club

Recreational Opportunities

The intramural sports program offers a variety of activities that will allow you to interact with other students outside the classroom and learn about local recreational opportunities. The program varies year to year depending on student interest. Activities could include city league sports, swim parties, bowling tournaments, and golfing days.

ASBG has equipment for you to use free of charge. A sample of equipment available for you to checkout includes a canoe, cross country skis, snowboards, tennis rackets, croquet sets and golf clubs. Contact ASBG for more information.

Students' Rights & Responsibilities

In accordance with federal, state, and local laws and Clatsop Community College's policies and procedures, certain rights and responsibilities apply to all registered students. The College publishes a student handbook to provide detailed information to you regarding your rights and responsibilities, policies governing privacy and disclosure of student records, and services for students. For information and a copy of the handbook, inquire at the Student Services Office, Towler Hall 200.

Student Code of Conduct

You are expected to conduct yourself in a manner compatible with the College's function as an educational institution. Any action or behavior that disrupts the orderly functioning of the College is prohibited. Actions such as disorderly conduct, verbal or physical harassment of another student or staff member, use, possession, or distribution of alcoholic beverages or other "controlled substances" are examples of violations of the College's Student Code of Conduct and are cause for disciplinary action. Examples of behaviors that disrupt the functioning of the instructional process include, but are not limited to: academic dishonesty, plagiarism, furnishing false information, unauthorized copying of printed material or computer software, and failing to comply with directions of college staff acting in performance of their duties.

For more detailed information regarding the Student Code of Conduct and disciplinary procedures and for information regarding Student Grievance Procedures, see the Student Handbook.

1999-2000 Clatsop Community College
Oregon Community College Student Scholars

Clatsop Community College annually selects 2 students as Oregon Community College Student Scholars. The award is based on grades, classroom performance and contributions to the community, and includes a $1,000 scholarship to a four-year college. Congratulations to 1999-2000 recipients, Dan Berger and Barbara Darby.

"Attending Clatsop Community College has been a positive experience for me, as the instructors provide an academic environment that fosters learning through individual attention to each students educational needs. Working in the criminal justice field for several years prior to attending college, my education at CCC has helped me better understand the field I work in, complementing my practical knowledge with theories and subjects related to my work. I plan on eventually transferring to Western Oregon University to pursue a bachelor's degree in Criminal Justice."

Dan Berger

"I appreciate the superior learning opportunities and the way I am treated as an individual by the faculty and staff of Clatsop Community College. I will be graduating in June with an Associate in General Studies degree with an emphasis in journalism and computer science. My goal is to transfer to the University of Oregon and pursue being a freelance journalist."

Barbara Darby

Academic Programs

Associate In Arts - Oregon Transfer Degree

You have the opportunity to broaden your creative and critical knowledge through an Arts and Sciences program. You might enroll in the lower division program to explore several fields of study to clarify your educational and professional goals. Or you might seek a broad general education as a foundation in preparation for specialization during your junior and senior years at a four-year institution.

Many students attend Clatsop Community College for one or more terms and then transfer to a four-year college. The Associate in Arts - Oregon Transfer Degree allows you to complete lower division requirements at Clatsop Community College. If you complete this degree and are accepted at Oregon public universities, you are admitted as having completed all the lower division General Education requirements for a baccalaureate degree; however, some departments within Oregon University System institutions may require additional courses for admittance with junior standing.

You should confer with your advisor at Clatsop and with the institution to which you expect to transfer concerning the requirements of their baccalaureate major. Additional classes which are not on following lists may transfer as electives. The receiving school makes the decision concerning which classes it will accept for credit, which apply to its major and degree requirements, which classes transfer as electives, and which classes it will not accept. In any case, it is your responsibility to confer with the school to which you intend to transfer.

General Requirements

Writing — **Nine credits** (three classes) with a "C" or better in each class from the following courses: WR 121 English Composition and WR 122 English Composition and *either* WR 123 English Composition *or* WR 227 Technical Report Writing.

Mathematics — **Four credits** or more with a "C" or better in MTH 105 Introduction to Contemporary Mathematics or a higher numbered math course. This course cannot be used to meet the Math/Science requirement.

Oral Communication — **Three credits** (one class) with a "C" or better from the following courses: SP 111 Fundamentals of Public Speaking, SP 112 Persuasive Speech, or SP 219 Small Group Discussion. This course cannot be used to meet the Arts & Letters requirement.

Distribution Requirements

Arts & Letters

A minimum of 12 credits, chosen from at least two disciplines, with no more than 9 credits from one discipline. (CHOOSE FROM THE FOLLOWING LIST)

ART 115,116,117	Basic Design	3 ea	ENG 201,202,203	Shakespeare	3 ea
ART 204,205,206	History of Western Art	3 ea	ENG 204,205,206	Survey of English Literature	3 ea
ART 211,212,213	Survey Visual Art of 20th Century	3 ea	ENG 220	Non-European Minority Literature	3
ENG 104,105,106	Introduction to Literature	3 ea	ENG 221	Intro to Children's Literature	3
ENG 107,108,109	World Literature	3 ea	ENG 253,254,255	Survey of American Literature	3 ea
ENG 110	Introduction to Film Studies	3	ENG 260	Intro to Women's Literature	3

(continued on the next page)

FR 201,202,203	Second Year French	4 ea
GER 201,202,203	Second Year German	4 ea
PHL 101	Philosophical Problems	3
PHL 102	Ethics	3
PHL 103	Critical Reasoning	3
R 201,202,203	Great Religions of the World	3 ea
SP 111	Fundamentals of Public Speaking	3
SP 112	Persuasive Speech	3
SP 115	Intro. to Intercultural Communication	3
SP 219	Small Group Discussion	3
SPAN 201,202,203	Second Year Spanish	4 ea
TA 101	Introduction to Theatre	3
TA 121,122,123	Fundamentals of Acting	3 ea
WR 241,242,243	Creative Writing	3 ea
WR 249	Writing Children's Books	3
WR 270	Literary Publications	3

Social Science

A minimum of 15 credits, chosen from at least two disciplines, with no more than 9 credits from one discipline. (CHOOSE FROM THE FOLLOWING LIST)

ANT 110	General Anthropology: Cultural	3
ANT 150	General Anthropology: Archeological	3
ANT 170	General Anthropology: Physical	3
ANT 232	Native North Americans	3
CJ 100	Survey of Criminal Justice	3
CJ 101	Introduction to Criminology	3
CJ 110	Introduction to Law Enforcement	3
CJ 114	Gender, Race, Class & Crime	3
CJ 120	Introduction to the Judicial Process	3
CJ 130	Introduction to Corrections	3
EC 115	Introduction to Economics	3
EC 201,202	Principles of Economics	4 ea
GEO 100	Introduction to Physical Geography	3
GEO 110	Intro to Cultural & Human Geography	3
GEO 120	World/Regional Geography	3
GEO 130	Economic/Resource Geography	3
HFS 226	Growing Years	3
HS 101	Alcohol Use, Misuse and Addiction	3
HS 102	Drug Use, Misuse and Addiction	3
HS 154	Community Resources	3
HS 201	Family Alcoholism/Addiction	3
HS 205	Youth Addiction	3
HST 101,102,103	History of Western Civilization	3 ea
HST 201,202,203	History of the United States	3 ea
PS 201, 202	American Government	3 ea
PS 203	State and Local Government	3
PS 205	International Politics	3
PSY 101	Psychology of Human Relations	3
PSY 201,202,203	General Psychology	3 ea
PSY 215	Intro. to Developmental Psychology	3
PSY 216	Social Psychology	3
PSY 219	Introduction to Abnormal Psychology	3
PSY 231	Introduction to Human Sexuality	3
SOC 204	General Sociology: Introduction	3
SOC 205	General Sociology: Social Issues	3
SOC 225	General Sociology: Social Problems	3
SOC 210	Marriage, Family & Intimate Relations	3
SOC 213	Minorities: Dealing with Diversity	3
SOC 221	Juvenile Delinquency	3
SOC 223	Sociology of Aging	3

Science/Mathematics

A minimum of 15 credits (including at least 12 credits in biological or physical sciences with laboratories) chosen from at least two disciplines. (CHOOSE FROM THE FOLLOWING LIST)

*BI 101,102,103	General Biology	4 ea
*BI 201,202,203 * 211,212,213	General/Principles of Biology	4 ea
BI 222	Human Genetics	3
*BI 231,232,233	Human Anatomy and Physiology	4 ea
*BI 234	Introductory Microbiology	4
*BOT101	Botany	4
*CH 104,105,106	Introductory Chemistry	4 ea
*CH 221,222,223	General Chemistry	4 ea
CS 161	Computer Science I	4
CS 162	Computer Science II	4
CS 171	Principles of Computer Organization	4
CS 260	Data Structures	4
CS 271	Computer Architecture	4
CS 279M	Network Management-LAN NT	3
CS 279N	Network Management-LAN Novell	3
CSB 133	Beginning Visual Basic Prog.	3
CSB 233	Advanced Visual Basic Prog.	3
CSB 234	Visual Basic III	4
*ES 160	Techniques in Environmental Information Analysis	4
G 145	Field Geology of Oregon	3
*G 201,202,203	Geology	4 ea
*GS 104,105,106	Physical Science	4 ea
GS 161	Field Biology of Oregon	3
MTH 105	Intro. to Contemporary Mathematics	4
MTH 111	College Algebra	4
MTH 112	Elementary Functions (Trigonometry)	4
MTH 211,212,213	Fundamentals of Elementary Mathematics I,II,III	3 ea
MTH 241	Calculus for Management and the Social Sciences	4
MTH 243,244	Intro. to Probability and Statistics	4 ea
MTH 251,252,253	Calculus I,II,III	4 ea
MTH 254	Vector Calculus I	4
MTH 255	Vector Calculus II	4
MTH 256	Differential Equations	4
*PH 201,202,203	General Physics	5 ea
*PH 211,212,213	General Physics with Calculus	5 ea

*courses which meet the lab science requirements of the AA-OT

Electives Limitations on electives:

Electives must be from the approved list - appendix A, pages 113 and 114.

Professional/Technical courses - A total of 12 credits of courses numbered 100 or higher from the list on pages 115 and 116.

Physical Education - A maximum of six credits.

Individual Music Lessons (MUP) - A maximum of 12 credits on a major instrument and six credits on a secondary instrument may be applied to an associate degree.

Cooperative Work Experience - no more than 18 credits of combined worksite and seminar courses.

Institutional Requirements

Complete a minimum of 90 credits of approved lower division collegiate courses listed on pages 113 and 114.

Earn a cumulative grade point average of 2.00 or above for all college work which includes applicable credits earned at other accredited colleges and universities.

Earn a grade point average of 2.00 or above for all Clatsop Community College coursework.

Attend at least two terms, including the last term, and complete at least 24 credits at Clatsop Community College.

Foreign Language

Students, who have graduated from high school or completed a high school equivalency program in 1997 or after, must meet one of the following requirements for admission to an Oregon University System institution: *either,*

1) two years of the same high school level language, *or*
2) two terms of college level language with a grade of "C" or better (may be first year language).

Associate of Arts - Oregon Transfer Degree Worksheet

The Oregon Transfer Degree allows students to complete lower division (freshman and sophomore) degree requirements at Clatsop. Students who complete this degree and are accepted at Oregon public universities and colleges are admitted as having completed all lower division and General Education requirements for a baccalaureate degree.

General Requirements - Complete all classes with a grade of C or better.

Writing

WR 121 English Composition Credit 3 Term

WR 122 English Composition Credit 3 Term

_____ Credit 3 Term

WR 123 or WR 227

Mathematics

_____ Credit 4 Term_____

MTH 105 or higher number math

Oral Communication

_____ Credit 3 Term_____

SP 111, SP 112 or SP 219 (113)

Distribution Requirements

Arts and Letters - 12 Credits

A minimum of twelve (12) credits, chosen from at least two disciplines, with no more than nine credits from one discipline. (Chosen from the list on the previous pages)

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

Social Science - 15 Credits

A minimum of fifteen (15) credits, chosen from at least two disciplines, with no more than nine credits from one discipline. (Chosen from the list on the previous pages)

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____

Science/Mathematics - 15 Credits

A minimum of fifteen (15) credits (including at least twelve credits in biological or physical sciences with laboratories) chosen from at least two disciplines. (Chosen from the list on the previous pages)

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____

Electives

Complete electives to bring the total credits to 90. All elective credit must be from the approved transfer list, appendix A, pages 113 - 114. A total of 12 credits of Professional/Technical courses numbered 100 or higher from the list on pages 115 - 116 may be applied. Students are limited to a maximum of 6 hours of physical education, no more than 18 credits of combined worksite and seminar Cooperative Work Experience courses, and in individual music lessons (MUP), a maximum of 12 credits on a major instrument and 6 credits on a secondary instrument.

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

_____ Credit____ Term_____ _____ Credit____ Term_____

Academic Programs

Associate in General Studies

The General Studies degree provides students with the opportunity to design a program in broad interdisciplinary areas. Students may select one of two options. One option provides an emphasis in an Applied Science program. The second option is to create a liberal arts cluster which may facilitate transfer to a baccalaureate degree program at a four-year institution. The general studies degree normally requires two years of study.

Option A General Studies with an emphasis in an Applied Science program.

Complete two-thirds or 67 percent of the technical course credits in a specific Applied Science program to include the required core courses for all areas of emphasis (see appendix C on page 117). Technical option credits may be applied to the 67 percent minimum, but they cannot exceed the number specified in the program.

Complete the General Education Requirements as specified in the Applied Science program.

Writing	**Six credits** (two classes) with a C or better in each class from the following: a. Either WR 40 English Fundamentals or WR 121 English Composition **and** b. Either WR 121, 122, 123 English Composition ; WR 227 Technical Report Writing; BA 214 Business Communications; or a course designated by the specific Applied Science program.
Mathematics	**Four credits,** with a C or better, in MTH 65 Mathematics for the Applied Sciences or MTH 95 Intermediate Algebra or a higher numbered math course.
Humanities and/ or Social Sciences	**Six credits** of Humanities and/or Social Science courses from the Arts and Letters and Social Science lists on pages 25 - 26.
Computer	**One credit** or more of computer-related courses as designated in the specific Applied Science program.
Human Relations	As designated by the specific Applied Science program.

Option B General Studies with an area of concentration.

Complete 36 credits or more from a cluster of related courses the student and his/her adviser identify. They should identify the cluster courses as soon as possible after enrollment, but no later than the term prior to the term in which he/she plans to graduate.

Complete the following General Education Requirements:

Writing	**Six credits** (two classes) with a C or better in each class from the following: a. Either WR 40 English Fundamentals or WR 121 English Composition **and** b. Three credits from the following: WR 121, 122, 123 English Composition ; WR 227 Technical Report Writing; BA 214 Business Communications.
Mathematics	**Four credits,** with a C or better, in MTH 65 Mathematics for the Applied Sciences or MTH 95 Intermediate Algebra or a higher numbered math course.
Humanities and/ or Social Sciences	**Six credits** of Humanities and/or Social Science courses from the Arts and Letters and Social Science lists on pages 25 - 26.

Institutional Requirements

- Complete a minimum of 90 credits of approved coursework which includes alpha-numeric courses and non-transfer courses numbered 9.000-9.999.
- Earn a cumulative grade point average of 2.00 or above for all college work which includes applicable credits earned at other accredited colleges and universities.
- Earn a grade point average of 2.00 or above for all Clatsop Community College coursework.
- Apply no more than a maximum of 24 credits of pass grades toward an Associate Degree.
- Attend at least two terms, including the last term, and complete at least 24 credits at Clatsop Community College.

Applied Science Programs

Associate in Applied Science

Applied Science programs provide the skills and work experience you'll need to qualify for employment. With the help of a local industry advisory committee, each program is carefully planned to meet the needs of the current job market. Instruction is provided by trained, experienced professionals, and classes are conducted in an industry-like work setting. The Cooperative Work Experience program offers credit for on-the-job experience with local employers in the field of your choice.

Applied Science programs include general education courses to assure that you have a basic understanding of writing, mathematics, human relations, and social sciences and/or humanities. While courses are not specifically intended for transfer to a four-year college or university, certain courses are currently accepted for transfer credit at specific institutions. In most cases, Professional/ Technical courses can be transferred to other community colleges which offer similar programs. If you are planning to transfer, consult with appropriate representatives of the school you are planning to attend and with your Clatsop Community college advisor.

We offer one-year, two-year, or specialized training programs depending on the type and amount of preparation required for entry-level employment or professional renewal. Several options are available in many programs. Individuals holding state certifications in programs such as Fire Science and Emergency Medical Technician may be able to get credit based on their previous training. See a counselor or your advisor as you begin planning a specific program. Specific degree and certification requirements are listed below.

General Requirements

Writing	**Six credits** (two classes) with a C or better in each class from the following: a. Either WR 40 English Fundamentals or WR 121 English Composition **and** b. Either WR 121, 122, 123 English Composition ; WR 227 Technical Report Writing; BA 214 Business Communications; or a course specified by the specific Applied Science program.
Mathematics	**Four credits,** with a C or better, in MTH 65 Mathematics for the Applied Sciences or MTH 95 Intermediate Algebra or a higher numbered math course.
Humanities and/ or Social Sciences	**Six credits** of Humanities and/or Social Science courses from the Arts and Letters and Social Science lists on pages 25 - 26.
Computer	**One credit** or more of computer-related courses as specified in the specific Applied Science program.
Human Relations	As specified by the specific Applied Science program.

Program Courses

Required Courses	As prescribed in the specific Applied Science program.
Technical Options	Technical options provide student choice within an approved program. The number of technical option credits available is specified by the individual Applied Science programs.
Electives	The number of elective credits is specified by the specific Applied Science program. Students have the opportunity to choose these courses from the list of approved courses.

Institutional Requirements

- Complete a minimum of 90 credits of approved coursework which includes alpha-numeric courses and non-transfer courses numbered 9.000-9.999.
- Earn a cumulative grade point average of 2.00 or above for all college work which includes applicable credits earned at other accredited colleges and universities.
- Earn a grade point average of 2.00 or above for all Clatsop Community College coursework.
- Apply no more than a maximum of 24 credits of pass grades toward and Associate Degree.
- Attend at least two terms, including the last term, at Clatsop Community College.

APPLIED SCIENCES PROGRAM INDEX

ACCOUNTING
ASSOCIATE DEGREE

Job Description:
This program prepares people for entry level positions as accounting clerks, junior accountants, or bookkeepers who maintain financial records needed for business management. They prepare financial statements, payroll records and reports, and keep books and records up-to-date. They put together reports to show statistics such as cash receipts and expenditures, accounts payable and receivable, profit and loss, and financial position. They may complete worksheets, bank reconciliations, inventory reports, depreciation schedules, and income tax forms. Knowing how to use the computer is essential.

Employment Opportunities:
The opportunities depend upon the economy, replacement needs, and continued use of accounting and bookkeeping services in public, private, and governmental organizations. The use of computers to perform routine accounting and bookkeeping functions is present in all different sizes of organizations.

Potential Earnings:
The average entry wage is about $1,500 per month and the average maximum wage is about $2,831 per month.

First Year

Course Number	Course Title	Credits F	W	S
BA 101	Introduction to Business		3	
BA 104	Business Math/Electronic Calculators		4	
BA 285	Human Relations in Business			3
CSL 107	Spreadsheets			3
MTH 65	Math for Applied Sciences * ***or***	4		
MTH 95	Intermediate Algebra*	(5)		
OA 121	Keyboarding I**	3		
SP 111	Fundamentals of Public Speaking			3
WR 40	English Fundamentals*** ***or***			3
WR 121	English Composition***			(3)
OA 104	English for Business		4	
BA 131, 132, 133	Accounting Procedures I,II,III +	3	3	3
CS 131	Intro to Computer Info. Systems	4		

Second Year

Course Number	Course Title	Credits F	W	S
BA 177	Payroll and Business Tax Accounting ***		3	
BA 214	Business Communications***			3
BA 226	Introduction to Business Law I	4		
BA 211, 212, 213	Principles of Accounting I,II,III +	4	4	4
BA 250	Small Business Management		3	
BA 256	Income Tax ***	3		
BA 222	Financial Management ***			3
EC 115	Introduction to Economics			3
PHL 102	Ethics		3	
BA 280	Coop Work Experience - Accounting			2
BA 281	Coop Work Experience Seminar			1
	Technical Options****		3	
	Electives	4		

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Students must attain a typing proficiency equivalent to OA 121 Keyboarding.
Those who meet this requirement may substitute three credits of general electives.
*** Minimum grade C or higher for successful completion of program.
****Students must complete 3 credits of technical options to be selected from the list on page 40.
\+ C grade or better required in preceding course to take next level.

BUSINESS MANAGEMENT
ASSOCIATE DEGREE

Job Description:
Business management is a term that collectively describes those who have management responsibilities in an organization. They may own and/or operate small firms or work for larger firms that sell goods and services or manufacture products. Their duties may include marketing, managing finances, supervising employees, purchasing goods and services, and sales.

Employment Opportunities:
Employment in this field is expected to remain steady. Prospects are very good for those who want to own and manage a business, especially if they have determination, talent, and a unique service or product.

Potential Earnings:
A typical entry level wage could be $14,000 per year and, depending on experience, maximum may go to $40,000 or more per year.

First Year

Course Number	Course Title	Credits F	W	S
BA 101	Introduction to Business		3	
BA 104	Business Math/Electronic Calculators		4	
BA 211, 212	Principles of Acct. I,II *or* ***	4	4	
BA 131, 132, 133	Accounting Procedures I,II,III *** (see "Note")	(3)	(3)	(3)
BA 214	Business Communications**			3
CS 131	Introduction to Computer Information Systems	4		
MTH 65	Math for Applied Sciences * *or*	4		
MTH 95	Intermediate Algebra*	(5)		
WR 121	English Composition**		3	
OA 104	English for Business	4		
SP 111	Fundamentals of Public Speaking			3
OA 201	Word Processing I		3	
CSL 107	Spreadsheets			3
MIC 207	Presentation Software			3

Second Year

Course Number	Course Title	Credits F	W	S
CSD 122	Beginning Database Program Development	3		
BA 206	Management Fundamentals	3		
BA 226	Introduction to Business Law I	4		
BA 223	Marketing		3	
BA 224	Human Resource Management		3	
BA 227	Introduction to Business Law II		3	
BA 250	Small Business Management		3	
BA 230	Management Info. Systems			3
EC 115	Introduction to Economics			3
BA 285	Human Relations in Business			3
BA 280	Coop Work Experience - Business Administration			2
BA 281	Coop Work Experience Seminar: Business Administration			1
	Technical Options ****	3		3
	Electives	2	3	

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum grade C or higher.
*** Grade C or better required in preceding courses to take next level.
****Students must complete 6 credits of technical options to be selected from the list on page 40.

Note: Students who select Principles of Accounting sequence must complete two terms (BA 211, 212) and will need to complete an additional elective credit. Students who select Accounting Procedures sequence must complete three terms (BA 131, 132, 133).

MICROCOMPUTER APPLICATIONS
1 YEAR CERTIFICATE PROGRAM

Job Description:
The Microcomputer Applications program prepares students for careers which involve technology in roles of customer/user support, network or applications operations, and data entry. The program offers a One-Year Certificate and could lead to jobs such as data entry, customer service, word processing, and beginning network and applications operations.

Employment Opportunities:
Microcomputers are used in a variety of business, industrial, educational, and agency settings. This program prepares students to use both packaged and specially designed systems.

Potential Earnings:
Salary ranges for individuals with the One-Year Certificate may range from $18,000 to $22,000 per year depending upon location, size of company, and the specific job descriptions.

Course Number	Course Title	Credits F	W	S
OA 104	English for Business	4		
CS 131	Introduction to Computer Information Systems	4		
MTH 65	Math for Applied Sciences * *or*	4		
MTH 95	Intermediate Algebra *	(5)		
OA 201	Word Processing I	3		
OA 202	Word Processing II		3	
CSL 107	Spreadsheets		3	
CSD 122	Beginning Database Program Development		3	
MIC 178	Using the Internet for Communication and Research		3	
MIC 207	Presentation Software		3	
CSD 275	Advanced Database Program Development			3
CS 278	Data Communications and Networking			3
BA 285	Human Relations in Business			3
WR 40	English Fundamentals ** *or*			3
WR 121	English Composition **			(3)
	Technical Options ***			3

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum grade C or higher.
*** Students must complete technical options chosen from either the Science/Mathematics List on page 26, or the Business Technical Options List on page 40.

MICROCOMPUTER BUSINESS APPLICATIONS ASSOCIATE DEGREE

Job Description:
The Microcomputer Applications program prepares students for careers which involve technology in roles of customer/user support, network or applications operations, and data entry. The two-year AAS Degree in Microcomputer Business Applications could lead to employment opportunities in automated bookkeeping, database administration, network project teams and junior analyst positions in network systems, customer/user support and microcomputer applications.

Employment Opportunities:
Microcomputers are used in a variety of business, industrial, educational, and agency settings. This program prepares students to use both packaged and specially designed systems.

Potential Earnings:
Salary ranges for individuals completing the two-year AAS Degree may range from $18,000 to $29,000 per year. Salary potential and job availability in this field have expanded in the last five years. This expansion is projected to continue over the next five years, especially for employees holding degrees.

First Year

Course Number	Course Title	Credits F	W	S
OA 104	English for Business	4		
CS 131	Introduction to Computer Information Systems	4		
MTH 65	Math for Applied Sciences * ***or***	4		
MTH 95	Intermediate Algebra *	(5)		
OA 201	Word Processing I	3		
MIC 178	Using the Internet for Communication and Research		3	
OA 202	Word Processing II		3	
WR 40	English Fundamentals ** ***or***		3	
WR 121	English Composition **		(3)	
CSD 122	Beginning Database Program Development		3	
CSL 107	Spreadsheets		3	
CSD 275	Advanced Database Program Development			3
MIC 171	Intermediate Spreadsheets			3
CS 278	Data Communications and Networking			3
BA 285	Human Relations in Business			3
CS 125GR	Computer Graphics			3

Second Year

Course Number	Course Title	Credits F	W	S
OA 205	Desktop Publishing	3		
BA 131, 132	Accounting Procedures ***or*** +	3	3	
BA 211, 212	Principles of Accounting + (see "Note")	(4)	(4)	
BA 228	Computer Accounting Applications			3
MIC 207	Presentation Software		3	
MIC 210	Microcomputer Integrated Applications **		4	
BA 214	Business Communications			3
CS 280	Coop. Work Experience - Microcomputer Applications			2
CS 281	Coop. Work Experience Seminar- Microcomputer Applications			1
MIC 295	Microcomputer Directed Project			4
SP 111	Fundamentals of Public Speaking ***or***	3		
SP 219	Small Group Discussion	(3)		
	Social Science/Humanities ****	3	3	
	Technical Options *** (see "Note")	3	3	
	Electives (see "Note")			1

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum grade C or higher.
*** Students must complete technical options chosen from either the Science/Mathematics List on page 26, or the Business Technical Options List on page 40.
**** Selected from Arts and Letters, and Social Science Lists on page 25-26.
\+ C grade or better in preceding courses to take next level.

Note: Students who complete the Principles of Accounting sequence (BA 211, 212) will not have to complete the two (2) credits of Electives.

MICROCOMPUTER PROGRAMMING & NETWORKING ASSOCIATE DEGREE

Job Description:
The Microcomputer Programming & Networking program prepares students for careers that involve technology in roles of technical support, network operations and administration, applications development, and World Wide Web site development and maintenance. The two-year AAS degree in Microcomputer Programming and Networking could lead to employment opportunities as network technicians, network administrators, programmers, database developers, web site developers/designers, or in customer/user technical support.

Employment Opportunities:
Microcomputer programming and networking skills are needed in a variety of business, industrial, educational, and agency settings. This program prepares students to provide hardware and software solutions for a variety of business and technical problems.

Potential Earnings:
Salary ranges for individuals completing the two-year AAS Degree may range from $20,000 to $34,000 per year. Salary potential and job availability in this field have expanded in the last five years. This expansion is projected to continue over the next five years, especially for employees holding degrees.

First Year

Course Number	Course Title	Credits F	W	S
CS 131	Introduction to Computer Information Systems	4		
CS 161	Computer Science I	4		
CS 162	Computer Science II		4	
CS 260	Data Structures			4
CS 125GR	Computer Graphics			3
BA 285	Human Relations in Business *or*		3	
PSY 101	Psychology of Human Relations		(3)	
CSD 122	Beginning Database Program Development		3	
MIC 178	Using the Internet for Communication and Research		3	
CSD 275	Advanced Database Program Development			3
CS 278	Data Communications and Networking			3
MTH 65	Math for Applied Sciences * *or*	4		
MTH 95	Intermediate Algebra *	(5)		
WR 121	English Composition **	3		
WR 227	Technical Writing			3
SP 111	Fundamentals of Public Speaking *or*		3	
SP 219	Small Group Discussion		(3)	

Second Year

Course Number	Course Title	Credits F	W	S
CSB 133	Beg. Visual BASIC Prog. and	4		
CSB 233	Adv. Visual BASIC Prog.		4	
CSB 234	Visual Basic III			4
CS 279M	Network Management - LAN NT	3		
CS 279N	Network Management - LAN Novell		3	
CS 125H	Beginning Web Site Design/Development and	3		
CS 135H	Advanced Web Site Design/Development *or*		3	
CS 171	Principles of Computer Organization and	(4)		
CS 271	Computer Architecture (see "Note")		(4)	
CS 280	Coop. Work Experience - Microcomputer Applications			2
CS 281	Coop. Work Experience Seminar - Microcomputer Applications			1
MIC 295	Microcomputer Directed Project			4
	Social Science/Humanities ****	3		3
	Technical Options ***	3	3	

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum grade C or higher.
*** Students must complete technical options chosen from either the Science/Mathematics List on page 26, or the Business Technical Options List on page 40.
**** Selected from Arts and Letters, and Social Science Lists on pages 25-26.

Notes:
1. Students may take either of the sequences: CS 125H and CS 135H or CS 171 and CS 271. (Computer Science transfer students and students seeking traditional Computer Science or detailed hardware knowledge should take the CS171/CS271 sequence.
2. Students completing the CS171/CS271 sequence will complete a total of 4 credits of technical options. Other students will complete a total of 6 credits of technical options.

GENERAL OFFICE
ONE-YEAR CERTIFICATE PROGRAM

Job Description:
General office clerks perform a variety of clerical duties essential to office operations. Most clerks type, file, and operate calculating and copying machines. They may send, open, route, or answer mail; answer telephones; and greet visitors. They may also compile records and reports, tabulate and post data, and compute wages, taxes, and commissions or payments. Operating word processing equipment efficiently is essential.

Employment Opportunities:
Demand is greatest for those who have good clerical skills and who understand the organization, activities, and terminology of the business. Knowledge of bookkeeping or processing of payroll records may also increase chances for a job.

Potential Earnings:
The average wage is $1,200 - $1,800 per month.

Course Number	Course Title	Credits F	W	S
BA 104	Business Math/Electronic Calculators		4	
BA 131	Accounting Procedures I	3		
BA 214	Business Communications**			3
MTH 65	Math for Applied Sciences * ***or***	4		
MTH 95	Intermediate Algebra*	(5)		
OA 116	Office Procedures +	4		
OA 201	Word Processing Procedures I		3	
OA 240	Filing and Records Management		3	
WR 40	English Fundamentals** ***or***		3	
WR 121	English Composition**		(3)	
OA 104	English for Business	4		
MIC 145	Intro to Integrated Software		3	
CS 101	Computer Fundamentals	1		
OA 280	Cooperative Work Experience-Office Administration			2
OA 281	Coop Work Experience Seminar+			1
	Technical Options***			7

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum grade C or higher.

*** Students must complete 4 credits of technical options to be selected from the list on page 40. Another 3 credits of technical options must be chosen from the following courses:
CSL 107 Spreadsheets, 3 credits
BA 132 Accounting Procedures II, 3 credits
CSD 122 Beginning Database, 3 credits

\+ Contains human relations components

BUSINESS PROGRAMS ~ *Office Systems*

ASSOCIATE DEGREE

Following a common first year, students may elect one or more of the options listed on these two pages to complete their associate degree program.

First Year

Course Number	Course Title	Credits F	W	S
BA 104	Business Math/Electronic Calculators		4	
BA 214	Business Communications**			3
MTH 65	Math for Applied Sciences * *or*	4		
MTH 95	Intermediate Algebra*	(5)		
WR 40	English Fundamentals** *or*		3	
WR 121	English Composition**		(3)	
OA 104	English for Business	4		
OA 116	Office Procedures +	4		
OA 122	Keyboarding II	3		
CS 101	Fundamentals of Computing	1		
OA 201,202	Word Processing Procedures I,II		3	3
OA 240	Filing and Records Management		3	
BA 285	Human Relations in Business		3	
SP 111	Fundamentals of Public Speaking *or*			3
SP 219	Small Group Discussion			(3)
	Social Science/Humanities ++			3
	Electives			1

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum grade C or higher.

\+ Contains human relations component

++ Selected from Arts and Letters and Social Science lists, pages 25-26. Successful completion of program requires following competencies be demonstrated:

50 WAM/4 errors 3-min straight-copy timing

35 PWAM correctly format/key/edit a 175-word (avg.-size letter) no errors/5 min

20 PWAM correctly format/key/edit 1-page, rough-draft document, no errors/10 min

Second Year Option

LEGAL WORD PROCESSING OPTION - Office Systems

Job Description:
Legal word processing secretaries perform various duties in the preparation of legal papers and correspondence including typing, taking shorthand or using transcribing machines, maintaining files, and performing other clerical duties such as making initial drafts of legal documents, recording trial dates, scheduling the appearance of witnesses, having evidence at trials, delivering subpoenas, and helping with legal research.

Employment Opportunities:
Employment is expected to grow rapidly due to the need to replace experienced secretaries who leave the field.

Potential Earnings:
The average wage is $2,225 per month.

Second Year

Course Number	Course Title	Credits F	W	S
BA 226,227	Intro to Business Law I,II	4	3	
BA 131, 132	Accounting Procedures I,II ***	3	3	
CSD 122	Beginning Database Program Development	3		
CSL 107	Spreadsheets	3		
OA 135	Legal Terminology		3	
OA 139	Legal Transcription			3
OA 225	Machine Transcription		3	
MIC 210	Microcomputer Integrated Applications		4	
OA 295	Office systems Directed Project			4
OA 280	Coop. Work Experience-Office Administration			2
OA 281	Coop. Work Experience Seminar - Office Administration			1
	Social Science/Humanities *			3
	Electives	3		

* Selected from Arts and Letters and Social Science lists, pages 25-26.

** Strongly recommend WR 227, Technical Report Writing; SPN 9752, Spanish Conversation: Business

*** C grade or better in preceding course to take next level.

Second Year Option

MEDICAL WORD PROCESSING OPTION - Office Systems

Job Description:
Medical word processing secretaries perform clerical duties and assist administrators in a medical office. They may do routine typing, prepare and maintain medical records and charts, and schedule appointments. In some offices they may be responsible for bookkeeping, billing patients, handling credits and collections, and preparing financial reports.

Employment Opportunities:
Employment is expected to grow rapidly due to the need to replace experienced secretaries who leave the field.

Potential Earnings:
The average wage is about $1,875 per month.

Second Year

Course Number	Course Title	Credits F	W	S
BA 131, 132	Accounting Procedures I, II ***	3	3	
CSD 122	Beginning Database Program Development	3		
CSL 107	Spreadsheets	3		
OA 140, 141	Medical Terminology I, II	3	3	
OA 142	Medical Transcription			3
OA 225	Machine Transcription		3	
MIC 210	Microcomputer Integrated Applications		4	
OA 295	Office Systems Directed Project			4
OA 280	Coop. Work Experience - Office Administration			2
OA 281	Coop. Work Experience Seminar- Office Administration			1
	Social Science/Humanities *	3		
	Technical Options			3
	Electives **		3	1

* Selected from Arts and Letters and Social Science lists, pages 25-26.

** Strongly recommend WR 227, Technical Report Writing; SPN 9752, Spanish Conversation: Business

*** C grade or better in preceding course to take next level

Second Year Option

OFFICE MANAGEMENT OPTION - Office Systems

Job Description:
Office managers organize and supervise office operations and procedures necessary for conducting business. They typically supervise such office operations as typing, bookkeeping, and filing. They coordinate clerical work schedules and maintain personnel, financial, and other office records. They may devise filing systems or office layouts to improve clerical work flow. Office managers may purchase office supplies and equipment and control the office budget.

Employment Opportunities:
In the long run, average employment growth is expected. Job openings are often filled by promotion of secretaries within the firm. Therefore, there are few openings available to entry level applicants.

Potential Earnings:
The average wage is $2,400 per month

Second Year

Course Number	Course Title	Credits F	W	S
CSL 107	Spreadsheets	3		
BA 131, 132	Accounting Procedures I,II ***	3	3	
BA 177	Payroll		3	
CSD 122	Beginning Database Program Development	3		
OA 225	Machine Transcription	3		
BA 250	Small Business Management		3	
MIC 210	Microcomputer Integrated Applications		4	
OA 295	Office Systems Directed Project			4
OA 280	Coop. Work Experience - Office Administration			2
OA 281	Coop. Work Experience Seminar - Office Administration			1
	Social Science/Humanities *			3
	Technical Options	3		3
	Electives **		3	1

* Selected from Arts and Letters and Social Science lists, pages 25-26.

** Strongly recommend WR 227, Technical Report Writing; SPN 9752, Spanish Conversation: Business

*** C grade or better in preceding course to take next level

BUSINESS PROGRAMS

BUSINESS TECHNICAL OPTIONS

Courses which are used to satisfy program requirements may not be used as technical options.

Course Number	Course Title	Credits
BA 101	Introduction to Business	3
BA 104	Business Math with Electronic Calculators	4
BA 131,132,133	Accounting Procedures I, II, III	3 each
BA 177	Payroll and Business Tax Accounting	3
BA 206	Management Fundamentals	3
BA 208	Management Principles and Strategies	3
BA 211,212, 213	Principles of Accounting I,II,III	4 each
BA 214	Business Communications	3
BA 222	Financial Management	3
BA 223	Principles of Marketing	3
BA 224	Human Resource Management	3
BA 226	Introduction to Business Law I	4
BA 227	Introduction to Business Law II	3
BA 228	Computer Accounting Applications	3
BA 230	Management Information Systems	3
BA 250	Small Business Management	3
BA 256	Income Tax	3
BA 280	Cooperative Work Experience: Accounting	1-18
BA 280	Cooperative Work Experience: Business Administration	1-18
BA 281	CWE Seminar: Bus. Mgmt./Accounting	1
BA 285	Human Relations in Business	3
CS 101	Fundamentals of Computing	1
CS 125GR	Computer Graphics	3
CS 125H	Beginning Web Site Design/Development	3
CS 131	Introduction to Computer Information Systems	4
CS 135H	Advanced Web Site Design/Development	3
CS 161	Computer Science I	4
CS 162	Computer Science II	4
CS 171	Principles of Computer Organization	4
CS 260	Data Structures	4
CS 271	Computer Architecture	4
CS 278	Data Communication & Networking	3
CS 279M	Network Management - LAN NT	3
CS 279N	Network Management - LAN Novell	3
CS 280	Cooperative Work Experience: Microcomputer Applications	1-18
CS 281	CWE Seminar: Microcomputer Appl.	1
CSB 133	Beginning Visual BASIC Programming	3
CSB 233	Advanced Visual BASIC Programming	3
CSB 234	Visual BASIC III	4
CSD 122	Beginning Database Program Development	3
CSD 275	Advanced Database Program Development	3
CSL 107	Spreadsheets	3
DRF 139	Technical Print Interpretation	3
DRF 185	Computers in Design	3
DRF 213	AutoCAD - Beginning	4
DRF 214	AutoCAD - Intermediate	4
DRF 215	AutoCAD - Advanced	4
DRF 217	AutoCAD Upgrade	1
EC 115	Introduction to Economics	3
EC 201,202	Principles of Economics	4 each
EC 280	Cooperative Work Experience: Economics	1-18
HD 110	Career Planning	2
MIC 145	Introduction to Integrated Software	3
MIC 171	Intermediate Spreadsheets	3
MIC 178	Using INTERNET for Communications and Research	3
MIC 207	Presentation Software	3
MIC 210	Microcomputer Integrated Applications	4
MIC 295	Microcomputer Directed Project	4
OA 104	English for Business	4
OA 116	Office Procedures	4
OA 120	Computer Keyboarding	1
OA 121,122	Keyboarding I,II	3 each
OA 124	Keyboarding Skill Building	3
OA 135	Legal Terminology	3
OA 139	Legal Transcription	3
OA 140,141	Medical Terminology I, II	3 each
OA 142	Medical Transcription	3
OA 201,202	Word Processing Procedures I,II	3 each
OA 205	Desktop Publishing	3
OA 225	Machine Transcription	3
OA 240	Filing and Records Management	2-3
OA 280	Cooperative Work Experience: Office Administration	1-18
OA 281	CWE Seminar: Business	1
OA 295	Office Systems Directed Project	4
WR 227	Technical Report Writing	3

"I can't believe the computer labs . . . how up-to-date and complete they are: It's amazing!"

Courtney Shepherd

CRIMINAL JUSTICE

ASSOCIATE DEGREE

Job Description:
The field of criminal justice includes jobs such as law enforcement officers, probation and parole officers, correctional officers, and juvenile workers. Law enforcement officers (police officers) are responsible for enforcing laws and maintaining order. Their primary duties are to protect life and property, prevent crimes, and arrest and help prosecute violators. They also prepare written reports of their activities and testify in court.

Parole and probation officers help legal offenders adjust to society. They provide support and guidance to help people identify and solve their problems. Parole officers work with persons who have been released from a correctional institution and spend most of their time counseling offenders who have returned to the community. Probation officers work with juveniles and adults who have been released by the court without sentence or imprisonment. They perform presentence investigations, write reports, give court testimony, and help their clients work toward long range goals.

Correctional officers and juvenile detention workers supervise and control residents in prisons, jails, detention centers, and halfway houses to maintain security and enforce discipline. They oversee the daily activities of inmates, give out work assignments, and help the inmates with specific tasks. They inspect the facilities to ensure that conditions are sanitary and secure. They may supervise inmates in transit and escort them to and from cells, courts, and other facilities. They settle disputes among inmates, prevent escapes, and search and count inmates. Juvenile workers handle case loads similar to parole and probation officers, but work with offenders under 18 years of age.

Employment Opportunities:
Law enforcement officers: Employment is expected to grow as fast as the average for all occupations in Oregon. Parole and probation officers: A bachelor's degree is a minimum requirement for entering this field. Although there is currently a surplus of applicants, the recent passage of a ballot measure may eventually lead to the hiring of many more parole officers. Correctional officers: Employment is expected to grow as fast as the average for all occupations in Oregon. Juvenile Workers: These workers may also need to complete a four-year college degree for some types of employment. Employment opportunities do exist for persons with two years of college training.

Potential Earnings:
The average entry level wage for law enforcement officers is $2,600 per month and the average maximum wage is $3,600 per month; the average wage for correctional officers is about $2,600 per month. The average wage for parole and probation officers and juvenile workers is $3,300 per month.

First Year

Course Number	Course Title	Credits F	W	S
CJ 100	Careers in Criminal Justice	3		
CJ 101	Introduction to Criminology	3		
CJ 110	Introduction to Law Enforcement +	3		
CJ 120	Introduction to the Judicial Process		3	
CJ 121	Concepts of Criminal Law		3	
CJ 130	Introduction to Corrections +			3
CJ 132	Introduction to Parole and Probation			3
SP 111	Fundamentals of Public Speaking	3		
SP 112	Persuasive Speech *or*		3	
SP 219	Sm Group Discussion		(3)	
CS 131	Introduction to Computer Information Systems *or*			4
CS 101	Fundamentals of Computing *and*			(1)
MIC 145	Intro. to Integrated Software			(3)
WR 121	English Composition *		3	
WR 122	English Composition * *or*			3
WR 227	Technical Report Writing			(3)
	Social Science/Humanities **	3	3	3
	Electives		3	

* Minimum grade C or higher.
** Selected from Arts and Letters and Social Science lists, pages 25-26; psychology and/or sociology courses strongly recommended.
*** May be taken during the second year or during the summer between the first and second year.
**** Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
\+ Contains human relations components.

Second Year

Course Number	Course Title	Credits F	W	S
SOC 221	Juvenile Delinquency		3	
CJ 107	Criminal Justice Workshop			3
CJ 203	Crisis Intervention +		3	
CJ 210	Criminal Investigation	3		
CJ 215	Issues in Criminal Justice Supervision and Administration		3	
CJ 243	Alcohol and Other Dangerous Drugs			3
CJ 280	Cooperative Work Experience - Criminal Justice ***	1	1	1
CJ 281	Coop. Work Experience Seminar - Criminal Justice	1	1	1
MTH 65	Math for Applied Science **** *or*			4
MTH 95	Intermediate Algebra ****			(5)
	Social Science/Humanities **	3		
	Technical Options	3	3	
	Electives	4		

TECHNICAL OPTIONS

Students must complete six credits from the following list of courses. Courses which are used to satisfy program requirements may not be used as technical options. Some listed courses may not be offered every year.

Course Number	Course Title	Credits
CJ 114	Gender, Race, Class & Crime	3
CJ 230	Intro. to Juvenile Corrections	3
CJ 232	Intro. to Corrections Casework	3
CJ 244	Sexual Exploitation of Children	3
CJ 280	Cooperative Work Experience - Criminal Justice	3
HS 101	Alcohol Use, Misuse and Addiction	3
HS 102	Drug Use, Misuse and Addiction	3
HS 201	Family Alcoholism/Addiction	3
HS 205	Youth Addiction	3
PHL 102	Ethics	3
PSY 101	Psychology of Human Relations	3
PSY 219	Introduction to Abnormal Psychology	3
SPAN 101,102,103	First Year Spanish	4 each
SPAN 111,112,113	Conversational Spanish	3 each

EARLY CHILDHOOD EDUCATION

ONE-YEAR CERTIFICATE

The Early Childhood Education (ECE) program prepares individuals for careers as childcare workers or assistant teachers in early childhood education settings such as childcare centers, preschools and Head Start programs, and as teacher aides in the early grades. The coursework is also strong preparation for higher level positions such as preschool teacher and manager, and may be used towards an Associate in General Studies degree, with a concentration in Early Childhood Education. A certificate will be awarded on completion of the required general education courses, a minimum of 26 credits from the core ECE program, and additional credits from the technical options for a total of 45 credits. The American Red Cross First Aid, CPR and Food Handlers' cards are also required.

Job Description:
Childcare workers help supervise and provide care and learning experiences for children in daycare and preschool programs. Workers provide recreation and introduce basic concepts such as colors, shapes, numbers, and pre-reading skills. They plan classes and other activities designed to promote healthy mental and physical growth in children. They must also assist with classroom management, meals, and other daycare needs. Teacher aides provide classroom and clerical assistance to elementary and secondary teachers. Aides may grade papers and tests, assist with record keeping, supervise study halls, playgrounds, cafeterias, and hallways. Aides may also assist with classroom management, tutoring, and material preparation.

Employment Opportunities:
Employment opportunities vary, depending on public and private funding. Job opportunities are present in local daycare centers, Head Start Programs, private preschool programs, private and public elementary schools, and in-home day care.

Potential Earnings:
Many beginning childcare/aide positions start at minimum wage. Earnings potential ranges to $10.00 per hour. In-home day care earnings vary according to the number of children cared for.

Early Childhood Education Courses:

Course Number	Course Title	Credits
ECE/ED 280	Coop. Work Experience-Early Childhood Education / Education	6
ECE/ED 281	CWE Seminar - Early Childhood Education / Education	2
ECE 101	Language Arts Activities for Young Children	1
ECE 103	Math and Science for Young Children	1
ECE 105	Nutrition, Health and Safety for Young Children	1
ECE 109	Early Childhood Environment +	1
ECE 119	Self-Concept, Guidance and Self-Discipline of Young Children	1
ECE 124	Physical Activities for Young Children	1
ECE 125	Creative Activities for Young Children: Art	1
ECE 128	Program Planning and Evaluation for Young Children	1
ECE 129	Observation and Developmental Screening of Young Children	1
ECE 134	Statutes, Liability, Licensure Considerations for Childcare Facilities	1
ECE 137	Child Abuse and the Law	1
ECE 139	Infant and Toddler Programs	1
ECE 145	Toys and Games for Learning	1
ECE 146	Handicapping Conditions in Young Children	1
ECE 149	Disease Control in ECE Settings	1
ECE 175	Infant/Toddler Learning and Social Growth	1
PSY 215	Psychology of Human Development *or*	3
HFS 226	Growing Years (Birth through Age Eight) *or*	(3)
ECE 131	Child Development for the Day Care Worker	(2)

Required General Education Courses:

Course Number	Course Title	Credits
MTH 65	Math for Applied Sciences* *or*	4
MTH 95	Intermediate Algebra*	(5)
PSY 101	Psychology of Human Relations	3
WR 40	English Fundamentals** *or*	3
WR 121	English Composition**	(3)

	Technical Options	Credits
ECE/ED 280	Coop. Work Experience-Early Childhood Education / Education	1-6
ECE/ED 281	CWE Seminar - Early Childhood Education / Education	1-3
CJ 244	Sexual Exploitation of Children	3
ASL 101	American Sign Language I	3
SPAN 101	First Year Spanish *or*	3
SPAN 111	Conversational Spanish	(3)
SOC 210	Marriage, Family, and Intimate Relations	3
HS 101	Alcohol Use, Misuse and Addiction *or*	3
HS 201	Addiction and the Family	(3)
ENG 221	Children's Literature	3
SOC 213	Minorities: Dealing with Diversity *or* +	3
SP 215	Introduction to Intercultural Communications *or* +	(3)
SOC 9536	Introduction to Intercultural Awareness +	(2)

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum grade C or higher.

\+ Diversity Courses

FIRE SCIENCE

ASSOCIATE DEGREE

Job Description:
This program offers training and education for those wanting a fire science career or for those who are currently employed as firefighters. Many courses offered by Clatsop Community College allow students the option of completing lower division fire science requirements by independent study. Firefighters protect communities and forests against loss of life, injury, or destruction of property by fire. Firefighters work as a team with each person assigned to a special job. They operate and maintain fire stations, equipment, and trucks. They may also inspect buildings for fire hazards and investigate fire causes. They also spend time educating the public about fire safety, speaking in schools, and to civic and citizen groups. Coursework is accredited by the Oregon Fire Standards and Accreditation Board.

Students and entry level firefighters may be required to satisfactorily complete specific agility and endurance requirements, including climbing up and down the full length of a 24' ladder while carrying bundles; wearing self-contained breathing apparatus; entering confined spaces; carrying hoses and specified equipment, as well as demonstrating upper body physical strength and overall flexibility.

Employment Opportunities:
There is a surplus of qualified applicants, particularly in the metropolitan areas.

Potential Earnings:
The average salary for a firefighter is $2,585 per month. In rural areas firefighting may be a volunteer position.

Required General Education Courses:

Course Number	Course Title	Credits
MTH 65	Math for Applied Sciences * *or*	4
MTH 95	Intermediate Algebra *	(5)
PSY 101	Psychology of Human Relations	3
WR 121	English Composition **	3
WR 227	Technical Report Writing **	3
	Social Science/Humanities ***	3
	Technical Options	9
	Electives	5

Required Fire Science Courses

Course Number	Course Title	Credits
CS 131	Intro to Computer Information Systems *or*	4
OA 201	Word Processing Procedures I *or*	(3)
MIC 145	Intro to Integrated Software	(3)
FRP 150	Introduction to Fire Protection +	3
FRP 151	Firefighter Skills ++	9
FRP 158	Pump Construction and Hydraulics	3
FRP 164	Hazardous Materials	3
FRP 166	Building Construction +	3
FRP 172	Fire Codes & Ordinances +	3
FRP 280	Cooperative Work Experience:	3
GS 104	Physical Science *or*	4
PH 201	General Physics	(4)
HPE 295	Health and Fitness for Life	3
EMT 151	Emergency Medical Technician Basic-Part I	5
EMT 152	Emergency Medical Technician Basic-Part 2	5
FRP 156	Firefighter Law	1
FRP 157	Firefighter Safety	1
FRP 169	Fire Department Leadership +	3
FRP 170	Firefighting Strategy and Tactics +	3
FRP 171	Fire Protection Systems & Extinguishers +	3
SP 111	Fundamentals of Public Speaking	3

TECHNICAL OPTIONS

Students must complete nine credits from the following list of courses. Courses which are used to satisfy program requirements may not be used as technical options. Some listed courses may not be offered every year.

Course Number	Course Title	Credits
BI 231,232,233	Human Anatomy and Physiology	4 each
CJ 203	Crisis Intervention	3
CPL 120	Credit for Prior Learning	3
EMT 165, 166	Emergency Medical Technician Intermediate-Part I,II	4 each
EMT 169	Emergency Medical Technician Rescue	3
EMT 170	Emergency Communication and Patient Transportation	3
FRP 155	Instructional Methodology	2
FRP 181	Fire Prevention and Inspection	3
FRP 280	Cooperative Work Experience - Fire Science	3
OA 140	Medical Terminology	3

The FRP courses will be offered on a rotating basis every two years.

\+ Independent study courses

++ FRP 151 requires pre-approval of Fire Science Coordinator and is a variable credit course, 1-9 credits

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum grade C or higher.

*** Selected from Arts and Letters and Social Science lists, page 25-26.

HEALTH OCCUPATIONS

EMERGENCY MEDICAL TECHNICIAN
ONE-YEAR CERTIFICATE PROGRAM

You can become an Emergency Medical Technician-Basic (EMT-B) or EMT-Intermediate (EMT-I) and work as an EMT in the community by simply enrolling in those classes. The EMT-B class is two terms in length (EMT 151 and EMT 152). When you finish, you may take the National Registry and Oregon tests to be certified as an EMT-B. If you wish to become an EMT-I, you need to complete two additional quarters of the EMT-I class (EMT 165 and EMT 166).

If you want to become an EMT-Paramedic (EMT-P), you can complete the first year of the EMT-P associate degree program at Clatsop Community College. You can then apply for admission to the second year of the program at a college offering the EMT-Paramedic degree, for example, Chemeketa, Lane, or Central Oregon Community Colleges. Several other colleges in Oregon also offer this degree.

If you plan to enroll in EMT classes, you need to complete an EMT program/class application form and show how you meet the following Oregon Health Division requirements: At least 18 years old; college placement tests; valid drivers license; hepatitis and measles immunizations, and negative tuberculosis screening test. On your application, you will be asked to self-verify that you meet OHD standards for physical and mental fitness, and that you do not use mind-altering substances or have a disease that could affect your ability to respond in an emergency.

Job Description:
EMTs give immediate care to ill or injured people, and may transport them to the emergency department or between care facilities. EMTs examine patients, take vital signs, and obtain medical histories. They give emergency care to patients, including splinting fractures, controlling bleeding, treating acute allergic reactions, and maintaining breathing and the heart beat.

Employment Opportunities:
Employment for EMTs is stable at this time, but long-range projections predict growth. EMTs work in volunteer and paid positions with ambulance services and fire departments. They are also moving into positions of providing patient care in hospital emergency rooms and industrial settings.

Potential Earnings:
Beginning EMTs earn $6.50 to $9 per hour. Experienced paramedics earn up to $15 per hour, with supervisors and managers earning higher salaries.

Course Number	Course Title	Credits F	W	S
BI 231, 232, 233	Human Anatomy and Physiology	4	4	4
CJ 203	Crisis Intervention		3	
EMT 151	Emergency Medical Technician Basic, Pt 1	5		
EMT 152	Emergency Medical Technician Basic, Pt 2		5	
EMT 169	Emergency Medical Technician Rescue			3
EMT 170	Emergency Communication and Patient Transportation			3
EMT 175	Introduction to Emergency Medical Services	3		
MTH 65	Math for Applied Sciences* ***or***			4
MTH 95	Intermediate Algebra*			(5)
PSY 101	Psychology of Human Relations		3	
WR 121	English Composition**			3
OA 140	Medical Terminology I	3		

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum grade C or higher.

HEALTH OCCUPATIONS

MEDICAL ASSISTANT
ASSOCIATE DEGREE

The Medical Assistant Program prepares students to gain academic and technical knowledge, skills and abilities required for entry into medical assisting careers in medical offices, clinics, and other healthcare settings. On program completion, graduates may apply for national certification or registration, although this is not always required for employment.

Job Description:
Medical assistants perform various duties under the direction of a physician, physicians' assistant, or nurse practitioner. Medical assistants prepare patients for examinations, assist with treatments, administer medications, and perform selected diagnostic tests and procedures. They also prepare treatment areas, maintain supplies and instruments, schedule appointments, keep medical records, and perform other duties such as managing practice finances.

Employment Opportunities:
The job outlook for medical assistants is good regionally and nationally and is projected to grow.

Potential Earnings:
The average rate of pay for medical assistants in Oregon is approximately $22,000 annually.

First Year

Course Number	Course Title	Credits F	W	S
CS 101	Fundamentals of Computing	1		
OA 104	English for Business	4		
OA 116	Office Procedures	4		
OA 140	Medical Terminology I	3		
PSY 101	Psychology of Human Relations	3		
WR 40	English Fundamentals* *or*		3	
WR 121	English Composition*		(3)	
MTH 65	Math for Applied Science**		4	
OA 141	Medical Terminology II		3	
BI 121	Basic Human Anatomy & Physiology I		3	
MA 112	Medical Assistant Clinical Procedures		3	
BI 122	Basic Human Anatomy & Physiology II			3
BA 214	Business Communications*			3
MA 113	Medical Assistant Clinical Procedures II			4
MA 115	Pharmacology for Medical Assistants I			2
MA 133	Medical Assistant Practicum I			4

Second Year

Course Number	Course Title	Credits F	W	S
MA 126	Medical Law & Ethics	3		
MA 124	Medical Assistant Clinical Procedures III	2		
MA 231	Medical Assistant Practicum II	5		
MA 123	Medical Insurance & Billing	3		
OA 201	Word Processing Procedures I	3		
OA 240	Filing & Records Management		3	
MA 125	Pharmacology for Medical Assistants		2	
MA 233	Medical Assistant Practicum III		8	
HPE 295	Health & Fitness for Life			3
SP 111	Fundamentals of Public Speaking *or*			3
SP 112	Persuasive Speech *or*			(3)
SP 115	Introduction to Intercultural Communications			(3)
PSY 215	Introduction to Developmental Psychology		3	
	Technical Options			6

Technical Options

Course Number	Course Title	Credits
BA 131	Accounting Procedures I	3
BA 132	Accounting Procedures II	3
BA 177	Payroll & Business Tax Accounting	3
BA 206	Management Fundamentals	3
CSD 122	Data Base Management	3
CSL 107	Spreadsheets	3
MA 280	Cooperative Work Experience	2
MA 281	CWE Seminar: Medical Assistant	1
OA 142	Medical Transcription	3
OA 225	Machine Transcription	3
SPN 111	Conversational Spanish	3
SPN 112	Conversational Spanish	3

INDUSTRIAL & MANUFACTURING TECHNOLOGIES

INTEGRATED TECHNOLOGIES
ASSOCIATE DEGREE

Job Description:
The Integrated Technologies program prepares students to gain academic and technical knowledge, skills, and attitudes required for entry into mid-level professional/technical careers. It is based on hands-on learning and designed to prepare individuals for specific occupations or a range of occupational categories within the area of technology careers.

Employment Opportunities:
The technology areas covered in the program include industrial design, communication, computer-aided drafting (CAD), machine tools, computer-aided manufacturing (CAM), mechanical drive systems, industrial controls, electrical and electronic systems, and welding fabrication.

Potential Earnings:
Starting wage ranges from $9 to $12 an hour. For more information contact an instructor in the program.

Specific Requirements for entry into the Integrated Technologies Program

1. MTH 60 Basic Mathematics II, three credits, or equivalent with C grade or higher.
2. CS 131 Introduction to Computer Information Systems, four credits, or MIC 145 Introduction to Integrated Software, three credits, or equivalent computer experience.
3. DRF 139 Technical Print Interpretation, three credits, or equivalent experience.
4. WLD 150 Beginning Welding Practices, three credits, or equivalent experience.
5. IT 105 Principles of Technology I, four credits, or equivalent experience.
6. IT 108 Engine Principles, four credits, or equivalent experience.
7. WR 40 English Fundamentals, three credits, or equivalent with a C grade or higher.

First Year

Course Number	Course Title	Credits F	W	S
ELT 150	Introduction to DC Circuit Analysis		4	
ELT 155	Introduction to AC Circuit Analysis			4
IT 101	Engine Rebuilding-Gasoline *or*		4	
IT 102	Engine Rebuilding-Diesel			(4)
IT 106,107	Principles of Technology II,III		4	3
IT 121	Principles of Fluid Power			3
IT 140	Industrial Safety ++	1		
IT 141	Tool and Shop Basics	1		
MFG 150	Hazardous Materials & Industrial Safety	3		
MFG 180,181	Machine Tools I, II	3	3	
MTH 65	Math for Applied Sciences * *or*	4		
MTH 95	Intermediate Algebra *	(5)		
PSY 101	Psychology of Human Relations	3		
WLD 150	Beginning Welding Practices			3
WR 121	English Composition **			3

Second Year

Course Number	Course Title	Credits F	W	S
DRF 213	AutoCAD-Beginning	4		
DRF 214	AutoCAD-Intermediate		4	
ELT 208	Programmable Logic Controllers		4	
ELT 206	Semiconductor Devices	4		
IT 208	Mechanical Drives and Transmission of Power		4	
IT 209	Fluid Drives and Hydraulic Transmissions	4		
IT 225	HVAC			3
IT 280	Coop. Work Experience-Integrated Technologies			3
IT 281	Coop. Work Experience Seminar-Integrated Technologies +			1
MFG 250	Manufacturing Processes I		4	
WR 227	Technical Report Writing			3
	Social Sciences/Humanities ***	3		
	Technical Options	3		4

TECHNICAL OPTIONS

Students must complete seven (7) credits from the following list of courses. Courses which are used to satisfy program requirements may be used as technical options. Some listed courses may not be offered every year.

Course No.	Course Title	Cr.
DRF 185	Computers in Design	3
DRF 215	AutoCAD-Advanced	4
DRF 217	AutoCAD - Upgrade	1
DRF 228	AutoCAD Exam Prep.	2
ELT 207	Industrial Process Controls	4
ELT 219	Digital Computer Electronics	4
ELT 220	Introduction to Robotics	4
ELT 231	Digital Circuits	4
IT 101	Engine Rebuilding-Gas	4
IT 102	Engine Rebuilding-Diesel	4
IT 110	Applied Tech Projects	2-4
IT 206	Vehicle Elect. I	4
IT 207	Vehicle Elect. II	5
IT 210	Vehicle Tuneup & Instrmnt.	4
IT 218	Vehicle Steering & Susp. Sys.	4
IT 226	Industrial Refrigeration	4
IT 280	Coop Work Exp-Int Tech	1-3
MFG 181	Machine Tools II	1-6
MFG 250	Manufacturing Processes I	1-4
MFG 251	Manufacturing Processes II	1-8
MFG 282	Machine Tools III	1-6
WLD 150	Beg. Weld. Practices	1-9
WLD 160	Inter. Weld. Practices	1-12
WLD 190	Welding Certification Prep	1-5
WLD 170	Adv Welding Practices	1-5
WLD 296	Layout, Fab. & Repair	4
	Computer Courses	1-3

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum grade C or higher.
*** Selected from Arts and Letters and Social Science list, pages 25-26.
\+ Contains human relations components.
++ IT 140 uses CD-ROM modules. Satisfactory completion of these classes is required before taking classes in any of the shop facilities.

AUTOMOTIVE TECHNICIAN
ONE-YEAR CERTIFICATE PROGRAM

Job Description:
This competency based program will provide an individual with the prerequisite knowledge, skills, work habits and attitude required to perform routine, predictable, proceduralized tasks as defined by the National Institute for Automotive Service Excellence. These entry-level tasks involve motor skills and limited theoretical knowledge and are performed under close supervision. Course curriculum follows specifications for qualification and certification of an entry level ASE Automotive Technician. This program is one step on the ladder of skills the trainees may achieve in their quest for a rewarding career. People who are creative and enjoy mind-hand challenges will find opportunities for advancement and experience a great sense of pride in workmanship as they ply their trade.

Employment Opportunities:
The job outlook for an ASE Automotive Technician is good regionally, nationally and globally. ASE Automotive Technicians are employed in a wide range of industries that use related tasks during daily operations.

Potential Earnings:
Presently starting wages in Oregon are about $9.00 per hour, with top wages to about $22.42 per hour as the individual's skill level increases.

Entrance Requirements:
ASSET test scores of 35 or higher for writing and 38 or higher for math.

Course Number	Course Title	Credits F	W	S
IT 140	Industrial Safety ***	1		
IT 141	Tool & Shop Basics	1		
IT 105	Principles Of Technology I	4		
IT 108	Engine Principles	4		
MIC 145	Introduction to Integrated Software *or*	3		
CS 131	Introduction to Computer Info. Systems	(4)		
IT 218	Vehicle Steering & Suspension Systems		4	
IT 206	Vehicle Electricity I		4	
IT 230	Vehicle Heating and Air Conditioning		4	
IT 219	Vehicle Brake Systems			4
MFG 180	Machine Tools I		1	1
IT 207	Vehicle Electricity II			5
IT 280	Cooperative Work Experience			2
IT 281	Cooperative Work Experience Seminar+			1
WLD 150	Beginning Welding			2
MTH 65	Mathematics For Applied Sciences* *or*	4		
MTH 95	Intermediate Algebra*	(5)		
WR 40	English Fundamentals** *or*		3	
WR 121	English Composition**		(3)	

Legend Notes:
* Minimum Grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum Grade C or higher.

*** IT 140 uses CD-ROM training modules. Satisfactory completion of this class is required before taking classes in any of the shop facilities.

\+ Contains human relations components.

Notes: The program addresses the application of technical writing skill as the trainee delivers written quality control reports. To assure that the individual possesses the ability to interact well with co-workers, the program will address the human relations component throughout the program and specifically in conjunction with the Cooperative Work Experience class. Students demonstrate practical math applications throughout the program as well.

Upon completion the trainees will receive a Certificate of Completion from CCC qualifying them as an entry level automotive technician. With the addition of two years minimum field experience and upon successfully completing the NIASE exam, trainees will become a certified ASE Automotive Technician in their field of training.

CADD TECHNICIAN (COMPUTER-AIDED DESIGN & DRAFTING) ONE-YEAR CERTIFICATE PROGRAM

Job Description:
This competency based program will provide an individual with the prerequisite knowledge, skills, work habits and attitude required to perform routine, predictable, proceduralized tasks. These entry level CADD Technicians tasks involve computer skills and limited theoretical knowledge and are performed under close supervision. Course curriculum follows national specifications for qualification and certification of an entry level CADD Technician. This program is one step on the ladder of skills the trainees may achieve in their quest for a rewarding career.

Employment Opportunities:
The job outlook for CADD Technicians are good regionally, nationally and globally. Entry level CADD Technicians are employed in a wide range of industries that use related tasks during daily operations.

Potential Earnings:
Presently starting wages in Oregon are about $9.00/hour, with top wages to about $18.00/hour as the individual's skill level increases.

Program Requirements:
The department recommends that students enter the program at the beginning of fall term, based upon space availability. Acceptance into the program is based on demonstration of basic math and high school level reading/writing skills by meeting or exceeding the following ASSET test scores: 35 or higher for writing and 38 or higher for math.

Course Number	Course Title	Credits F	W	S
DRF 139	Technical Print Interpretation	3		
DFR 213	AutoCAD - Beginning	4		
ART 115	Basic Design	3		
MIC 145	Introduction To Integrated Software *or*	3		
CS 131	Intro to Computer Info. Systems	(4)		
	Technical Options	3		
DFR 214	AutoCAD - Intermediate		4	
ART 116	Basic Design		3	
MTH 65	Mathematics For Applied Sciences* *or*		4	
MTH 95	Intermediate Algebra*		(5)	
WR 40	English Fundamentals** *or*		3	
WR 121	English Composition**		(3)	
DRF 185	Computers in Design		3	
DFR 215	AutoCAD - Advanced			4
DRF 295	Directed Projects			3
DRF 228	CADD Exam Preparation			2
DRF 280	Cooperative Work Experience-CADD+			2
DRF 281	Cooperative Work Experience Seminar+			1
	Technical Options:			
3 Credits chosen from the following list:				
MIC 178	Using the Internet for Communications		3	
MIC 207	Presentation Software		3	
MIC 250	Computer Graphics		3	

Legend Notes:
* Minimum Grade C or higher Math courses numbered higher than MTH 95 may be substituted

** Minimum Grade C or higher

\+ Contains human relations components

Notes:
To assure that the individual possesses the ability to interact well with co-workers, the program will address the human relations component throughout the program and specifically in conjunction with the Cooperative Work Experience class. Certificate studies prepare students for a national certification exam, thereby demonstrating their competency and proficiencies in CADD.

MANUFACTURING TECHNICIAN
MACHINIST ONE-YEAR CERTIFICATE PROGRAM

Job Description:
This competency based program will provide an individual with the prerequisite knowledge, skills, work habits and attitude required to perform routine, predictable, proceduralized tasks. Manufacturing Technician's (Entry-Level Machinist) tasks involve motor skills and limited theoretical knowledge and are performed under close supervision. Course curriculum provides industry standards for a Manufacturing Technician's (Entry-Level Machinist) position. This program is one step on the ladder of skills the trainees may achieve in their quest for a rewarding career. People who are creative and enjoy mind-hand challenges will find opportunities for advancement and experience a great sense of pride in workmanship as they ply their trade.

Employment Opportunities:
The job outlook for Manufacturing Technician's are good regionally, nationally and globally. Manufacturing Technician's (Entry-Level Machinists) are employed in a wide range of industries that use related tasks during daily operations.

Potential Earnings:
Presently starting wages in Oregon are about $9.00 per hour, with top wages to about $21.00 per hour as the individual's skill level increases.

Program Requirements:
The department recommends that students enter the program at the beginning of a scheduled term, based upon space availability. Some classes may not be offered every term. Acceptance into the program is based on demonstration of basic math and high school level reading/writing skills by meeting or exceeding the following ASSET test scores: 35 or higher for writing and 38 or higher for math.

Course Number	Course Title	Credits F	W	S
IT 140	Industrial Safety ***	1		
IT 141	Tool & Shop Basics	1		
MIC 145	Introduction to Integrated Software *or*	3		
CS 131	Intro to Computer Information Systems	(4)		
DRF 139	Technical Print Interpretation	3		
WLD 150	Beginning Welding		3	
MFG 180	Machine Tools I (Var. 1-6)	6		
MFG 181	Machine Tools II(Var. 1-6)		6	
MFG 282	Machine Tools III(Var. 1-6)		3	3
MFG 250	Manufacturing Processes(Var. 1-8)			7
IT 280	Cooperative Work Experience+			2
IT 281	Cooperative Work Experience Seminar+			1
MTH 65	Mathematics For Applied Sciences* *or*	4		
MTH 95	Intermediate Algebra*	(5)		
WR 40	English Fundamentals** *or*		3	
WR 121	English Composition**		(3)	

Legend Notes:
* Minimum Grade C or higher. Math courses numbered higher than MTH 95 may be substituted.

** Minimum Grade C or higher.

*** IT 140 uses CD-ROM training modules. Satisfactory completion of this class is required before taking classes in any of the shop facilities.

\+ Contains human relations components.

Notes:
The program addresses the application of technical writing skill as the trainee delivers written quality control reports for each workmanship sampling. To assure that the individual possesses the ability to interact well with co-workers, the program will address the human relations component throughout the program and specifically in conjunction with the Cooperative Work Experience class. Students demonstrate practical math applications throughout the program as well.

INDUSTRIAL & MANUFACTURING TECHNOLOGIES

AMERICAN WELDING SOCIETY ENTRY LEVEL WELDING ONE-YEAR CERTIFICATE PROGRAM

Job Description:
This competency based program will provide an individual with the prerequisite knowledge, skills, work habits and attitude required to perform routine, predictable, proceduralized tasks as defined by the American Welding Society. These entry-level welding tasks involve motor skills and limited theoretical knowledge and are performed under close supervision. Course curriculum follows the AWS specifications for qualification and certification of QC10-95 entry level welder. This program is one step on the ladder of skills the trainees may achieve in their quest for a rewarding career. People who are creative and enjoy mind-hand challenges will find opportunities for advancement and experience a great sense of pride in workmanship as they ply their trade.

Employment Opportunities:
The job outlook for welding is good regionally, nationally and globally. Entry level welders are employed in a wide range of industries that use welding and welding-related tasks during daily operations.

Potential Earnings:
Presently starting wages in Oregon are about $9.50/hour, with top wages to about $16.50/hour as the individual's skill level increases.

Program Requirements: The department recommends that students enter the program at the beginning of a scheduled term, based on space availability. Some classes may not be offered every term. Acceptance into the program is based on demonstration of basic math and high school level reading/writing skills by meeting or exceeding the following ASSET test scores: Math 36-45; Reading 38-41; Writing 37-41. Because a variety of working conditions exist in the welding field, a person generally should be in good physical condition and be able to stand, stoop, kneel and bend. Good eyesight, especially depth perception, is necessary for a welder.

Course Number	Course Title	Credits F	W	S
IT 140	Industrial Safety ***	1		
IT 141	Tool & Shop Basics	1		
DRF 139	Technical Print Interpretation	3		
WLD 100	Materials Processing	4		
WLD 101	Shielded Metal Arc Welding Process	10		
WLD 102	Gas Metal Arc Welding Process		9	
WLD 103	Flux Core Arc Welding Process		9	
WLD 104	Gas Tungsten Arc Welding Process			8
IT 280	Cooperative Work Experience+			2
IT 281	Cooperative Work Experience Seminar+			1
MTH 65	Mathematics For Applied Sciences* *or*	4		
MTH 95	Intermediate Algebra*	(5)		
WR 40	English Fundamentals** *or*		3	
WR 121	English Composition**		(3)	

Legend Notes:
* Minimum Grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum Grade C or higher.
*** IT 140 uses CD-ROM training modules. Satisfactory completion of this class is required before taking classes in any of the shop facilities.
\+ Contains human relations components.

Notes: The program addresses the application of technical writing skill as the trainee delivers written quality control reports for each welding process workmanship sampling. To assure that the individual possesses the ability to interact well with co-workers, the program will address the human relations component throughout the program and specifically in conjunction with the Cooperative Work Experience class. Students demonstrate practical math applications throughout the program, especially in the workmanship assessment projects.

Upon completion the trainees will receive a Certificate of Completion from AWS qualifying them as a nationally recognized entry level welder. They will also be registered in the AWS databank for certificate verification purposes.

MARITIME SCIENCES

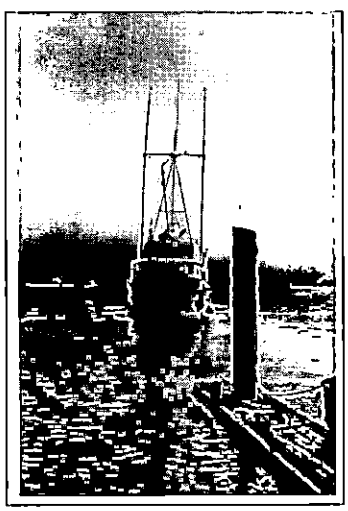
ONE-YEAR CERTIFICATE PROGRAM

Job Description:
Persons employed in the maritime industry work as deckhands or operators on commercial fishing vessels and/or other merchant vessels engaged in the transport of freight or passengers. Deckhands are responsible for keeping the vessel and its equipment in working order and, in the commercial fishing industry, may be responsible for standing a watch in the wheelhouse and conducting the vessel from one point to another while adhering to the principles of navigation and the rules of the road. Vessel operators are responsible for the operation and navigation of the vessel, as well as all safety issues aboard. In the merchant or passenger carrying trade, these operators are required to possess a United States Coast Guard (USCG) Merchant Marine Officers license.

Employment Opportunities:
Recent U.S. Coast Guard rulings dealing with minimum crew size have increased the demand for deckhands in the ocean towing industry. In the commercial fishing industry, the demand for deckhands is greatest in the trawl and longline fisheries. Deckhands who have obtained special skills in navigation, splicing, rigging, net mending, welding, and engine room systems have considerably enhanced employment opportunities. The demand for vessel operators in the charter fishing industry is dependent on geographical location. Towing vessel operators must possess a U.S. Coast Guard license.

Potential Earnings:
The entry level wage varies from $12 an hour in the merchant fleet to a share of the profit of the catch in the commercial fishing fleet. The average wage for operators is $125 to $250 a day.

Course Number	Course Title	Credits F	W	S
MAS 150	Marine Safety	2		
MAS 155	Introduction to Watch Keeping			2
MAS 165	Practical Navigation		2	
MAS 181	Seamanship I	2		
MAS 182	Seamanship II		2	
MAS 183	Seamanship III			2
MTH 65	Math for Applied Science* ***or***	4		
MTH 95	Intermediate Algebra*	(5)		
PSY 101	Psychology of Human Relations			3
WR 40	English Fundamentals** ***or***		3	
WR 121	English Composition**		(3)	
	Technical Options	7	8	8



TECHNICAL OPTIONS
Students must complete 23 credits form the following list of courses.

Course Number	Course Title	Credits
MAS 100	Maritime Occupations	2
MAS 110	Limited Operator Uninspected Passenger Vessel Certification	3
MAS 111	Limited Operator Uninspected Passenger Vessel Endorsement	1
MAS 120	US Coast Guard Marine License Preparation***/+	3
MAS 130	Radar Observer: Original Endorsement, Unlimited	2
MAS 131	Radar Observer: Recertification	1
MAS 132	Radar Observer: Rivers	1
MAS 141	Introduction to Trawling & Trawl Safety	2
MAS 142	Introduction to Fishing Gear Types & Safety	2
MAS 164	Introduction to Navigation***	3
MAS 166	Advanced Navigation***	3
MAS 167	Celestial Navigation***	3
MAS 168	Charts, Aids to Navigation, and Magnetic Compasses***	3
MAS 170	Marine Weather, Tides, Currents, and Waves***	3
MAS 175	Rules of the Road***	3
MAS 180	Marine Electronics***	3
MAS 184	Galley Cooking	2
MAS 185	GMDSS Training (Global Marine Distress Safety System)	3
MAS 190	Vessel Practicum	2
MAS 280	Cooperative Work Experience: Maritime Sciences	4
	Welding	3

* Minimum grade C or higher. Math courses numbered higher than MTH 95 may be substituted.
** Minimum grade C or higher.
*** Course is offered in an individualized format.
\+ Nine (9) credits of MAS 120, Marine License Preparation, may be applied toward the AGS degree, Associate degree, and the One-Year Maritime Science certificate.

MARITIME SCIENCES

VESSEL OPERATIONS
ASSOCIATE DEGREE

Job Description:
This competency-based program will provide an individual with the requisite knowledge, skills, work habits and attitude to perform work on a vessel as an entry level deckhand. Job tasks include handling lines, performing routine vessel and gear maintenance, participating in drills, performing galley duties, standing watches, and becoming part of a working crew in a close quarters environment. Course curriculum follows industry needs as presented by the Maritime Science Department advisory committee. Classes are taught in a practical atmosphere and employ extensive use of a training vessel. This program would be of interest to people who desire a professional career path with advancement opportunities that are in a non-traditional setting. Students completing this program will be qualified to work as crewmembers on research vessels, merchant ships, tugs, charter and passenger vessels, and commercial fishing vessels. Professional licensing is available to students who meet US Coast Guard requirements.

Employment Opportunities:
The job outlook for crewmembers in the maritime industry is good regionally, nationally, and globally. Entry level deckhands work on a wide range of vessels performing a variety of tasks. Contracts often require crewmember to work twelve hour days for weeks or months at a time while away from home.

Potential Earning:
Entry level wages varies from $12 an hour in the merchant fleet to a share of profits in the commercial fishing fleet. Average wage for deckhands is $100 to $150 per day with operators receiving twice that amount.

FIRST YEAR

Course Number	Course Title		Credits
MTH 65	Math for Applied Sciences * *or*		4
MTH 95	Intermediate Algebra * (or a course higher than MTH 95)		(5)
WR 40	English Fundamentals * (or WR 121 or course higher than WR 121) G		3
PSY 101	Psychology of Human Relations		3
IT 140	Industrial Safety		1
MAS 181	Seamanship I		2
MAS 182	Seamanship II		2
MAS 183	Seamanship III		2
MAS 184	Galley Cooking		2
MAS 150	Crewmember Training Marine Safety		2
MAS 155	Introduction to Watchkeeping		2
MAS 164	Introduction to Navigation		3
MAS 165	Practical Navigation		2
MAS 168	Charts, Aids to Navigation, & Marine Compasses		3
MAS 175	Rules of the Road		3
MAS 190	Vessel Practicum	S	1
MAS 100	Maritime Occupations	S	2
MAS 141	Trawling and Trawl Safety	S	2
MAS 142	Fishing Gear Safety	S	2
MAS 170	Marine Weather, Tides, Currents, and Waves	S	3
WLD	Welding	S	1

S = Suggested Elective

SECOND YEAR

Course Number	Course Title		Credits
BA 214	Business Communications * (Or WR 121 if not taken in first year, or course higher than WR 121)		3
HS 101	Alcohol use, Misuse, and Addiction (Or HS 102, Drug Use, Misuse, and Addiction; or any acceptable three credit Humanities or Social Science course)		3
CS 101	Fundamentals of Computing (Or computer course higher than CS 101)		1
IT 105	Principles of Technology I		4
IT 106	Principles of Technology II		4
IT 107	Principles of Technology III		3
MAS 186	Small Vessel Operations I		2
MAS 187	Small Vessel Operations II		2
MAS 188	Small Vessel Operations III		2
MAS 166	Advanced Navigation		3
MAS 180	Marine Electronics		2
HM 120	Hazardous Materials & Emergency Response Training		1
MAS 190	Vessel Practicum	S	2
MAS 148	Vessel Stability	S	3
MAS 147	Rules and Regulations	S	3
MAS 185	FCC GMDSS Training	S	3
MAS 130	Radar Observer: Original Endorsement, Unlimited	S	2
IT 110	Applied Technology Project	S	2

TECHNICAL OPTIONS COURSE LIST
The following technical options may be substituted for any suggested elective (S)

Course Number	Course Title	Credits
MAS 190	Vessel Practicum	1 - 3
MAS 120	USCG License Prep	3 - 9
MAS 280	Marine Cooperative Work Experience	1 - 4
MAS	Any Maritime Science course may be used for Technical Options	
WLD	Maximum of four (4) credits of welding courses	1 – 4
IT 101	Engine Rebuilding – Gasoline	4
IT 102	Engine Rebuilding – Diesel	4
IT 108	Engine Principles	4
IT 110	Applied Technology Project	2
IT 121	Principles of Fluid Power	3
IT 141	Tool & Shop Basics	1
IT 208	Mechanical Drives and Transmission of Power	4
IT 209	Fluid Drives and Hydraulic Transmissions	4

Maritime Sciences

Specialized Training Programs and Courses in the Maritime Sciences

Clatsop Community College's Maritime Science Department (MSD) offers specialized maritime training programs and courses. We offer training for individuals at entry skill levels and for mariners employed within the industry. An example of a group of specialized training courses and programs are the U.S. Coast Guard approved programs. The approved programs may do one, or more, of following; (1) meet U.S. Coast Guard and International Maritime Organization (IMO) training requirements; (2) lead to Coast Guard and STCW (Standards of Training, Certification and Watchkeeping for Seafarers) endorsements; (3) or satisfy Code of Federal Regulation (CFR) requirements.

Courses that lead to U.S. Coast Guard license endorsements include:

1. Radar Observer Original, "Unlimited". (40-hour course)
2. Radar Observer Original, "Rivers". (24-hour course)
3. Radar Observer Re-Certification, "Unlimited" and "Rivers". (8 and 24-hours)
4. Automatic Radar Plotting Aids. (ARPA)
5. Global Marine Distress Safety System. (GMDSS)
4. Celestial Navigation, "Upon Ocean" endorsement for licenses up to 1600 gross tons. (Minimum of 60-hours required for licenses of 500 gross tons or greater)*

The College's License Training Program is approved to satisfy CFR requirements. The approval allows students to complete the Training Program in leu of U.S. Coast Guard testing for the following licenses:

1. Master/Mate 200 Gross Tons - Near Coastal/Inland Waters.*
2. Master/Mate 100 Gross Tons - Near Coastal/Inland Waters.*
3. Operator of Uninspected Passenger Vessels.*
4. Master/Operator Limited Scope Waters. (40-hours)

*See the section on Modular Classes for an explanation of required hours.

Maritime Science Department courses that meet CFR, IMO or Federal Communication Commission (FCC) requirements include:

1. Marine Safety (24-hours), CFR requirements
2. Personal Safety (40-hours), IMO and CFR requirements
3. HAZWOPER (24 and 40 hour), CFDR requirements
4. FCC examination, Element 1 (Marine Radio Operator Permit) and Element 1 and 7 Global Marine Distress Safety System (GMDSS) Radio Operator, CFR requirements

Maritime Science Department's class format

Classes in the Maritime Science Department meet 8:00 A.M. - 5:00 P.M., Monday through Friday. The courses, or programs, marked with an asterisk* are modular classes. Students may start modular classes any day of the week and complete the required modules at their own learning rate. We sell most modules in forty-hour blocks of time. The modular format allows students working in the industry additional flexibility for upgrading skills and training requirements.

NURSING

NURSING ADMISSION REQUIREMENTS

Nurses at all levels need to be caring and relate well to people of different backgrounds and cultures. As a nurse, you need to be able to adapt to change, think critically, and respond during crises. Personal integrity and ethical behavior are essential for nurses. The nursing program is academically and physically rigorous. As a nursing student, you need to be able to grasp scientific concepts, set up and answer basic math and algebra problems, and communicate well verbally and in writing. Physically, you need to be able to remain on your feet for extended periods, lift up to 40 pounds, hear heart and breath sounds and use a telephone, read fine print, and identify skin tones such as pale, ashen, grey, or bluish. If you have a history of substance abuse or mental health problems or a criminal record, you may wish to speak with a nursing advisor prior to pursuing nursing as a career.

Nursing program enrollment is limited. You must apply for admission; if accepted, you will begin nursing classes fall term. Applications are accepted by the Admissions Office between February 1 and the end of March. For specific dates, you can request a nursing program information and application packet. If you meet the minimum requirements for admission, you will be awarded points toward admission for such things as grades, completed college classes, and work experience in health care. Applicants who have the highest number of points are offered program admission. If you don't fall within this group, you will be placed on a ranked list of alternates. Once you are accepted into the program, you will need to pay a non-refundable fee and meet other requirements for immunizations, CNA certification, and CPR training.

If you are a licensed practical nurse (LPN) or have been enrolled in a nursing program at Clatsop or another college, you may qualify for advanced placement into the nursing program. You may enter the program at any point up to the beginning of the second year, depending on your education and experience. If you think you may qualify for advanced placement, contact the Admissions Office for more information about this option.

Minimum Requirements for Nursing Program Admission:

You need to meet the following requirements to be considered for admission to the nursing program, whether you are applying for initial or advanced placement:

1. A high school diploma with a C average (a GPA of 2.0) or higher, or a GED certificate with an average score of 45, or 24 credits of college level courses with a cumulative GPA of 2.0 or higher.

2. a. One year of high school chemistry with lab within the past 5 years, or CH 104 and CH 105 Introductory Chemistry, or equivalent with a grade of C or above.
   b. MTH 65 Math for Applied Sciences completed with a grade of C or above, or readiness for MTH 95 Intermediate Algebra or higher demonstrated by placement test scores.
   c. Readiness for WR 121 English Composition demonstrated by placement test scores; or completing WR 40 English Fundamentals or equivalent or higher with a grade of C or above.

3. A completed Clatsop Community College nursing application packet and college placement tests.

If you do not meet the minimum requirements for nursing program admission at this time, you may begin taking college classes as a pre-nursing student. An advisor will help you plan your program and select courses to meet the minimum requirements for admission.

NURSING

ASSOCIATE DEGREE NURSING

Job Description:
Registered nurses (RNs) are caring and use their knowledge, skills, and problem-solving to help individuals, families, and groups with health needs. RNs plan care and work with people to help them become healthier or to regain health after illness or surgery. Nurses teach health practices to clients and other health care providers, and frequently supervise the work of nursing assistants and practical nurses. RNs also administer medications and perform treatments for patients. Nurses work in a variety of settings, including hospitals and long-term care, schools, industry, clinics, and patients' homes. With advanced education, nurses may work as managers, educators, public health nurses, as a clinical specialist, or independently as a nurse practitioner.

Employment Opportunities:
The need for registered nurses is expected to grow, especially in clinic and community settings.

Potential Earnings:
The average wage in Oregon is approximately $20 per hour depending where the nurse works. Nurse practitioners and nurse managers earn salaries at a range of $45-60,000 per year.

First Year

Course Number	Course Title	Credits F	W	S	Su
BI 231,232,233	Human Anatomy & Physiology	4	4	4	
BI 234	Microbiology	4			
NUR 101	Nsg: Found. of Care+	8			
NUR 102	Nsg: Focus on Indiv.+		8		
NUR 103	Nsg: Focus on Fam.+			8	
NUR 109	Nsg: Mental Health +				4
NUR 112	Collab. Practice I		2		
NUR 113	Collab. Practice II			1	
PSY 215	Devl. Psychology		3		
WR 121	English Composition			3	
NUR 111	Nursing Concepts & Clinical Practice ##				1-3
	CS or MIC elective	1			
	Hlth, PE, or Dance elect.*	1-3			

Second Year

Course Number	Course Title	Credits F	W	S
NFM 225	Human Nutrition		4	
NUR 201	Nsg: Clients in Crisis+	7		
NUR 202	Nsg: Families in Crisis+		8	
NUR 208	Nsg: Transit. to Practice+			7
NUR 215	Physical Assessment+	3		
NUR 231	Collab. Practice III	2		
NUR 232	Collab. Practice IV		1	
WR 122, 123	English Composition *or*			3
WR 227	Tech. Report Writing			(3)
	Hlth, PE, or Dance elect.*			1-3
	Social Science elective**	3		
	Arts & Letters elective***			3

\+ Contains human relations components.
* Any of the following classes may be selected to fill the health or physical activity elective: D 192, D 292, D 294 Dance, Beginning, Intermediate, or Advanced; HE 207 Stress Management; HPE 295 Health and Fitness for Life; or PE 185 Physical Education.
** Selected from Social Science list on page 26.
*** Selected from Arts and Letters list on pages 25-26.
NUR 111 required for selected advanced placement students only.

Note: All nursing classes must be completed with a C grade or higher to continue in the program and progress to the next term. All first year program requirements must be completed with a C grade or higher to enter the second year of the program. All required courses must be completed with a C grade or higher to receive the degree.

NURSING

PRACTICAL NURSING FOUR-TERM CERTIFICATE PROGRAM

Job Description:
The licensed practical nurse (LPN) cares for patients under the direction of an RN, physician, or dentist. LPNs collect information about the patient's health, help plan care, and administer medications and other treatments. Practical nurses work primarily in hospitals and long-term care. They also may work in medical or dental offices, clinics, and caring for patients in the home.

Employment Opportunities:
Employment opportunities for LPNs are fairly stable at this time, with some growth expected.

Potential Earnings:
The average wage for LPNs is approximately $13.50 per hour in Oregon.

Course Number	Course Title	Credits F	W	S	Su
BI 231,232,233	Human Anatomy & Physiology	4	4	4	
BI 234	Microbiology	4			
NUR 101	Nsg: Found. of Care+	8			
NUR 102	Nsg: Focus on Indiv.+		8		
NUR 103	Nsg: Focus on Fam.+			8	
NUR 109	Nsg: Mental Health +				4
NUR 112	Collab. Practice I		2		
NUR 113	Collab. Practice II			1	
PSY 215	Devl. Psychology		3		
WR 121	English Composition			3	
	CS or MIC elective	1			
	Hlth, PE, or Dance elect.*	1-3			

* Any of the following classes may be selected to fill the health or physical activity elective: D 192, D 292, D 294 Dance, Beginning, Intermediate, or Advanced; HE 207 Stress Management; HPE 295 Health and Fitness for Life; or PE 185 Physical Education.

+ Contains human relations components.

Note: All nursing classes must be completed with a C grade or higher to continue in the program and progress to the next term. All required courses must be completed with a C grade or higher to receive the certificate.

COMMUNITY EDUCATION

Lifelong Learning

The College considers education to be a lifelong process; therefore, courses are taught for all ages and interests. Community Education is an integral part of the total educational program of the college. A broad variety of courses are offered each term for professional, cultural, and special interest groups, as well as business and industry, and persons seeking an associate degree.

The Community Education Division offers simple registration procedures. If you are a part-time student wishing to become a degree candidate, you must complete the normal admission procedures.

Typical community education offerings include art, conversational foreign language, home economics, internet, music, photography, personal fitness, health, securities, investments, and other general interest topics. In addition, management, employee, and small business development courses, seminars and workshops are offered.

General interest courses are designed to be flexible. There are more than 250 such courses offered each term in various locations. These classes start at convenient times and are purposely located to be easily accessible to you. Classes can be of any practical length: a full-term or a partial-term course, a weekend workshop, or an evening seminar. The College will offer a course on nearly any topic if a suitable location, a qualified instructor, and a sufficient number of students can be identified.

Any group of ten or more people who have common educational or training interests may request a seminar, a course or course series. The College then may seek an appropriate instructor and set up the course. Tuition and/or fees for such courses are established so that they cover the cost of the instruction, materials, and laboratory expenses.

Off Campus Classes

There are many locations within the College district to take classes. The College maintains a full-time office and classroom complex in Seaside to coordinate classes in Arch Cape, Cannon Beach, Seaside, and Gearhart. Phone 738-3346 for information about south county classes. Other classes throughout the district are coordinated for residents living near Warrenton, Svensen, Knappa, Clatskanie, Westport, Jewell, and Ranier. Call the Community Education Office, 338-2408, for specific information about classes in your area.

Courses By Television

College courses and workshops via television utilizing Oregon Public Broadcasting and local cable are offered by the College and may lead to an associate degree.

Courses and workshops are also available through the Oregon Ed-Net system. Interactive, two-way audio/visual communication is provided on campus for classes not offered in the College's regular schedule. The system is also used by business, industry, and government agencies. Contact the Learning Resource Center (Library) for details, 338-2341.

Registration For Community Education

Registration times and locations for community education courses are provided in the term schedule published prior to each term. Student registrations are processed on a first-come, first-served basis. You may register by mailing in a registration form with a Visa/Mastercard number or personal check, or sign up for classes in person. Phone registration is also available by calling 338-2408 or 738-3346.

SPECIAL PROGRAMS

COMMUNITY EDUCATION

SERVICES FOR BUSINESS AND INDUSTRY

All Business and Training opportunities can be accessed with one call: (503)738-3346

Customized Training and Workforce Development

Clatsop Community College sponsors many management workshops, seminars, and courses specifically designed for business and industry. Events can be geared for an entire industry, or they can be custom designed for single "in-house" organizations. Instructors are selected for their experience and their emphasis is on applying practical knowledge. Contact the Business and Training Center at 738-3346 for further information.

Small Business Development Center (BizCenter)

The Small Business Development Center provides services and resources to existing, new, and potential small businesses throughout the College district and is part of a state wide network for service to businesses. The Center is located in the College's Business and Training Center. Services consist of consultation, basic management seminars, and an intensive small business management program. Call 738-3347 or (800) 206-7352 for further information.

Apprenticeship Training

Related classroom training for registered apprentices is also coordinated through the Community Education Office. It is taught according to Oregon's Law and Plan of Apprenticeship and Training, the U.S. Department of Labor, and the Oregon State Apprenticeship Council. Classes cover technical areas of the trades and are intended to complement skills learned on the job. Apprenticeship related training offered through Clatsop Community College currently includes plumbing, electrician-inside wireman, and Emergency Medical Technician (EMT). This program is for indentured apprentices only. Call 338-2408 for information.

You can obtain information on how to become an apprentice from the Oregon Bureau of Labor and Industry, Apprenticeship Training Division, 800 NE Oregon St. #32, Portland, Oregon 97232; telephone 731-4072 ext. 270; local telephone number, 338-2408 (Community Education office).

Summer Term

The College offers a limited selection of course offerings during the summer. Requests for specific classes may be directed to the office of Community Education or to the Vice-President, Instructional Programs/Student Services for academic coursework.

Lower division transfer, vocational-technical, self-improvement and basic skill courses are offered.

Summer term schedules are available the first week of June. You may request the Registrar's Office to mail you a copy.

An Important Note: The College is closed on Fridays in July and August through Labor Day.

"Clatsop Community College's ability to create a pool of highly trained, highly skilled, and well educated workers for both local businesses and businesses looking to relocate to Clatsop County makes the College's presence indispensable to a healthy economy."

Margaret Forbes
Director, Clatsop Economic Development Council

Clatsop/Linfield Bachelor's Degree Program

Clatsop Community College and Linfield College in McMinnville, Oregon, cooperate to offer a joint program making it possible for you to earn a bachelor's degree in Social and Behavioral Sciences, Business Management, Accounting, Arts and Humanities, International Business, and Business Information Systems.

Lower division courses are provided by Clatsop; upper division courses are brought to the Clatsop campus through arrangements with Linfield College's Division of Continuing Education.

The program features weekend and evening on-site classes and credit for prior learning. Contact the Clatsop/Linfield Advisor for further information. Phone: 338-2308.

Western Oregon University

Clatsop Community College and Western Oregon University in Monmouth, Oregon, cooperate to offer a North Oregon Coast Program. WOU offers upper division courses for professional development and personal enrichment as well as course work that can lead to bachelor degrees in business and criminal justice.

CCC provides lower division courses; upper division courses are brought to the Clatsop campus through arrangements with WOU's Division of Extended Programs. The North Oregon Coast Program includes Clatsop, Tillamook Bay, and Oregon Coast community colleges. The program features weekend and evening on-site classes, as well as distance education including video and Web-based courses.

Contact the Clatsop/WOU adviser for further information. Call 503-791-3896 or toll-free 1-800-451-5767, or e-mail extend@wou.edu.

Job Opportunities and Basic Skills (JOBS)

If you are receiving cash public assistance or food stamps you may qualify for the Job Opportunities and Basic Skills (JOBS) Program. The JOBS Program serves adult and teenage participants referred by the State of Oregon's Adult and Family Services Division. You are offered a series of education, training, and employment skills enhancements to prepare to leave welfare. The aim is for you to become self-sufficient and provide for your family without public assistance.

Typical activities are ABE/GED classes, regular credit classes in a skill area, specialized short-term training, life skills/personal management, job search classes, and counseling.

Clatsop Community College works in a partnership arrangement with Adult and Family Services, MTC Training and Placement Services, the Employment Department, local school districts, and Clatsop Behavioral Healthcare to provide services. The program is funded through the Family Support Act of 1983 and the State of Oregon.

Lives In Transition

The Lives in Transition (LIT) program is designed to assist individuals to grow towards economic self-sufficiency through personal development and career exploration.

Lives in Transition provides:

- Classes in life and transition planning
- Classroom activities include: developing self esteem, assertiveness, communication skills, decision making, and goal setting
- Information on non-traditional and vocational technical careers
- Six tuition free, transferable college credits
- Reimbursement for child care and transportation costs, if needed, to attend the LIT classes
- On-going support, information and referral to College and community resources

The program is located in Towler Hall, room 209. For more information call 338-2377.

Special Programs

Marine Safety Training

Radar Observer

ARPA

GMDSS

Marine Safety Training

The College offers marine safety courses that are U.S. Coast Guard approved. Classes are conducted coast-wide with other community colleges and Sea Grant agencies. Marine safety classes cover the following topics: preparation for an emergency; cold water near drowning; hypothermia; cold water survival skills; sea survival; stability; marine fire fighting; and emergency procedures.

Classes can be arranged to meet the needs of specific groups. The course is aimed at certifying commercial fishermen to meet or exceed international maritime organization standards as well as those of the U.S. Marine Safety Advisory Committee. Graduates meet compliance criteria as set forth by the Fishing Vessel Safety Act of 1988.

Other affected groups which can benefit are charter operators and crews; government agencies such as National Oceanic and Atmospheric Administration, United States Coast Guard, and National Marine Fisheries Service; local and state police; fisheries observers; park rangers; lifeguards; and the general public.

Additional information about this program can be obtained by contacting the Maritime Science Center, 325-7962.

Radar Observer Program

The U.S. Coast Guard approved Radar Observer Program offers you five different courses: five-day original endorsement, three-day "Rivers" original endorsement, one-day "Rivers" recertification, three-day recertification, and one-day recertification. The five-day original endorsement class is required if you will be operating vessels 200 gross tons or over on an ocean route or 300 gross tons on any route. The three-day "Rivers" original endorsement course meets new federal requirements for operators of towing vessels of 26 feet or more in length operating solely on rivers. The three-day recertification class is designed for you if you need to renew your "unlimited" endorsement and would like to practice your plotting skills before taking the renewal exam. The one-day recertification class does not include any instruction or practice time and is limited to the exam only. The one-day recertification class is recommended only if you have recent time on direct plotting radars. Instruction in the three- and five-day classes will include radar operation, characteristics of radar waves, target identification, plotting (three-day "Rivers" does not include plotting), and rules of the road for using radar.

Cost of the classes includes books and classroom materials. You must pay at the time you reserve your class seat. For more information about registering for the radar school, call the Maritime Science Center, 325-7962.

ARPA Training

The U.S. Coast Guard approved Automatic Radar Plotting Aid (ARPA) course meets the requirements for STCW certification and endorsement for master, mate and officer in charge of a navigational watch on ships equipped with ARPA radar. Students must currently hold an unlimited radar endorsement. The 32-hour course covers principles, performance standards and operation of ARPA radar and includes recertification for the unlimited radar endorsement Additional information about this program can be obtained by contacting the Maritime Science Center, 325-7962.

STCW GMDSS Training

The U.S. Coast Guard approved 70-hour Global Marine Distress Safety System (GMDSS) course meets the minimum required training for certification as GMDSS operator in accordance with STCW standards. The course includes principles of communications, GMDSS communications system, GMDSS equipment, distress alerting and operational procedures. The student will operate actual GMDSS equipment with state of the art simulation hardware. Additional information about this program can be obtained by contacting the Maritime Science Center, 325-7962.

Small Business Management

If you are a business owner/manager, the Small Business Management Program provides you with a variety of skills and tools that can lead you to greater business success. The program includes a practical once-a-month classroom session covering a variety of business topics and providing you an opportunity to exchange ideas with other business owners. The program also includes a monthly visit to businesses by the SBM instructor to assist in applying the materials learned in class. The instructor/student relationship is completely confidential.

The course covers a variety of subjects, including financial control and management, supervision, sales and marketing, inventory control, quality control, accounting, customer relations, and computer applications. You will receive a certificate of completion at the conclusion of the three year program.

Additional information about this program can be obtained by contacting Jim Entler at the Business and Training Center, South County Center, 738-3347 or 338-2405.

Oregon Advanced Technology Consortium

Manufacturers and businesses may improve their competitive edge by implementing new technologies.

Clatsop Community College is pleased to be the local partner of Oregon Advanced Technology Consortium (OATC), a consortium of 12 Oregon community colleges serving small and medium sized manufacturers seeking access to advanced technology services and training. OATC services include technology demonstrations, prototyping, telecommunications, Internet access, short production runs, engineering support, and advanced technical training.

The Mission of OATC is to improve Oregon's competitiveness by assisting businesses and manufacturers with the adoption and implementation of new technologies. Businesses require new and existing technologies–particularly readily available, off-the-shelf manufacturing technologies- to modernize their industries and enhance their ability to compete in the global market.

CONSORTIUM MEMBERS:
Blue Mountain CC
Central Oregon CC
Chemeketa CC
Clackamas CC
Clatsop CC
Columbia Gorge CC
Lane CC
Linn Benton CC
Mt. Hood CC
Portland CC
Rogue CC
Southwestern Oregon CC

For information and services, contact the Community Information Center, 325-8502.

Small Business Management

Oregon Advanced Technology Consortium

SPECIAL PROGRAMS

GRANT FUNDED PROGRAMS

Trio Programs

Educational Talent Search (ETS)

Upward Bound (UB)

Plus Program (SSS)

SECONDARY EDUCATION

In cooperation with the area school districts, Clatsop Community College has competed for and successfully received two federal grants which assist middle school and high school students. The general purposes of the grants are to help you succeed in school, make plans for the future and enter post-secondary education. These grants, Educational Talent Search (ETS) and Upward Bound (UB), are long term grants which are renewable; the services from these grants should continue for many years. The requirements for eligibility are similar for both grants with an emphasis on students who come from families which qualify based on income and educational levels. If you want more information, you should contact the ETS or UB office at 338-2370.

Educational Talent Search

Educational Talent Search (ETS) is a 100% federally funded grant which helps eligible 6th grade through 12th grade students be successful in school, graduate from high school, and enter an appropriate post-secondary program. ETS provides a wide range of services to participants in the 12 schools in the program. Classroom presentations, small group work, large multi-school activities, individual counseling, and special group tours are a few of the approaches used. Individuals who are eligible and are past high school age can also participate in the program. If you have questions, you should contact the ETS Office at 338-2370.

Upward Bound

Upward Bound (UB) provides an intense, year-long program for eligible students which includes a tutorial program during the year and a five to six week summer program. You have a variety of cultural and educational experiences as well as opportunities to explore career and school options. The summer program will emphasize hands-on experiences in math and science. Upward Bound is 100% federally funded. If you are interested in more information, you should contact the Upward Bound office at 338-2370.

POSTSECONDARY GRANT

Student Support Services

Another strategy of the TRIO Program is Student Support Services (SSS). This program serves the academic and personal needs of first-generation college students, students with disabilities and low-income students. The Plus Program is Student Support Services at Clatsop and is 100% federally funded. Individuals interested in more information should see the description of the Plus Program on page 21.

GRANT FUNDED PROGRAMS

Carl D. Perkins Vocational and Technical Education Act of 1998

The Carl D. Perkins Vocational and Technical Education Act of 1998 provides federal funds to develop the academic, vocational, and technical skills of high school and community college students by:

- developing challenging academic standards;
- integrating academic and professional technical instruction, and linking high school and community college education;
- developing, implementing, and improving professional technical education;
- providing professional development to improve professional technical education programs, services and activities.

Specifically, the grant provides for improving the linkage between the area high schools and Clatsop Community College in the following program areas: Business & Management and Industrial & Manufacturing Technologies.

Funding is available for staff training and curriculum development, including inservice training of both professional technical and academic instructors working with professional technical students for integrating academic and professional technical education.

Gender Equity in Professional Technical Education

One component of the Carl D. Perkins Vocational and Technical Education Act of 1998 is to improve gender equity in career awareness, and/or the recruitment, retention, and placement of men and women in nontraditional livable wage jobs. Contingent upon receipt of the Carl Perkins Grant award, federal funds are available to assist in the development of regional gender equity systems.

In cooperation with the area school districts, Clatsop Community College will fund local equity projects that promote activities that will enable people to examine and overcome equity barriers in the community. The following are allowable uses of these funds:

- Projects directed toward elimination of institutional sex biased and stereotyped practices, which result in improved enrollments and retention in nontraditional professional technical education programs.
- Projects designed to eliminate biased and stereotyped attitudes and behaviors of teachers, administrators, support staff, area employers, and business organizations.
- Projects designed to improve career guidance with the aim of eliminating bias, stereotypes, and limited expectations for students based on gender.

Additional information concerning the Carl D. Perkins Vocational and Technical Education Act of 1998 or Gender Equity services may be directed to the Carl Perkins Program office at Clatsop Community College.

Carl Perkins Professional Technical Program

Gender Equity in Professional Technical Education

Special Programs

Adult Education and Family Literacy

College Preparation Courses

General Educational Development (GED)

English as a Second Language

Literacy Program

General Information

The purpose of Adult Education is to help you improve your basic reading, writing and mathematical skills. Instruction in basic skills enhances your opportunities for success in continued academic learning and in the workplace. Course offerings include basic skills classes and labs, college preparation, GED, and English for Speakers of Other Languages. Career and workforce skills are integrated into the courses. SEA (Student Educational Assistance) Services is also a part of Developmental Education. The SEA supports students at all levels of study through tutoring, study groups and career counseling opportunities. All services in the SEA are free.

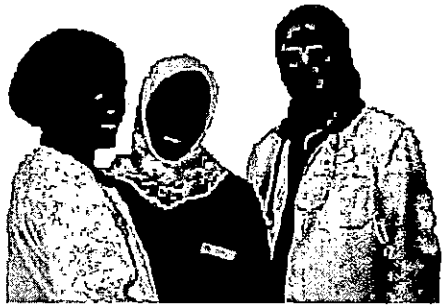
College Preparation Courses for Transfer and Vocational Students

College preparation courses help you strengthen the reading, writing, and mathematics skills needed to prepare for college transfer classes, vocational programs and the workforce. After completing the ASSET placement test and meeting with your assigned advisor, you will register for the appropriate courses.

General Educational Development (GED)

The GED program offers classes for you to complete the GED equivalency certificate. This certificate is accepted as a substitute for a high school diploma by employers, apprenticeship programs and colleges throughout the United States. In Oregon the certificate is awarded by the Oregon Department of Education.

If you are interested in obtaining your GED contact the Director of Developmental Education. Day and evening classes are offered in Astoria and Seaside. Classes are free and you may begin on start dates throughout the term.



English for Speakers of Other Languages

English for Speakers of Other Languages (ESOL) classes are designed to help non-native speakers to gain skills in reading, writing, and speaking. Strengthening English skills will increase opportunities for success in college courses and the workplace. Classes are offered in Astoria, Seaside and Cannon Beach. The ESOL classes are free, and you may register at any time.

Literacy Program

Tutors are available to assist basic skills and ESOL students with reading, writing, math, citizenship and workforce skills. Free trainings are offered biannually for tutors. If you are interested in volunteering for the Volunteer Literacy Tutor program or want to refer someone for tutoring, contact the Director of Developmental Education.

"As an ESL student, CCC is the best place to start college because it is not big and I can have the teachers attention."
Zuifa Nuvi

ANT ANTHROPOLOGY

ANT 110
GENERAL ANTHROPOLOGY: CULTURAL
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students gain a basic understanding of the variety of cultures in the world, an appreciation of the sources of information used by cultural anthropologists, and knowledge of evolutionary, ecological, and functional paradigms.

ANT 150
GENERAL ANTHROPOLOGY: ARCHEOLOGICAL
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of archaeological methods and theories including techniques used in gathering and interpreting data on past cultures, preservation of such data, development of culture and civilization, and description of the prehistory of Oregon and Washington.

ANT 170
GENERAL ANTHROPOLOGY: PHYSICAL
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students acquire basic knowledge of the processes of human evolution and variation; historical perspective and current controversy in physical anthropology; Mendelian and population genetics; modern human variation and classification; and primates and fossil man.

ANT 232
NATIVE NORTH AMERICANS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Introduction to the native populations of the "New World", from simple food collecting bands to advanced civilizations. Includes discussion of life and customs prior to white contact, as well as the impact of westernization on native cultures.

ASL AMERICAN SIGN LANGUAGE

ASL 101
AMERICAN SIGN LANGUAGE I
(3.00 Lecture Hrs./Wk.) **3 Credits**
This is the first in a related series of courses that focus on the use and study of American Sign Language (ASL), the language that is widely used by Deaf Americans. Students will learn basic ASL vocabulary, grammatical structures, and conversational behaviors. Students are introduced to cultural values, beliefs, and behavioral norms shared by those within the Deaf Community.

ASL 102
AMERICAN SIGN LANGUAGE II
(3.00 Lecture Hrs./Wk.) **3 Credits**
This is the second in a related series of courses that focus on the use and study of American Sign Language (ASL). Students will improve their skills in vocabulary, grammatical structures, and conversational behaviors. Special focus will be emphasized on developing more awareness of the cultural values and beliefs shared by the Deaf Community.

ASL 103
AMERICAN SIGN LANGUAGE III
(3.00 Lecture Hrs./Wk.) **3 Credits**
This is the third in a related series of courses that focus on the use and study of American Sign Language (ASL). Students will continue to increase their skills in vocabulary, grammatical structures, and in depth cultural awareness. Cultural information centers upon the ways in which hearing people can work with Deaf people to establish culturally appropriate relationships.

ART ART

ART 104
ART APPRECIATION: ITALY
(2.00 Lecture Hrs./Wk.) **2 Credits**
Students will study the visual arts of Italy from Etruscan times through the Baroque style of the 17th Century.

ART 115
BASIC DESIGN
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
This is a foundation course for most professions in the visual arts including architecture, interior architecture, graphic design, landscape design, and all commercial applications. Students complete two-dimensional projects exploring the basic elements and principles of design; gain a basic knowledge of the concepts underlying fundamental composition and formal theory in the visual arts; and develop a vocabulary for work and criticism. **Note:** This class is a prerequisite to ART 116.

ART 116
BASIC DESIGN
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete studio exercises exploring the basic elements and principles of three-dimensional design and continue to master the concepts underlying fundamental composition and formal theory in the visual arts. Students gain a fundamental understanding of vocabulary, function and applications of three-dimensional design concepts. Students learn the processes of visual thinking and creative problem solving. **Prerequisite:** ART 115 or instructor approval.

ART 117
BASIC DESIGN
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students complete two-and three-dimensional projects demonstrating an understanding of creative process within the context of the art movements of the 20th Century. Students learn how to independently make use of creative thought processes and visual problem solving. **Prerequisite:** ART 116 or instructor approval.

ART 118
INTRODUCTION TO CALLIGRAPHY
(4.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students complete projects which develop their knowledge and skill regarding lettering principles, techniques, and functions; traditions and historical development of letters; the Roman alphabet; and practical and creative uses of calligraphy.

ART 131
INTRODUCTION TO DRAWING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This is a foundation course for most professions in the visual arts including architecture, interior architecture, graphic design, landscape design, and all commercial applications. Students gain drawing experience through exercises which build basic drawing skills, learn to observe and record the form of a variety of objects with communicative accuracy, and develop personal expression and creative innovation. Introduction to drawing media, graphic structure, value rendering, and 1 and 2 point perspective.

ART 132
INTRODUCTION TO DRAWING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students complete projects which demonstrate their knowledge of portrait and figure drawing emphasizing the structure of the human form and the expressive and creative use of drawing media. **Prerequisite:** ART 131 or instructor approval.

ART 133
INTRODUCTION TO DRAWING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students complete projects which demonstrate understanding of form and explore drawing content. They develop individual interpretation and adapt technique to complete independent work which addresses more personal goals. **Prerequisite:** ART 131 & 132 or instructor approval.

ART 194
INTRODUCTION TO WATERCOLOR
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop basic watercolor techniques including color mixing, paint application, and basic composition. **Prerequisite:** Drawing and design classes recommended.

ART 195
INTRODUCTION TO WATERCOLOR
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students further develop basic skills in watercolor painting including color mixing, paint application, and basic composition. **Prerequisite:** ART 194 recommended.

ART 196
INTRODUCTION TO WATERCOLOR
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to develop basic skills in watercolor painting including color mixing, paint application, and basic composition. **Prerequisites:** ART 194 & 195 or instructor approval.

ART 204
HISTORY OF WESTERN ART
(3.00 Lecture Hrs./Wk.) 3 Credits
In this three-course sequence, students have the opportunity to appreciate and enjoy art, explore Western styles, and relate specific works of art to each other and the ideas that animated the life of their times. This class provides an historical survey of the visual arts in the Western world from the Egyptian through the Romanesque periods. **Note:** Need not be taken in sequence.

ART 205
HISTORY OF WESTERN ART
(3.00 Lecture Hrs./Wk.) 3 Credits
This class provides an historical survey of the visual arts in the Western world from the Gothic through the Baroque periods. **Note:** Need not be taken in sequence.

ART 206
HISTORY OF WESTERN ART
(3.00 Lecture Hrs./Wk.) 3 Credits
This class provides an historical survey of the visual arts in the Western world from the Rococo period through the 20th Century. **Note:** Need not be taken in sequence.

ART 211
SURVEY VISUAL ARTS OF THE 20TH CENTURY
(3.00 Lecture Hrs./Wk.) 3 Credits
Through the study of 20th century art, principally focused on European and American art and culture from approximately 1880 to 1910, students will develop an understanding of the role of art and culture from the turn of the century to the present day. Special emphasis will be placed on examining paintings, sculptures, and some graphic arts through field trips and classroom discussion. **Prerequisite:** minimal background in history or art history helpful, but not required.

ART 212
SURVEY VISUAL ARTS OF THE 20TH CENTURY
(3.00 Lecture Hrs./Wk.) 3 Credits
Through the study of 20th century art, principally focused on European and American art and culture in the first half of the century, students will develop an understanding of the role of art and culture from the turn of the century to the present day. Special emphasis will be placed on examining paintings, sculptures, and some graphic arts through field trips and classroom discussion. **Prerequisite:** minimal background in history or art history helpful, but not required.

ART 213
SURVEY VISUAL ARTS OF THE 20TH CENTURY
(3.00 Lecture Hrs./Wk.) 3 Credits
Through the study of 20th century art, principally focused on European and American art and culture of the post-war era 1945 to present, students will develop an understanding of the role of art and culture from the turn of the century to the present day. Special emphasis will be placed on examining paintings, sculptures, and some graphic arts through field trips and classroom discussion. **Prerequisite:** minimal background in history or art history helpful, but not required.

ART 218
CALLIGRAPHY - INTERMEDIATE
(4.00 Lecture/Lab Hrs./Wk.) 2 Credits
This class is the first of a three-course series which prepares students to produce calligraphic and drawn letters on a commercial basis. Students develop skill in Humanist Bookhand, Simple Roman Capital, and a style of writing based upon basic script which may be used for personal expression. **Prerequisite:** ART 118 or instructor approval.

ART 219
CALLIGRAPHY - INTERMEDIATE
(4.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students demonstrate their skill in Italic hand, both lowercase and capitals including work with a pointed lettering brush, edged pens, and a script-written Italic. **Prerequisite:** ART 118 or instructor approval.

ART 220
CALLIGRAPHY - INTERMEDIATE
(4.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students demonstrate their skill in the Uncial and Carolingian script, including work with a flat, edged lettering brush as a variation to write the basic scripts. **Prerequisite:** ART 118 or instructor approval.

ART 231
DRAWING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to build a visual vocabulary for formal problem solving. They will increase their technical and expressive drawing skills introduced in previous drawing classes. **Prerequisite:** ART 131, 132 & 133 or instructor approval.

ART 232
DRAWING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to build a visual vocabulary for formal problem solving. They will increase their technical and expressive drawing skills introduced in previous drawing classes. **Prerequisite:** ART 131, 132 & 133 or instructor approval.

ART 233
DRAWING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to build a visual vocabulary for formal problem solving. They will increase their technical and expressive drawing skills introduced in previous drawing classes. **Prerequisite:** ART 131, 132 & 133 or instructor approval.

ART 250
INTRODUCTION TO CERAMICS
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop basic skills in ceramics including clay preparation, throwing, and glaze application.

ART 251
INTRODUCTION TO CERAMICS
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop basic skills in ceramics including the production of functional and expressive forms. **Note:** Need not be taken in sequence.

ART 252
INTRODUCTION TO CERAMICS
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students learn clay forming processes in beginning ceramics including throwing, decorating, and glazing. **Note:** Need not be taken in sequence.

ART 253
CERAMICS - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students have the opportunity to apply the techniques learned in introductory ceramics and conduct experimental research with clay bodies, glazes, and firing methods. **Prerequisite:** ART 250, 251 and 252; or instructor approval.

ART 254
CERAMICS - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
In this class students glaze pottery forms using the glaze research from ART 253 Ceramics - Intermediate. **Prerequisites:** ART 250, 251, 252, and 253; or instructor approval.

ART 255
CERAMICS - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This class provides the opportunity for students to focus on expressive methods of producing pottery forms. **Prerequisites:** ART 250, 251, 252, 253 and 254; or instructor approval.

ART 270
INTRODUCTION TO PRINTMAKING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This is the first course in a year-long sequence recommended for students preparing for architecture, interior architecture, and graphic design programs. During the sequence, students learn techniques for wood cut, monoprint and etching. Students may work in the media introduced this term or any media they have studied in a previous course. **Prerequisites:** None, but drawing and design classes are recommended.

ART 271
INTRODUCTION TO PRINTMAKING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the techniques of making original fine art prints acquired through lectures, studio projects, and individual applications. Students may work in the media introduced this term and/or any media they have studied in a previous course. **Prerequisites:** None, but drawing and design classes are recommended.

ART 272
INTRODUCTION TO PRINTMAKING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the techniques of making original fine art prints acquired through lectures, studio projects, and individual applications. Students may work in the media introduced this term and/or any media they have studied in a previous course. **Prerequisites:** None, but drawing and design classes are recommended.

ART 273
PRINTMAKING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to develop skill in printmaking applying the techniques learned in introductory printmaking classes. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 270, 271 & 272 or instructor approval.

ART 274
PRINTMAKING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to develop skill in printmaking applying the techniques learned in introductory printmaking classes. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 270, 271 & 272 or instructor approval.

ART 275
PRINTMAKING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students continue to develop skill in printmaking applying the techniques learned in introductory printmaking classes. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 270, 271 & 272 or instructor approval.

ART 276
INTRODUCTION TO SCULPTURE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This class provides the opportunity for students to develop skill in basic portrait study emphasizing construction of facial features and forms.

ART 277
INTRODUCTION TO SCULPTURE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This class provides the opportunity for students to develop skill in techniques of sculpture involving basic figure study emphasizing construction of human features.

ART 278
INTRODUCTION TO SCULPTURE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This class provides the opportunity for students to develop skill in techniques of stone carving emphasizing form, carving techniques, and finishing processes.

ART 279
INTRO TO MIXED MEDIA AND HYBRID FORMS: MULTIDISCIPLINARY
(6.00 Lecture/Lab Hrs./Wk. 3 Credits
Students will learn about theory, methods, and compositional problems of creating with mixed media and installation art forms. **Prerequisites:** ART 115, ART 131 and one other studio class, or instructor approval.

ART 281
INTRODUCTION TO PAINTING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students complete projects addressing compositional and technical problems, explore oil and acrylic media, and exhibit individual creativity. **Prerequisites:** None, but drawing and design classes are strongly recommended.

ART 282
INTRODUCTION TO PAINTING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students complete projects which demonstrate skill in portrait and figure composition, emphasize the structure of the human form; use painting media and color expressively and creatively; emphasize space concept; and enrich their visual vocabulary. **Prerequisite:** ART 281 or instructor approval.

ART 283
INTRODUCTION TO PAINTING
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students create paintings which demonstrate their knowledge of technique, theory, and philosophy of painting. Students complete independent work which contributes to their personal portfolio. **Prerequisite:** ART 282 or instructor approval.

ART 284
PAINTING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete projects which demonstrate applied knowledge of methods, materials, composition, and technique. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 281, 282 & 283; or instructor approval.

ART 285
PAINTING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete projects which demonstrate applied knowledge of methods, materials, composition, and technique with emphasis on the human figure. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 281, 282 & 283; or instructor approval.

ART 286
PAINTING - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete projects which demonstrate applied knowledge of methods, materials, composition, and technique. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 281, 282 & 283; or instructor approval.

ART 291
SCULPTURE - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Application of techniques introduced in introductory sculpture. **Prerequisites:** ART 276, 277, 278 Introduction to Sculpture or instructor approval.

ART 292
SCULPTURE – INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Application of techniques introduced in introductory sculpture. **Prerequisites:** ART 276, 277, 278 Introduction to Sculpture or instructor approval.

ART 293
SCULPTURE - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students will apply techniques introduced in introductory sculpture. **Prerequisites:** ART 276, 277, 278 Introduction to Sculpture or instructor approval.

ART 294
WATERCOLOR - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete projects which apply their knowledge of watercolor painting techniques, concepts, and theories of expression. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 194, 195 & 196; or instructor approval.

ART 295
WATERCOLOR - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete watercolor paintings which demonstrate individual variations of technique. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 194, 195 & 196, or instructor approval.

ART 296
WATERCOLOR - INTERMEDIATE
(6.00 Lecture/Lab Hrs./Wk.) **3 Credits**
Students complete watercolor paintings which demonstrate skill in composition and incorporate theories of expression. Students complete independent work which contributes to their personal portfolio. **Prerequisites:** ART 194, 195 & 196; or instructor approval.

BA BUSINESS ADMINISTRATION

BA 101
INTRODUCTION TO BUSINESS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate a basic understanding of the concepts, elements, and issues involved in the United States business system.

BA 104
BUSINESS MATH WITH ELECTRONIC CALCULATORS
(4.00 Lecture Hrs./Wk.) **4 Credits**
Students demonstrate the application of mathematics skills to business and consumer problems and use an electronic calculator keyboard by touch. **Prerequisite:** MTH 65 or instructor approval.

BA 131
ACCOUNTING PROCEDURES I
(3.00 Lecture Hrs./Wk.) **3 Credits**
Bookkeeping basics. This class prepares students to perform simple accounting in service organizations emphasizing the accounting cycle, banking procedures, and payroll accounting. This is the first course of a year-long sequence in which students learn to organize financial information and prepare financial reports.

BA 132
ACCOUNTING PROCEDURES II
(3.00 Lecture Hrs./Wk.) 3 Credits
Bookkeeping basics. This class prepares students to perform accounting tasks in merchandising organizations including special journals and ledgers; purchases and sales; inventory and prepaid expenses; tangible long-lived assets; and notes and receivables. **Prerequisite:** BA 131 with a C grade or better, or instructor approval.

BA 133
ACCOUNTING PROCEDURES III
(3.00 Lecture Hrs./Wk.) 3 Credits
Bookkeeping basics. This class prepares students to perform accounting tasks in manufacturing organizations, partnerships, and corporations. Students learn to prepare statements of cash flows; analyze financial statements; and complete other accounting procedures involving stock, bonds, corporate earnings, and investments. **Prerequisite:** BA 132 with a C grade or better, or instructor approval.

BA 177
PAYROLL & BUSINESS TAX ACCOUNTING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop the knowledge and skills needed to complete payroll forms and records and to comply with federal and state requirements.

BA 206
MANAGEMENT FUNDAMENTALS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the fundamental principles for thinking and operating as a manager, including organizational interaction and human relations.

BA 211
PRINCIPLES OF ACCOUNTING I
(4.00 Lecture Hrs./Wk.) 4 Credits
Students learn to use basic accounting concepts and procedures including the accounting cycle and dealing with cash, receivables, and merchandise inventories common to a sole proprietorship. Students will also become familiar with a commonly used computerized accounting program or spreadsheet. **Note:** This is the first course in a year-long sequence which is intended for students who are planning to transfer to a four-year college.

BA 212
PRINCIPLES OF ACCOUNTING II
(4.00 Lecture Hrs./Wk.) 4 Credits
Students learn to use accounting concepts and procedures required to prepare cash flow statements and manage tangible and intangible assets; payroll; partnerships and corporations; long-term investments and liabilities; stocks; and bonds. They demonstrate knowledge of professional accounting standards. Students will also become familiar with a commonly used computerized accounting program or spreadsheet. **Prerequisite:** BA 211 with a C grade or better, or instructor approval.

BA 213
PRINCIPLES OF ACCOUNTING III
(4.00 Lecture Hrs./Wk.) 4 Credits
Managerial accounting. Students demonstrate an understanding of the use of internal accounting data to direct the affairs of businesses. Students will also become familiar with a commonly used computerized accounting program or spreadsheet. **Prerequisites:** BA 211 & 212 with a C grade or better, or instructor approval.

BA 214
BUSINESS COMMUNICATIONS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate the ability to prepare memos, letters, and informal reports; conduct research; and prepare analytical business and/or technical reports. **Prerequisites:** ASSET writing score of 45+ or OA 104; OA 121; & instructor approval.

BA 222
FINANCIAL MANAGEMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the concepts, techniques, decision processes and other factors that are used to manage a firm's sources and uses of funds. They will become familiar with asset management, capital budgeting, and long-term financing procedures. **Prerequisites:** BA 211 with a C grade or better, or instructor approval.

BA 223
PRINCIPLES OF MARKETING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the basic issues and practices in marketing management including marketing strategy planning. Students design a marketing mix.

BA 224
HUMAN RESOURCE MANAGEMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of principles and techniques related to managing human resources emphasizing hiring practices, training and employee development, and personnel management.

BA 226
INTRODUCTION TO BUSINESS LAW I
(4.00 Lecture Hrs./Wk.) 4 Credits
Students demonstrate a basic knowledge of law and its origins, court systems, legal rights and duties, formation of contracts, operation and discharge of contracts, law of sales of goods, and bailments.

BA 227
INTRODUCTION TO BUSINESS LAW II
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate an understanding of the various areas of business law: agency, sales, partnerships, corporations, bankruptcy, real and personal property, and landlord and tenant.

BA 228
COMPUTER ACCOUNTING APPLICATIONS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate the ability to use an integrated accounting program to perform accounting functions and solve problems including general ledger, accounts receivable, accounts payable, and inventory. **Prerequisites:** BA 131 & 132, or BA 211 & BA 212, or instructor approval.

BA 230
MANAGEMENT INFORMATION SYSTEMS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate an understanding of the systems that exist for business management's use in making intelligent decisions, including computers, microfiche and alternative paper-oriented systems.

BA 250
SMALL BUSINESS MANAGEMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of managing the small business enterprise, emphasizing its general functions, procedures, and problems.

BA 256
INCOME TAX
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate an understanding of the theory and practice of preparing of federal and state individual income tax returns.

BA 285
HUMAN RELATIONS IN BUSINESS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate an understanding of the communication aspects of interpersonal behavior including perception, power and influence, group dynamics, conflict, and motivation which is essential for success in the workplace and with friends and family.

BI BIOLOGY

BI 101
GENERAL BIOLOGY - EMPHASIS ON ECOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate knowledge of the basic principles of biology including evolution and diversity of organisms, with a strong emphasis on ecology. Includes field work. **Note:** Does not meet requirements for biology majors. Need not be taken in sequence. If you have completed one term of college biology, consult the instructor.

BI 102
GENERAL BIOLOGY - EMPHASIS ON HUMAN BIOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate knowledge of the basic principles of biology including the chemical and cellular basis of life, cell division, energy transformation, genetics, and human organ systems. **Note:** This course is recommended for pre-nursing students. Does not meet requirements for biology majors. Need not be taken in sequence. If you have completed one term of college biology, consult the instructor.

BI 103
GENERAL BIOLOGY - EMPHASIS ON THE BIOLOGY OF PLANTS (odd years)
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students will demonstrate knowledge of the basic principles of biology including structure and function of systems of animals and plants. This class involves field work and focuses on plants. **Note:** Does not meet requirements for biology majors. Need not be taken in sequence. If you have completed one term of college biology, consult the instructor.

BI 103A
GENERAL BIOLOGY - EMPHASIS ON THE BIOLOGY OF ANIMALS (even years)
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students will demonstrate knowledge of the basic principles of biology including structure and function of systems of animals and plants. This class involves field work and focuses on plants. **Note:** Does not meet requirements for biology majors. Need not be taken in sequence. If you have completed one term of college biology, consult the instructor.

BI 121
BASIC HUMAN ANATOMY & PHYSIOLOGY I
(3.00 Lecture Hrs./Wk.) 3 Credits
Examines the structure and function of the human body including all characteristics, tissues, organs and body systems. Covers integumentary, musculoskeletal, nervous, endocrine systems, as well as the special senses. **Prerequisite:** completion of MTH 60 or a higher level math with a C grade or higher.

BI 122
BASIC HUMAN ANATOMY & PHYSIOLOGY II
(3.00 Lecture Hrs./Wk.) 3 Credits
Examines the structure and function of the human body including all characteristics, tissues, organs and body systems. Covers cardiovascular, digestive, respiratory, renal, immune, and reproductive systems. **Prerequisite:** completion of BI 121 with a C grade or higher, or instructor approval.

BI 211
PRINCIPLES OF BIOLOGY
(4.00 Lecture, 3.00 Lab Hrs./Wk.) 5 Credits
This the first of a year-long sequence designed for pre-med, pre-vet, and science majors. These are process/ investigative oriented courses largely built around lab and field work in which students develop skills in experimental design, data collection and analysis (including basic statistics), and use of scientific instrumentation and field research tools. This term, students conduct investigations in cellular chemistry, structure and function, biological energy transformations, and cell life cycles. **Note:** Pre-nursing can substitute BI 211 for BI 102. **Prerequisite:** High school chemistry or instructor approval. MTH 95 and concurrent enrollment in CH 221 recommended.

BI 212
PRINCIPLES OF BIOLOGY
(4.00 Lecture, 3.00 Lab Hrs./Wk.) 5 Credits
Students conduct laboratory investigations and demonstrate knowledge of genetics, both Mendelian and molecular; biotechnology; animal diversity; and animal anatomy and physiology. **Prerequisite:** BI 211, or instructor approval. MTH 95 and CH 222 recommended.

BI 213
PRINCIPLES OF BIOLOGY
(4.00 Lecture, 3.00 Lab Hrs./Wk.) 5 Credits
Students complete laboratory investigations in plant physiology and several field biology investigations. Students demonstrate knowledge of ecology, evolution, plant diversity, and plant anatomy and physiology. **Prerequisite:** BI 212, or instructor approval. MTH 95 and CH 223 recommended.

BI 222
HUMAN GENETICS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of human genetics and classical principles of heredity and population genetics, including basic genetic principles, sex-linked inheritance, population genetics and evolution, and genetic counseling. **Note:** Offered alternate years (2000-2001).

BI 231
HUMAN ANATOMY AND PHYSIOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
The year-long sequence provides students with the knowledge of the form and function of the dynamic human body which is required for health service occupations and further study in the biological sciences. Students master knowledge and concepts of organization and terminology, cells and membranes, and the nervous system. **Prerequisite:** BI 102 or 201 or instructor approval. College level chemistry is recommended.

BI 232
HUMAN ANATOMY AND PHYSIOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students master knowledge and concepts of respiration, the cardiovascular system, the renal system, and the body's fluids. **Prerequisite:** BI 102 or 201 or instructor approval. College level chemistry is recommended.

BI 233
HUMAN ANATOMY AND PHYSIOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students master knowledge and concepts concerning bone and muscle, heredity, development, and reproduction. **Prerequisite:** BI 102 or 201 or instructor approval. College level chemistry is recommended.

BI 234
INTRODUCTION TO MICROBIOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
This course is designed for allied health areas; not for science majors or those in pre-medicine, pre-dental or pre-veterinary science. Students demonstrate knowledge of the basic and applied aspects of microbiology with emphasis on the role of the microorganism in relation to humans. **Prerequisite:** None, but prior courses in biology and chemistry are strongly recommended.

CH CHEMISTRY

CH 104
INTRODUCTORY CHEMISTRY
(3.00 Lecture, 2.00 Lect./Lab, & 1.00 Lab Hrs./Wk.) 4 Credits
Students master basic knowledge of atomic theory, elements, compounds, bonding, naming, and radioactivity. **Note:** This course is designed for students with no prior chemistry course work and emphasizes applications to nursing and related areas. The two-quarter series is good preparation for CH 221 General Chemistry. **Prerequisite:** Mastery of basic arithmetic, percentages, ratios and proportions, and conversions. (equivalent to a "C" grade in MTH 20).

CH 105
INTRODUCTORY CHEMISTRY
(3.00 Lecture, 2.00 Lect./Lab, & 1.00 Lab Hrs./Wk.) 4 Credits
This is the second term of a two-quarter introductory general chemistry series. Students master basic knowledge of chemical reactions, gases, liquids, solids, acids, and bases. **Prerequisite:** Completion of CH 104 or equivalent.

CH 106
INTRODUCTORY CHEMISTRY - BIOCHEMISTRY
(3.00 Lecture, 2.00 Lect./Lab, & 1.00 Lab Hrs./Wk.) 4 Credits
Students master basic knowledge of the fundamental principles of biochemistry including organic chemistry and the four important classes of biomolecules: carbohydrates, lipids (fats and oils), proteins, and nucleic acids. **Prerequisites:** CH 104 & 105 or equivalent.

CH 221
GENERAL CHEMISTRY
(3.00 Lecture, 2.00 Lect./Lab, & 1.00 Lab Hrs./Wk.) 4 Credits
This three-term series is designed for all science and engineering majors. The first term students master knowledge and concepts of stoichiometry, energy in chemical reactions, quantum mechanics, atomic and molecular structure, periodicity, and chemical bonding. **Prerequisites:** Two years of high school algebra or MTH 95, one year of high school chemistry or CH 105, and instructor approval.

CH 222
GENERAL CHEMISTRY
(3.00 Lecture, 2.00 Lect./Lab, & 1.00 Lab Hrs./Wk.) 4 Credits
Second term of the general chemistry series for all science and engineering majors. Students master knowledge and concepts including gas laws, liquids and solids, intermolecular forces, colligative properties, solutions, chemical kinetics, acids and bases, and aqueous equilibria. Involves extensive algebraic problem-solving. **Prerequisites:** CH 221; MTH 111 is highly recommended.

CH 223
GENERAL CHEMISTRY
(3.00 Lecture, 2.00 Lect./Lab, & 1.00 Lab Hrs./Wk.) 4 Credits
Third term of the general chemistry series for all science and engineering majors. Students master knowledge and concepts including chemical thermodynamics, electrochemistry, metals and metallurgy, the descriptive chemistry of nonmetals, nuclear chemistry, and an introduction to organic chemistry. Involves extensive algebraic problem-solving. **Prerequisites:** CH 222; MTH 111 is highly recommended.

COMMUNICATIONS: See ENG or WR

CJ CRIMINAL JUSTICE

CJ 100
CAREERS IN CRIMINAL JUSTICE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of processes, people, components, and problems involved in the American system of criminal justice; and of the various careers and employment opportunities now and in the future.

CJ 101
INTRODUCTION TO CRIMINOLOGY
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of crime as a social problem including theoretical perspectives on the causes, treatment, and prevention of crime.

CJ 107
CRIMINAL JUSTICE WORKSHOP
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of ideas, issues, and recent events relating to the criminal justice system, for example computerization, women's roles, administration, organization, unionization, deadly force, polygraph, stress, health systems, and new research data.

CJ 110
INTRODUCTION TO LAW ENFORCEMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate in-depth knowledge of the roles and responsibilities of law enforcement in American society, including historical development, role concept and conflicts, professionalism, use of discretion, and current enforcement practices.

CJ 114
GENDER, RACE, CLASS AND CRIME
(3.00 Lecture Hrs./Wk.) 3 Credits
Students examine the cultural diversity issues which challenge our criminal justice system including the historical treatment of minorities, cross-cultural communications, and diversification within the law enforcement system.

CJ 120
INTRODUCTION TO THE JUDICIAL PROCESS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the judicial and social functions within the criminal justice system from arrest to appeal and comprehend the jurisdictional authority of federal and state court systems.

CJ 121
CONCEPTS OF CRIMINAL LAW
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate an understanding of the history, basic theories, and philosophical foundations of criminal law.

CJ 130
INTRODUCTION TO CORRECTIONS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the historical development and current processes in corrections including incarceration, probation, parole, treatment theories, and the human relations aspects of criminal justice careers.

CJ 132
INTRODUCTION TO PAROLE AND PROBATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge and critical analysis of the principles and techniques used in parole and probation in the administration of criminal justice.

CJ 203
CRISIS INTERVENTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of crisis intervention techniques used in domestic disputes, in suicide attempts, and in dealing with sexual assault victims and/or persons experiencing the trauma of a crisis.

CJ 210
CRIMINAL INVESTIGATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the history, theory, and principles of criminal investigation; strategies and procedures; forensic science and the crime lab; and crime lab techniques, capabilities and limitations.

CJ 215
ISSUES IN CRIMINAL JUSTICE SUPERVISION AND ADMINISTRATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the history, structure, and current issues in criminal justice which deal with supervision and management.

CJ 232
INTRODUCTION TO CORRECTIONS CASEWORK
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate a basic knowledge of the theories and current methods of behavior modification used by corrections personnel. They attain rudimentary skills in counseling and interviewing and gain the knowledge required for further study of advanced methods used by professional counselors.

CJ 243
ALCOHOL AND OTHER DANGEROUS DRUGS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the history of drug use, basic drug effects, symptoms of abuse and proper referral, the effects of drug abuse on American society, and criminal justice system responses.

CJ 244
SEXUAL EXPLOITATION OF CHILDREN
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the issues faced by criminal justice personnel who deal with sexual exploitation of children; strategies for cooperation between service agencies; and characteristics and treatment of victims, offenders, and non-offending family members.

CJ 281
FIELD EXPERIENCE SEMINAR - CRIMINAL JUSTICE
(1.00 Lecture Hr./Wk.) 1 Credit
Students develop appropriate and effective work practices through discussing employment related topics and sharing insights developed at the work site. **Note:** Requires concurrent enrollment in two credits of CJ 280. May be repeated twice toward an associate degree.

CPL CREDIT FOR PRIOR LEARNING

CPL 120 CREDIT FOR PRIOR LEARNING
(3.00 Lecture Hrs./Wk.) 3 Credits
This course guides students through the process of requesting college credit for learning acquired through work experience, volunteer work, industry training, etc. Each student develops a portfolio correlating non-academic learning experiences with related courses at Clatsop Community College. Typically, students gain new insights into past achievement and future goals. **Note:** A maximum of 22 portfolio credits and six credits of CPL 120 may be applied to an associate degree.

CS COMPUTER SCIENCE

SEE ALSO: MICROCOMPUTERS

CS 101
FUNDAMENTALS OF COMPUTING
(1.00 Lecture Hr./Wk.) 1 Credit
Students master contemporary computer terminology and the use of applications software including familiarization with hardware, disk formatting and management, software, startup, log in/out, Windows, and File Manager.

CS 125GR
COMPUTER GRAPHICS
(2.00 Lecture & 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students get overview information and hands-on experience in creating, editing, and using computer graphics and in the types and uses of fonts. Students use the acquired skills and knowledge to create stand-alone graphics and graphic elements to enhance their computer programs, database applications, WWW pages, and word processing documents created in other classes. **Prerequisite:** CS 131 or instructor approval.

CS 125H
BEGINNING WEB SITE DESIGN & DEVELOPMENT
(2.00 Lecture and 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students create World Wide Web sites using Hypertext Markup Language (HTML) and web site design tools. Students examine the principles and elements of effective web page design. **Prerequisite**: CS 131 or instructor approval.

CS 131
INTRODUCTION TO COMPUTER INFORMATION SYSTEMS
(4.00 Lecture Hrs./Wk.) 4 Credits
This class provides hands-on experience in preparation for more advanced classes. Students learn and apply basic concepts, elements, and structures of microcomputer systems to develop a basic understanding of programming, classifying, calculating, and reporting functions. **Prerequisite:** Keyboarding by touch.

CS 135H
ADVANCED WEB SITE DESIGN AND DEVELOPMENT
(2.00 Lecture and 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
This is the second course in Web site design and development. Students create interactive World Wide Web sites using scripting and programming languages. Students examine the principles and elements of effective web page design for interactive web sites. **Prerequisites:** CS 125H, CS 161, and CS 162

CS 160
ADVANCED OPERATING SYSTEMS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students become familiar with microcomputer operating systems which control allocation and usage of hardware resources such as memory, CPU time, disk space, and peripheral devices. These environments function as an interface between the user, the applications programs, and the computer hardware. **Prerequisite:** CS 131.

CS 161
COMPUTER SCIENCE I
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Using a high-level computer programming language, students apply algorithm design and structured programming principles to solve problems. They utilize the concepts of sequence, selection, repetition and modularity in program structure and gain an introductory understanding of arrays and pointers. Students examine the ethical and social issues in computer programming.

CS 162
COMPUTER SCIENCE II
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students develop a more advanced understanding of problem solving, algorithm design, and structured programming using a high-level language. Students solve problems using a variety of data structures and algorithms for storing and manipulating data including searching and sorting techniques, implementation of stacks, queues, linked lists and algorithm analysis. **Prerequisite:** CS 161.

CS 171
PRINCIPLES OF COMPUTER ORGANIZATION
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students gain and apply knowledge of the organization of a digital computer including number systems, encoding of data, Boolean and digital logic fundamentals, processor components and instruction execution. Students gain an introductory understanding of assembly language programming and the Assembler process. **Prerequisites:** CS 161, 162.

CS 237
SOFTWARE DESIGN
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate and apply the principles of software design and documentation with special emphasis on user-centered design of computer programs. They learn techniques for maximizing the usability and reliability of programs. **Prerequisites:** CS 161, 162 and CSB 133.

CS 244
INTRODUCTION TO SYSTEMS ANALYSIS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students carry out the step-by-step development of a system using the techniques necessary for developing each phase of the system's life cycle and documenting the complete system as it is designed and developed. **Prerequisite:** CS 13.

CS 260
DATA STRUCTURES
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students achieve and demonstrate their knowledge of the implementation and analysis of iterative and recursive algorithms to solve complex problems by completing programming exercises using scalar variables, arrays, linked lists, stacks, queues, trees, graphs, and table structures. **Prerequisites:** CS 161, 162.

CS 271
COMPUTER ARCHITECTURE
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Building on the knowledge and skills gained in CS 171, students gain a more sophisticated knowledge of microprogramming, machine language instructions, interrupts, operating system interface, and virtual memory. They gain and apply knowledge of assembly language programming, macros, linking and loading. **Prerequisite:** CS 171.

CS 278
DATA COMMUNICATIONS AND NETWORKING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the hardware, media and software used in data communications. They gain an understanding of data communication protocols, topologies, data formats and network management techniques. **Prerequisite:** MIC 178 or instructor approval.

CS 279M
NETWORK MANAGEMENT – LAN NT
(2.00 Lecture, 3.00 Lab Hrs./Wk.) 3 Credits
Students achieve and demonstrate knowledge of the implementation, installation, and management of local area networks. They install and configure hardware and software to support client-server computing and services using Microsoft Network Operating System (NOS) software. **Prerequisite:** CS 278.

CS 279N
NETWORK MANAGEMENT – LAN NOVELL
(2.00 Lecture, 3.00 Lab Hrs./Wk.) 3 Credits
Students achieve and demonstrate knowledge of the implementation, installation, and management of local area networks. They install and configure hardware and software to support client-server computing and services using Novell Network Operating System (NOS) software. **Prerequisite:** CS 278.

CSB 133
BEGINNING VISUAL BASIC PROGRAMMING
(3.00 Lecture Hrs./Wk.) 3 Credits
This is the first of two courses in programming for applications interface. Students use visual BASIC to write applications interfaces. **Prerequisite:** CS 131 recommended.

CSB 233
ADVANCED VISUAL BASIC PROGRAMMING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students build on the skills gained in CSB 133 and learn advanced features of visual programming including customizing applications, interfacing with other applications, and using a visual programming professional edition with its advanced features. **Prerequisite:** CSB 133.

CSB 234
VISUAL BASIC III
(3.00 Lecture and 3.00 Lab Hrs./Wk.) 4 Credits
This is the third course in application development using the Visual Basic programming language. Students explore advanced topics in Visual Basic programming which may include: Internet and intranet programming, animation, BackOffice© solutions, API programming, and advanced algorithms and data structures. **Prerequisites:** CSB 133 and CSB 233

CSD 122
BEGINNING DATABASE PROGRAM DEVELOPMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students become familiar with the capabilities of standard database management systems including concepts, elements, and structure. They learn how to store, access, sort, and make additions, deletions, and changes to that database. **Prerequisite:** MC 145 or CS 131 or instructor approval.

CSD 275
ADVANCED DATABASE PROGRAM DEVELOPMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students build on techniques learned in CSD 122 to create a database system and utilize its special features to create interfaces and enhancements. **Prerequisite:** CSD 122 or instructor approval.

CSL 107
SPREADSHEETS
(3.00 Lecture Hrs./Wk.) 3 Credits
Through hands-on exercises, students learn to utilize a spreadsheet program to its fullest possible extent. **Prerequisite:** None; basic keyboarding skills and computer literacy preferred.

DA DANCE

A maximum of ten credits of D 192 Beginning Dance; eight credits of D 292 Intermediate Dance, and six credits of D 294 Advanced Dance may be applied to an associate degree provided that a dance style and level is not repeated.

D 192
DANCE - BEGINNING JAZZ
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students of professional and recreational dance develop skill in jazz dance techniques.

D 192
DANCE - BEGINNING MODERN
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students of professional and recreational dance develop skill in modern dance techniques.

D 192
DANCE - BEGINNING TAP
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students of professional and recreational dance develop skill in the basic vocabulary, body movement, footwork, rhythm, and coordination necessary to execute tap dance steps and routines.

D 260
DANCE PERFORMANCE
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop their skills in dance and gain experience performing dance as a theatre art through dealing with production problems in choreographing, staging, lighting, and costuming for dance. **Prerequisite:** None; some dance experience helpful.

D 292
DANCE - INTERMEDIATE JAZZ
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students of professional and recreational dance apply movement theory in jazz dance. **Prerequisite:** D 192.

D 292
DANCE - INTERMEDIATE MODERN
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students of professional and recreational dance apply movement theory in modern dance. **Prerequisite:** D 192.

D 292
DANCE - INTERMEDIATE TAP
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students expand their skills in the basic vocabulary, body movement, rhythm, and coordination necessary to perform combinations of footwork steps and routines.
Prerequisite: D 192.

D 294
DANCE - ADVANCED JAZZ
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students develop skills in advanced movement and theory, and complete an apprenticeship in teaching jazz dance.
Prerequisite: D 292.

D 294
DANCE - ADVANCED MODERN
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students develop skills in advanced movement and theory, and complete an apprenticeship in teaching modern dance.
Prerequisite: D 292.

D 294
DANCE - ADVANCED TAP
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 2 Credits
Students develop skill in fast-paced barre with emphasis on increasing complexity of tap rhythms and sounds. They also improve balance, endurance, and style.
Prerequisite: D 292.

DCO DEVELOPMENTAL COMMUNICATIONS

DCO 10
ABE-READING/WRITING
(20.00 Lecture/Lab Hrs/Cr.) 1-6 Credits
Through individualized course work and group activities, students develop the reading and writing skills necessary for college preparation courses and the workforce.

DCO 22
PRACTICAL COMMUNICATIONS
(4.00 Lecture Hrs./Wk.) 4 Credits
Students improve their vocabulary and comprehension skills in reading, as well as their writing and editing skills.
Prerequisite: Either ASSET reading score 27-32 or ASSET writing score 27-30 or instructor approval. Concurrent enrollment in HD 50 recommended.

DESL ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

DESL 01
ENGLISH FOR SPEAKERS OF OTHER LANGUAGES
(20.00 Lecture/Lab Hrs./Cr.) 1-10 Credits
Students improve their skills in speaking, reading, and writing English necessary for success in daily life and the workforce.

DESL 07
ENGLISH FOR SPEAKERS OF OTHER LANGUAGES - ADVANCED
(3.00 Lecture Hrs./Wk.) 3 Credits
Through advanced studies, students will develop their skills in speaking, reading and writing English in preparation for college courses or vocational training.

DFL DEVELOPMENTAL FAMILY LITERACY

DFL 70
THE MAGIC BOX
(3.00 Lecture Hrs./Wk.) 3 Credits
Parents and children will work together on basic reading and writing skills through group activities focusing on life experience and a collection of stories written by class participants. Literacy efforts are reinforced through art activities, including music and dance. Parents and children strengthen reading, writing and language acquisition skills while parents learn ways to participate in their children's education.

DGED DEVELOPMENTAL GED

DGED 48
PRE-GED PREPARATION
(20.00 Lecture/Lab Hrs./Cr.) 1-6 Credits
Students improve their skills in reading writing and math in preparation for taking the GED test. **Prerequisite:** DMTH 07 ABE Math and/or DCO 10 ABE-Reading/Writing or BASIS score of 215-235 or instructor approval.

DGED 49
GED PREPARATION
(20.00 Lecture/Lab Hrs./Cr.) 1-6 Credits
Students improve their knowledge of social studies, writing, literature, science and mathematics. **Prerequisites:** DGED 48 or BASIS score of 236-242 (Math/Reading) or score of 4 or 5 on writing test or instructor approval.

DMTH DEVELOPMENTAL MATH

DMTH 07
ABE - MATHEMATICS
(20.00 Lecture/Lab Hrs./Cr.) 1-6 Credits
Students develop skills in whole number mathematics, including adding, subtracting, multiplying, dividing, rounding, estimating and problem solving.

DPD DEVELOPMENTAL PERSONAL DEVELOPMENT

DPD 70
CAREER EDUCATION
(2.00 Lecture Hrs./Wk.) 2 Credits
Students analyze work force skills, recognize the requirements of the workplace, and understand the diversity and preparations for various occupations in order to make informed career decisions.

DRD DEVELOPMENTAL READING

DRD 30
READING EFFECTIVENESS II
(3.00 Lecture Hrs./Wk.) 3 Credits
Students begin to develop the skills needed to read academic material. **Prerequisite:** DCO 22 or ASSET score 33-37; concurrent enrollment in HD 50 recommended.

DRD 40
READING EFFECTIVENESS III
(3.00 Lecture Hrs./Wk.) 3 Credits
Students work to increase their reading vocabulary, comprehension and critical thinking skills. **Prerequisite:** DRD 30 or ASSET score 38-41. Concurrent enrollment in HD 50 recommended.

DRF DRAFTING

DRF 139
TECHNICAL PRINT INTERPRETATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn and apply the principles of reading and interpreting blueprints. Students master the use, application, and interpretation of symbols, lines, abbreviations, dimensions, and measurements in planning, construction, and assembly.

DRF 185
COMPUTERS IN DESIGN
(2.00 Lecture, 3.00 Lab Hrs/Wk.) 3 Credits
Students gain and apply knowledge and skills to use digital systems in the process of design. Students complete exercises exploring digital image processing, two dimensional drawing and three dimensional modeling as means to create and communicate design ideas. **Prerequisite:** CS 131 or MIC 145.

DRF 213
AUTOCAD - BEGINNING
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students gain and apply introductory knowledge and skills of computer aided drafting/design (CAD) including the hardware and operating system. Students complete exercises utilizing fundamental AutoCAD tools to create, modify and display drawings. **Prerequisites:** CS 131 or MIC 145; and DRF 139 or instructor approval.

DRF 214
AUTOCAD - INTERMEDIATE
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students gain and apply the knowledge and skills needed to utilize AutoCAD in more advanced applications. Students complete exercises using CAD techniques to draw and sketch three dimensional objects and to create complex drawings using dimensions and symbols. **Prerequisite:** DRF 213 or instructor approval.

DRF 215
AUTOCAD - ADVANCED
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students gain and apply the knowledge and skills needed for three dimensional modeling and customizing AutoCAD. Students complete exercises in creating, manipulating and viewing three dimensional CAD models and customizing the AutoCAD environment to suit specific user needs. **Prerequisite:** DRF 214 or instructor approval.

DRF 217
AUTOCAD - UPGRADE
(16.00 Lab Hours Total) 1 Credit
This course is for individuals who are skilled in using AutoCAD and need to upgrade to the latest release. Students develop skills in using new and modified tools and features to get the most out of recent system enhancements.
Prerequisite: DRF 213, 214, and/or 215.

DRF 228
AUTOCAD EXAM PREPARATION
(4.00 Lecture/Lab Hrs/Wk.) 2 Credits
Students prepare to complete AutoCAD Level I and II Certification Exams. Students review the format and requirements of the certification exams, strengthen knowledge and skills necessary for successful completion of the exams and complete a series of preparative exams. **Prerequisites:** DRF 213 and DRF 214.

DRF 295
CADD DIRECTED PROJECT
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
This is the capstone course for the entry level CADD technician program. Students build on knowledge gained in other courses and use critical thinking and problem solving skills to address a significant problem in their area of specialization. Students prepare a comprehensive report and make a professional presentation. **Prerequisite:** Completion of all but the last quarter of course work for the certificate program.

DWR DEVELOPMENTAL WRITING

DWR 31
PARAGRAPH WRITING
(3.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop skills in writing short, well-developed and well-edited paragraphs. **Prerequisite:** DCO 22, ASSET score 31-34, and writing sample. Concurrent enrollment in HD 50 recommended.

EC ECONOMICS

EC 115
INTRODUCTION TO ECONOMICS
(3.00 Lecture Hrs./Wk.) 3 Credits
This course is not for business students who are intending to transfer to a four-year program. Students develop an understanding of major economic concepts, utilize models, and identify and analyze economic choices which apply to current economic problems.

EC 201
PRINCIPLES OF ECONOMICS
(4.00 Lecture Hrs./Wk.) 4 Credits
This is the first of a two-course series which is intended for students planning to transfer to a four year college. In this course students gain a basic understanding of microeconomics which examines the allocation of resources and distribution of income in the market system.

EC 202
PRINCIPLES OF ECONOMICS
(4.00 Lecture Hrs./Wk.) 4 Credits
This is the second of a two-course series. Students demonstrate a basic understanding of macroeconomics which examines our national economic issues including fiscal and monetary policies and their implementation.

ECE EARLY CHILDHOOD EDUCATION

ECE 101
LANGUAGE ARTS ACTIVITIES FOR YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate an understanding of curriculum analysis, development, planning, implementation, extension, and evaluation of language arts activities.

ECE 103
MATH AND SCIENCE FOR YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students acquire and demonstrate an understanding of curriculum analysis, development, planning, implementation, extension, and evaluation of math and science activities.

ECE 105
NUTRITION, HEALTH AND SAFETY FOR YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate knowledge of children's nutritional needs, health routines, communicable diseases and safety issues, and develop activities for the preschool environment.

ECE 109
EARLY CHILDHOOD ENVIRONMENTS
(10 Lecture Hrs.) 1 Credit
Students demonstrate knowledge of the multicultural environmental setting of the classroom including learning centers, appropriate celebrations, toys and instructional materials.

ECE 119
SELF-CONCEPT, GUIDANCE, AND SELF-DISCIPLINE OF YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate an understanding of theories and practices that promote the development of self-concept and of appropriate guidance and self-discipline activities for children from birth to age six.

ECE 124
PHYSICAL FITNESS ACTIVITIES FOR YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate an understanding of curriculum analysis, development, planning, implementation, extension, and evaluation of physical fitness activities for young children.

ECE 125
CREATIVE ACTIVITIES FOR YOUNG CHILDREN: ART
(10 Lecture Hrs.) 1 Credit
Students demonstrate an understanding of curriculum analysis, development, planning, implementation, extension, and evaluation of art activities for young children.

ECE 128
PROGRAM PLANNING AND EVALUATION FOR YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate knowledge of methods of planning, developing and evaluating programs in early childhood education, with special attention to comparing program requirements with the developmental needs of young children.

ECE 129
OBSERVATION AND DEVELOPMENTAL SCREENING OF YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate and apply knowledge of objective techniques for recording and interpreting children's behavior.

ECE 131
CHILD DEVELOPMENT FOR THE DAY CARE WORKER
(20 Lectures Hrs.) 2 Credits
Students demonstrate knowledge of child development theories as they relate to young children, prenatal through nine years.

ECE 134
STATUTES, LIABILITY, LICENSURE CONSIDERATIONS FOR CHILDCARE FACILITIES
(10 Lecture Hrs.) 1 Credit
This course prepares teachers and directors of child care centers and day care homes to develop a facility while complying with state and federal laws and regulations.

ECE 137
CHILD ABUSE AND THE LAW
(10 Lecture Hrs.) 1 Credit
Students demonstrate knowledge of the types of child abuse identified by state and federal law, and the procedures that must be followed when abuse is suspected.

ECE 139
INFANT AND TODDLER PROGRAMS
(10 Lecture Hrs.) 1 Credit
Students demonstrate knowledge of infant-toddler developmental theory, programs, program regulations, and the differences between these and regular childcare programs.

ECE 145
TOYS AND GAMES FOR LEARNING
(10 Lecture Hrs.) 1 Credit
Students use their personal creativity to develop and make age-appropriate games and toys. Students also evaluate commercially available toys for children from birth to age six.

ECE 146
HANDICAPPING CONDITIONS IN YOUNG CHILDREN
(10 Lecture Hrs.) 1 Credit
Students demonstrate an understanding of a variety of handicapping conditions, current special education law, and resources available for teachers and parents.

ECE 149
DISEASE CONTROL IN ECE SETTINGS
(10 Lecture Hrs.) 1 Credit
Students demonstrate knowledge of prevention, identification, follow-up, and state immunization law concerning communicable diseases commonly found in early childhood settings.

ECE 175
INFANT/TODDLER LEARNING AND SOCIAL GROWTH IN A GROUP SETTING
(10 Lecture Hrs.) 1 Credit
Students will develop an understanding of infant/toddler cognitive and social/emotional development, how it impacts learning and self-esteem, and how to address these developmental needs in a group setting.

ECE 281
SEMINAR - EARLY CHILDHOOD EDUCATION
(1.00 Lecture Hr./Wk./Cr.) 1-5 Credits
Through discussions of strategies, students coordinate theory and practice and increase their effectiveness in dealing with children and children's issues. **Prerequisite**: instructor approval.

EGR ENGINEERING

EGR 101
ENGINEERING ORIENTATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate familiarity with the engineering disciplines, curricula at four year colleges, professional ethics, and licensing requirements for professional engineers. Students gain experience in data collection and engineering problem analysis using tools such as graphing calculators, spreadsheets and word processing programs. Course includes a team engineering project. **Prerequisite:** Math 111 or High School Trigonometry.

ELT ELECTRONICS

ELT 150
INTRO TO DIRECT CURRENT CIRCUIT ANALYSIS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of the principles of electronics, physics, and unidirectional current to series, parallel, complex, and unidirectional current circuit analysis; and electrical measuring applications. **Prerequisite:** MTH 65 or instructor approval.

ELT 155
INTRODUCTION TO ALTERNATING CURRENT CIRCUIT ANALYSIS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of electrical and electronic technology for alternating current including analysis of sine wave, series circuits with a sine input voltage, series resonance, parallel resonance, and filter circuits. **Prerequisite:** ELT 150 or instructor approval.

ELT 206
SEMICONDUCTOR DEVICES
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of solid state devices including diodes, bipolar and field effect transistors, atomic theory of semiconductors, transistor biasing, gain control, and trouble shooting. **Prerequisite:** ELT 155 or instructor approval.

ELT 207
INDUSTRIAL PROCESS CONTROLS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of industrial process control systems from sensing of temperature, pressure, level and flow, to control of the final process element. **Prerequisite:** ELT 155 or instructor approval.

ELT 208
PROGRAMMABLE LOGIC CONTROLLERS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of fundamental concepts and programming of programmable logic controllers including gates, flip-flops, timers, counters, contacts, sequences, and registers. **Prerequisite:** ELT 206 & 207 or instructor approval.

ELT 219
DIGITAL COMPUTER ELECTRONICS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of the elements of microcomputer systems including hardware, interfacing, and memories. They program in machine language and practice troubleshooting. **Prerequisite:** ELT 208 or instructor approval.

ELT 220
INTRODUCTION TO ROBOTICS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate knowledge of robotics, the history of the industry, and robot classification. Students compare computer architectures and address control and interfacing requirements. **Prerequisite:** ELT 208 or instructor approval.

ELT 231
DIGITAL CIRCUITS
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of digital circuits including binary, octal, and hexadecimal numbering systems, binary number codes, Boolean algebra principles, logic circuits, design methods, flip-flops, and arithmetic operations and circuits. **Prerequisite:** ELT 155 or instructor approval.

EMT EMERGENCY MEDICAL TECHNICIAN

EMT 151
EMERGENCY MEDICAL TECHNICIAN BASIC, PART 1
(44 Lecture, 22 Lecture/Lab Hrs.; 66 Hrs. Total) 5 Credits
This two-part course meets Oregon State Health Division and Federal Department of Transportation requirements for EMT-Basic and prepares the student to provide basic pre-hospital emergency medical care and transportation of the sick and injured. On successful completion of EMT 152, the student will be prepared to pass the certification examination for EMT-Basic. **Prerequisite:** Current CPR certificate, current measles and hepatitis B immunizations, negative TB test; valid driver's license; ASSET Placement Test; self-verification of ability to meet Oregon Health Division requirements for certification.

EMT 152
EMERGENCY MEDICAL TECHNICIAN BASIC, PART 2
(44 Lecture, 22 Lecture/Lab Hrs.; 66 Hrs. Total) 5 Credits
Continuation of EMT 151. Students demonstrate the knowledge and skills required to provide basic pre-hospital emergency medical care and transportation of the sick and injured. On successful completion of this course, the student will be prepared to pass the certification examination for EMT-Basic. **Prerequisite:** Successful completion of EMT 151.

EMT 165
EMERGENCY MEDICAL TECHNICIAN INTERMEDIATE, PART 1
(38 Lecture, 22 Lecture/Lab Hrs.; 60 Hrs. Total) 4 Credits
This class prepares students to perform the procedural responsibilities delegated to the EMT-Intermediate. **Prerequisite:** Certified as EMT-Basic; current AHA healthcare provider CPR document; 80% or better on EMT-Intermediate pretest; and demonstrated proficiency in specified skills.

EMT 166
EMERGENCY MEDICAL TECHNICIAN INTERMEDIATE, PART 2
(38 Lecture, 22 Lecture/Lab Hrs.; 60 Hrs. Total) 4 Credits
Students master the knowledge and skills required of an EMT-Intermediate. **Prerequisite:** Successful completion of EMT 165.

EMT 169
EMERGENCY MEDICAL TECHNICIAN RESCUE
(22 Lecture, 30 Lab Hrs.; 52 Hrs. Total) 3 Credits
Students demonstrate the knowledge and skills needed to rescue and extricate patients while maintaining personal safety; control and management of the accident scene; and considering needs of the accident trauma patient and the use and maintenance of rescue tools and equipment.

EMT 170
EMERGENCY COMMUNICATION AND TRANSPORTATION
(30 Lecture, 12 Lab Hrs.; 42 Hrs. Total) 3 Credits
This class prepares emergency medical services personnel to handle telecommunications and transportation of the sick and injured. **Prerequisite:** Current valid driver's license.

EMT 175
INTRODUCTION TO EMERGENCY MEDICAL SERVICES
(3.00 Lecture Hrs./Wk.) 3 Credits
This class provides students with an understanding of the emergency medical services (EMS) system; its history, personnel roles, training, and responsibilities; and the organization, funding, and role of ambulance and rescue services.

ENG ENGLISH

ENG 104
INTRODUCTION TO LITERATURE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students will read, discuss, and analyze a variety of short stories and novels. They will learn the techniques of literary criticism for use in oral and written responses to the literature.

ENG 105
INTRODUCTION TO LITERATURE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students will read, discuss, and analyze a variety of plays. They will learn about the conventions of literary and popular drama and its implications both on the page and on the stage.

ENG 106
INTRODUCTION TO LITERATURE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students will read, discuss, and analyze a variety of poems, both historical and contemporary. Emphasis will be on finding personal meaning in poetry as well as mastering the techniques of literary criticism.

ENG 107
WORLD LITERATURE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the literary styles and historic significance of works from Sumerian, Greek, Roman, Hebrew, and Italian literature from 3000 BC to the Middle Ages with emphasis epic and tragedy.

ENG 108
WORLD LITERATURE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the literary styles and historical significance of works from Medieval and Renaissance European literature including epic, drama, essay, novel, and the sonnet. **Note:** ENG 107 recommended.

ENG 109
WORLD LITERATURE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the literary styles and historical significance of works of European, Asian, and African literature from the 18th to the 20th Century including the genres of novel, drama, and poetry. **Note:** ENG 107 and 108 recommended.

ENG 110
INTRODUCTION TO FILM STUDIES
(3.00 Lecture, 1.00 Lab Hrs./Wk.) 3 Credits
Students will enhance their visual literacy by viewing, discussing, and analyzing contemporary film with emphasis on cinematic technique and critical approaches to this media. Participants will also discuss the relationship of film to cultural values and the various influences on contemporary film practice. Theme will vary by term.

ENG 201
SHAKESPEARE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students read and respond to Shakespeare's early histories, comedies, and tragedies. They become familiar with the Elizabethan world, Shakespeare's life, and his view of history, tragedy, and comedy.

ENG 202
SHAKESPEARE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students read and respond to representative histories, comedies, and tragedies of Shakespeare's middle period including Shakespeare's social criticism comedies, betrayal and heroic histories, and Greek and Roman tragedies.

ENG 203
SHAKESPEARE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students conduct a detailed examination of Shakespeare's four major tragedies and one late romantic, philosophic comedy and address Shakespearean criticism.

ENG 204
SURVEY OF ENGLISH LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze works of English literature from its beginning through the 16th Century. Students make use of historical, cultural, and philosophical perspectives in discussion and written responses.

ENG 205
SURVEY OF ENGLISH LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze works of 17th and 18th Century English literature. Students make use of historical, cultural, and philosophical perspectives in discussion and written responses.

ENG 206
SURVEY OF ENGLISH LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze works of 19th and 20th Century English literature. Students make use of historical, cultural, and philosophical perspectives in discussion and written responses.

ENG 220
NON - EUROPEAN MINORITY LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, discuss, and analyze the literature of one or more American minority groups. **Note:** May meet state institutions cultural diversity requirement.

ENG 221
INTRODUCTION TO CHILDREN'S LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students will be introduced to children's literature by reading and examining folk tales, fairy tales, classic stories, nursery rhymes, poems, picture books, and chapter books. The main emphasis is on reading and discussing the works in terms of their literary merits. We will also discuss the ways this literature might be useful to parents, teachers, and others who work with children.

ENG 253
SURVEY OF AMERICAN LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze works of major authors of American poetry and prose during the period from 1630 to 1860 in the context of the literary movements including Puritanism, Classicism, and Romanticism.

ENG 254
SURVEY OF AMERICAN LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze 19th Century American prose and poetry in light of the development of American civilization.

ENG 255
SURVEY OF AMERICAN LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze 20th century American prose and poetry in light of the development of American civilization.

ENG 260
INTRODUCTION TO WOMEN'S LITERATURE
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students read, respond to, and analyze works of all genres written by women of many lands and ages, with an emphasis on contemporary American writers. **Note:** May meet state institutions' cultural diversity requirement.
Prerequisite: WR 40.

ES ENVIRONMENTAL SCIENCE

ES 150
INTRODUCTION TO ENVIRONMENTAL SCIENCE
(2.00 Lecture/Lab Hrs./Wk.) **1 Credit**
This class provides an orientation for students who are interested in the academic and professional opportunities in environmental science. Students conduct field investigations and present their findings, investigate career options, and develop a portfolio.

ES 160
TECHNIQUES IN ENVIRONMENTAL INFORMATION ANALYSIS
(3.00 Lecture, 3.00 Lab. Hrs./Wk.) **4 Credits**
Students gain an overview of environmental measurement, instrumentation, and data analysis. They develop mapping, modeling, and group problem solving skills. This class involved field work and uses computers. **Prerequisites:** ES 150 and MTH 243 or instructor permission.

FIRE SCIENCE: See FRP

FOREIGN LANGUAGES: See ALS, FR, SPAN, GER

FR FRENCH

FR 101
FIRST YEAR FRENCH
(4.00 Lecture Hrs./Wk.) 4 Credits
Students develop skill in hearing, speaking, reading, and writing the French language through the immersion method - target language spoken in the classroom. **Note:** Must be taken in sequence or with instructor approval.

FR 102
FIRST YEAR FRENCH
(4.00 Lecture Hrs./Wk.) 4 Credits
Students continue to develop skill hearing, speaking, reading, and writing through the immersion method target language spoken in the classroom. **Prerequisite:** FR 101 or instructor approval.

FR 103
FIRST YEAR FRENCH
(4.00 Lecture Hrs./Wk.) 4 Credits
Students continue to develop skill hearing, speaking, reading, and writing through the immersion method - target language spoken in the classroom. **Prerequisite:** FR 102 or instructor approval.

FRP FIRE PROTECTION

FRP 150
INTRODUCTION TO FIRE PROTECTION
(3.00 Lecture Hrs./Wk.) 3 Credits
This class provides the firefighter with knowledge of the basic history and philosophy of fire protection; an awareness of professional literature, career opportunities, and requirements; and the experience of developing a professional resume.

FRP 151
FIREFIGHTER SKILLS
(3 Lab Hrs./Wk./Credit) 1-9 Credits
This class provides the beginning firefighter with the knowledge and skills required to work under direct supervision. **Prerequisite:** Current CPR certificate.

FRP 154
WATER DISTRIBUTION SYSTEMS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students meet the competencies with regard to water supply operations in the fire service as set forth by the Fire Standards and Accreditation Board in Firefighter II, Apparatus Operator I and II. **Prerequisite:** MTH 70 and FRP 151 or equivalent.

FRP 155
INSTRUCTIONAL METHODOLOGY
(2.00 Lecture Hrs./Wk.) 2 Credits
Students develop proficiency in the methodologies and skills needed to conduct fire science instruction using prepared course outlines and materials.

FRP 156
FIREFIGHTER LAW
(1.00 Lecture Hr./Wk.) 1 Credit
Students demonstrate knowledge of the basic Oregon laws relating to fire protection.

FRP 157
FIREFIGHTER SAFETY
(1.00 Lecture Hr./Wk.) 1 Credit
Firefighters learn the most common causes of injuries and deaths to firefighters and the responsibilities of the company officer for firefighter safety and survival. The class emphasizes the need for an appropriate attitude regarding firefighter safety.

FRP 158
PUMP CONSTRUCTION & HYDRAULICS
(22 Lecture, 22 Lecture/Lab Hrs.; 44 Hrs. Total) 3 Credits
Students develop the knowledge and skills required to operate various fire pumps and accessories. They will demonstrate competency in drafting, hydrant and tanker operations, and rule of thumb fire ground hydraulic calculations. **Prerequisite:** FRP 151 or equivalent.

FRP 160
FUNDAMENTALS OF FIRE PREVENTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the philosophy and history of fire protection with emphasis on issues, programs, regulations, and responsibilities, especially company inspections.

FRP 164
HAZARDOUS MATERIALS
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students gain the knowledge and skills needed to safely respond to and manage a chemical emergency. This includes proper application of foam for vapor suppression and basic plugging and patching of minor hazardous material releases.

FRP 166
BUILDING CONSTRUCTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Firefighters acquire the knowledge and skills required to assess building stability and resistance to fire; locate special hazards stemming from construction type, design features, alterations of materials; and determine likely paths of fire extension.

FRP 169
FIRE DEPARTMENT LEADERSHIP
(3.00 Lecture Hrs./Wk.) 3 Credits
This class explains the unique aspects of a company officer's job, basic functions of management, organization, and the leadership and interpersonal skills required of a supervisor.

FRP 170
FIREFIGHTING STRATEGY AND TACTICS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the fire command system, rescue, offensive and defensive fire attack, property conservation, staging and apparatus placement, sectoring, company functions, communications, and command procedures.

FRP 171
FIRE PROTECTION SYSTEMS AND EXTINGUISHERS
(33 Lecture Hrs. Total) 3 Credits
Students gain knowledge of types and uses of portable fire extinguishers, their care, inspection and recharging procedures. Students become familiar with various detection, reporting, and extinguishing systems including sprinklers and standpipes.

FRP 172
FIRE CODES AND ORDINANCES
(33 Lecture Hrs. Total) 3 Credits
Firefighters study the Uniform Fire Code, State Fire Marshal Fire Safety Regulations and related Oregon revised statutes, National Fire Prevention Association, and other codes relating to fire prevention and life safety.

FRP 181
FIRE PREVENTION AND INSPECTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn methods of contemporary fire prevention inspection including preparation, pre-approach information, written inspection notices, relations with owners and occupants, and compliances. **Prerequisite:** FRP 151 or equivalent.

G GEOLOGY

G 201
PHYSICAL GEOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
First of a two-part sequence; students demonstrate knowledge of formation and physical evolution of the Earth and mountain ranges through time; a general understanding of igneous, sedimentary, and metamorphic rocks and minerals; and an appreciation of earthquakes, volcanology, and the development of plate tectonic theory. **Note:** There will be one or two Saturday field trips per term.

G 202
PHYSICAL GEOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Second of a two-part sequence; students demonstrate knowledge of various processes by which mountain ranges are worn down and carried to the sea; the types of landforms and deposits associated with these processes; and a general understanding of natural resources in the Earth's crust. **Note:** There will be one or two Saturday field trips per term. **Prerequisite:** G 201.

G 203
HISTORICAL GEOLOGY
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students apply principles of physical geology to understand how tectonism and chemical/physical process in Earth, oceans, and atmosphere over enormous spans of time have influenced the evolution of life, caused localized and mass extinctions, and ultimately resulted in the planet as we know it. **Note:** Field trips will include a Saturday field trip to Mt. St. Helens and the G 145 field trip to central Oregon on Memorial Day weekend. **Prerequisite:** G 202 or instructor approval.

GEO GEOGRAPHY

GEO 100
INTRODUCTION TO PHYSICAL GEOGRAPHY
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain an introductory knowledge of the physical elements of geography and the environment in which people live, with emphasis on themes pertaining to economic development. Student learning focuses on natural processes that create physical diversity on the natural landscape, including weather and climate, vegetation and soils and landform development and change.

GEO 110
CULTURAL AND HUMAN GEOGRAPHY
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the evaluation, use, and modification of landscapes and the environment of the earth by the cultural groups occupying in the past, present, and future. **Note:** Need not be taken in sequence.

GEO 120
WORLD / REGIONAL GEOGRAPHY
(3.00 Lecture Hrs./Wk.) 3 Credits
This class provides a survey of the realms and regions of the modern world. Students gain knowledge of world environments and how people have adjusted to, organized, used, and modified them.

GEO 130
ECONOMIC / RESOURCE GEOGRAPHY
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop knowledge of structures, patterns, and locational principles of economic activities; examine regional economic development, agricultural land use, industrial location, and distribution of service activity; and compare real-world examples with theory.

GER GERMAN

GER 101
FIRST YEAR GERMAN
(4.00 Lecture Hrs./Wk.) **4 Credits**
Students develop skill in hearing, speaking, reading, and writing contemporary German through the immersion method - target language spoken in the classroom.

GER 102
FIRST YEAR GERMAN
(4.00 Lecture Hrs./Wk.) **4 Credits**
Students continue to develop skill in hearing, speaking, reading, and writing contemporary German through the immersion method - target language spoken in the classroom. **Prerequisite:** GER 101.

GER 103
FIRST YEAR GERMAN
(4.00 Lecture Hrs./Wk.) **4 Credits**
Students continue to develop skill in hearing, speaking, reading, and writing contemporary German through the immersion method - target language spoken in the classroom. **Prerequisite:** GER 102.

GER 111
CONVERSATIONAL GERMAN
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop skill in basic German conversation using basic vocabulary, grammatical structures, present tense, and cultural concepts. **Note:** This sequence focuses on oral communication-speaking and hearing, with less emphasis on reading and writing.

GER 112
CONVERSATIONAL GERMAN
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students improve their skill in German conversation including the use of past tense, more complex grammatical structures, and vocabulary related to traveling, jobs and shopping. **Prerequisite:** GER 111 or instructor approval.

GER 113
CONVERSATIONAL GERMAN
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students become more proficient in German conversation through using past and future tense and learning vocabulary related to sports, health sciences and everyday situations. **Prerequisite:** GER 112 or instructor approval.

GS GENERAL SCIENCE

GS 104
PHYSICAL SCIENCE
(3.00 Lecture, 3.00 Lab Hrs./Wk.) **4 Credits**
This class is designed for non-science majors who want a basic understanding of the physics of everyday phenomena including curve balls, rainbows, electric motors, and fluorescent light bulbs. **Note:** Does not meet requirements for science majors. Need not be taken in sequence. **Prerequisite:** MTH 70.

GS 105
PHYSICAL SCIENCE
(3.00 Lecture, 3.00 Lab Hrs./Wk.) **4 Credits**
This class is designed for non-science majors who want a basic understanding of the fundamentals of chemistry including the chemistry of current issues such as solid waste disposal, use of fossil fuels, and acid rain. **Note:** Does not meet requirements for science majors. Need not be taken in sequence. **Prerequisite:** MTH 70; strongly recommend GS 104.

GS 106
PHYSICAL SCIENCE
(3.00 Lecture, 3.00 Lab Hrs./Wk.) **4 Credits**
This class is designed for non-science majors who want a basic understanding of the natural processes of the earth including earthquakes, mountain building, volcanoes, and tsunamis. **Note:** Does not meet requirements for science majors. Need not be taken in sequence. **Prerequisite:** MTH 60.

HD HUMAN DEVELOPMENT

HD 50
COLLEGE SKILLS
(1.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) **2 Credits**
Students become familiar with college offices, services, and programs; improve their skills in taking notes, reading efficiently, and taking tests; use self-assessment to explore learning and thinking styles, values, and skills; and set educational and career goals. **Note:** Concurrent enrollment in at least DCO 22 and DRD 30 recommended.

HD 100
COLLEGE SURVIVAL & SUCCESS
(3.00 Lecture Hrs./Wk.) **3 Credits**
This class helps students develop attitudes, skills, and strategies known to promote college success including goal setting, time management, note taking, study techniques, test taking, and use of college resources. **Note:** Recommended reading and writing levels equivalent to at least DRD 40 and WR 40.

HD 110
CAREER PLANNING
(2.00 Lecture Hrs./Wk.) 2 Credits
This class prepares students to make informed career choices through clarifying their personality, values, and general abilities; exploring present and future career opportunities; setting career and educational goals; and developing a career action plan.

HD 202
LIFE TRANSITIONS
(2.00 Lecture, 4.00 Lab Hrs./Wk.) 3 Credits
Focuses on self-exploration and development of life-planning skills through a process of analyzing predictable life transitions. Emphasizes developing and integrating skills in goal setting, decision making, and plan implementation. **Prerequisite:** Instructor approval and attendance of orientation prior to class.

HD 209
THE COMPLETE JOB FINDER
(2.00 Lecture Hrs./Wk.) 2 Credits
Students will develop strategies for job search inquiry, position exploration, application completion, and job offer evaluation as well as enhance their skills in writing resumes, cover letters, and applications. Includes participation in video role-playing of interviewing techniques.

HD 215
TRANSITION TO THE UNIVERSITY
(2.00 Lecture Hrs./Wk.) 2 Credits
Students will be able to make a successful academic and personal transition from the community college to the university by developing a Transfer Action Plan. In addition, they will acquire academic and personal survival skills necessary for success at the university level.

HE HEALTH

HE 112
STANDARD FIRST AID AND EMERGENCY CARE
(1.00 Lecture Hr./Wk.) 1 Credit
Students develop the basic knowledge and skills to help adult victims of physical emergencies including calling emergency medical services (EMS) for assistance, keeping victims and assisting parties safe, and caring for a victim until EMS arrives.

HE 207
STRESS MANAGEMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
This class provides a clear understanding of the meaning of stress in everyday life. Students learn how they react and adjust to stressors. Includes learning and practicing relaxation techniques.

HFS HEALTH & FAMILY STUDIES

HFS 226
GROWING YEARS - CHILD DEVELOPMENT, BIRTH THROUGH AGE EIGHT -TELECOURSE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of normal growth and development and an appreciation for the physical changes, abilities, needs, and interests of children from the prenatal period through age eight.

HPE HEALTH & PHYSICAL EDUCATION

HPE 295
HEALTH AND FITNESS FOR LIFE
(2.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop an understanding of the relationship between optimal health, wellness, and physical fitness by gaining knowledge of the interacting roles of physical fitness, nutritional status, and the ability to cope with stress.

HS HUMAN SERVICES

HS 101
ALCOHOL, USE, MISUSE AND ADDICTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn concepts and perspectives concerning alcohol use based on a bio-psycho-social approach to alcohol problems. Pharmacology and personal impact stressed.

HS 102
DRUG USE, MISUSE, AND ADDICTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge about mind/mood-altering (psychoactive) drugs; the social and psychological context of their use; their effects on body, brain, behavior, and quality of life; considerations in prevention and treatment of drug problems. **Prerequisite:** HS 101 recommended.

HS 154
COMMUNITY RESOURCES
(3.00 Lecture Hrs./Wk.) 3 Credits
Students acquire and demonstrate knowledge of history, purpose, philosophy, and values of community resources developed for people with specific disadvantages or disabilities. Students become acquainted with local social service agencies and organizations, and how to refer clients to them.

HS 155
INTERVIEWING FOR SOCIAL SERVICES
(3.00 Lecture Hrs./Wk.) 3 Credits
Students acquire and demonstrate knowledge of the theoretical background and specific basic interviewing techniques for establishing an effective professional helping relationship. Students interview peers for peer and professional observation and feedback. **Prerequisite:** HS 154.

HS 201
FAMILY ALCOHOLISM / ADDICTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students will demonstrate knowledge of the effects of chemical dependency on the whole family: addictive behavior in the family system, dynamics, roles, therapeutic interventions, and considerations for recovery. **Note:** HS 101 strongly recommended.

HS 205
YOUTH ADDICTION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop theoretical framework and skills to work with chemically-dependent youth. Students learn current theories about causes of drug use among youth, and professional strategies for drug-use prevention, intervention, assessment, treatment and recovery. **Note:** Prior or concurrent enrollment in HS 101, HS 102 or HS 201 recommended.

HST HISTORY

HST 101
HISTORY OF WESTERN CIVILIZATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Against the background of Eurasia, students gain knowledge of the origins and development of Western civilization from ancient times to AD500.

HST 102
HISTORY OF WESTERN CIVILIZATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop an understanding of the cultural, social, economic and political development of Western civilization from AD500 to AD1700 against the background of Eurasia and the world. **Note:** Need not be taken in sequence.

HST 103
HISTORY OF WESTERN CIVILIZATION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students survey the cultural, social, economic and political the development of Western civilization from AD1650 to the present against a global background. **Note:** Need not be taken in sequence.

HST 201
HISTORY OF THE UNITED STATES
(3.00 Lecture Hrs./Wk.) 3 Credits
Students increase their understanding of the political, economic, social, intellectual, and cultural history of the United States from the arrival of Native Americans until the 1830's.

HST 202
HISTORY OF THE UNITED STATES
(3.00 Lecture Hrs./Wk.) 3 Credits
Students gain knowledge of the political, economic, intellectual, and foreign relation patterns of the United States between the 1840's and 1918 with emphasis on the impact of the Civil War on culture, expansion, and technology.

HST 203
HISTORY OF THE UNITED STATES
(3.00 Lecture Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the political, economic, intellectual, cultural, and foreign relation patterns of the United States from World War I to the present; recent global involvement; and the technological revolution from automobiles through computers.

IMT INDUSTRIAL & MANUFACTURING TECHNOLOGIES

IT 101
ENGINE REBUILDING - GASOLINE
(1.00 Lecture, 6.00 Lecture/Lab Hrs./Wk.) 4 Credits
Each student evaluates, removes, rebuilds and restores an engine. (They may bring their own.) Work includes valve train reconditioning, engine crank bearings and oil pump removal/replacement, and cylinder and piston reconditioning. **Prerequisite:** IT 108.

IT 102
ENGINE REBUILDING - DIESEL
(1.00 Lecture, 6.00 Lecture/Lab Hrs./Wk.) 4 Credits
Students demonstrate an understanding of diesel engine construction and the principles of operation, servicing, and adjustment. Students participate in evaluating, disassembling, assembling, and reconditioning and/or replacing engine components. **Prerequisite:** IT 108.

IT 105
PRINCIPLES OF TECHNOLOGY I
(2.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) 4 Credits
In this potential year-long sequence, students analyze and apply technical concepts of physics to equipment and devices in mechanical, fluid, and electrical systems, and transformers. This term students develop an understanding of and apply the concepts of force, work, rate, resistance, and energy. **Prerequisite:** MTH 65 or higher, or Ft. James pre-applicant program.

IT 106
PRINCIPLES OF TECHNOLOGY II
(2.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) 4 Credits
Students develop an understanding of and apply the technical concepts of power, force transformers, momentum, waves and vibrations, and energy converters. **Prerequisite:** IT 105.

IT 107
PRINCIPLES OF TECHNOLOGY III
(1.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students gain an understanding of and apply the technical concepts of transducers, radiation, optical systems, and time constants. **Prerequisite:** IT 106.

IT 108
ENGINE PRINCIPLES
(3.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 4 Credits
In this class students gain knowledge of the theory and operational principles of the internal combustion engine. Students follow a diagnostic procedure to disassemble, evaluate condition, reassemble, and operate a four stroke gasoline engine.

IT 110
APPLIED TECHNOLOGY PROJECTS
(20.00 Lecture/Lab Hrs./Cr.) 1-3 Credits
Students complete individual projects which apply and advance the laboratory skills and theories they have learned in other professional technical classes. **Note:** May be repeated one time toward the Integrated Technologies degree. **Prerequisite:** Instructor approval.

IT 121
PRINCIPLES OF FLUID POWER
(2.00 Lecture, 3.00 Lab Hrs./Wk.) 3 Credits
Students demonstrate knowledge of the basic components of hydraulic and pneumatic systems and their combination into circuits. They also learn to maintain and size equipment. **Prerequisite:** MTH 65.

IT 140
INDUSTRIAL SAFETY
(20 Lecture/Lab Hrs. Total) 1 Credit
Students use a competency-based program to provide the prerequisite amount of knowledge and skills necessary to develop and maintain safe work habits while engaged in various industrial job settings. Course curriculum follows OSHA guidelines and suggested safety practices. An overview is provided for the safe use of tools/equipment commonly found in the fabrication/construction industry. Students must demonstrate competency before entering the shop work areas.

IT 141
TOOL AND SHOP BASICS
(20 Lecture/Lab Hr. Total) 1 Credit
Students use a competency-based program with associated lab activities to provide the prerequisite amount of knowledge and skills necessary to use hand tools and perform basic shop practices in layout, measuring, fastener identification and information retrieval.

IT 206
VEHICLE ELECTRICITY I
(3.00 Lecture, 3 Lab Hrs./Wk.) 4 Credits
Basic theory of D.C. electricity; electrical measurement and meter use; and application to chassis wiring. Lab assignments to reinforce theory through applications on simulations or live projects. **Prerequisite:** IT 105.

IT 207
VEHICLE ELECTRICITY II
(3.00 Lecture, 6 Lab Hrs./Wk.) 5 Credits
Theory and applications for servicing batteries, starting systems, charging systems and maintenance of automotive electrical circuits and components. Practical applications made on bench components and live projects. **Prerequisite:** IT 206.

IT 208
MECHANICAL DRIVES & TRANSMISSION OF POWER
(3.00 Lecture, 3.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply an understanding of the basic theory required to service and repair mechanical devices that transmit power to perform work including a variety of clutches, gearboxes, fixed shafts, and universal joints. **Prerequisite:** MTH 65.

IT 209
FLUID DRIVES AND HYDRAULIC TRANSMISSIONS
(2.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) 4 Credits
Students demonstrate and apply knowledge of the principles of fluid power as used to propel equipment and machinery in industrial applications including fluid coupler, torque converters, automatic shift and hydrostatic transmissions.
Prerequisite: IT 121.

IT 210
VEHICLE TUNE UP AND INSTRUMENTATION
(2.00 Lecture, 6.00 Lab Hrs./Wk.) 4 Credits
Theory of ignition systems; methods of testing engine performance using the electronic scope and other diagnostic instruments. Laboratory sessions provide hands-on experience with live projects. **Prerequisite:** IT 108, IT 206, IT 207.

IT 218
VEHICLE STEERING & SUSPENSION SYSTEMS
(2.00 Lecture, 6 Lab Hrs./Wk.) 4 Credits
Theory and applications for service and repair of suspension systems; wheel alignment; wheel bearings; tires and wheels; wheel balance; and steering systems. Applications made on live projects.

IT 219
VEHICLE BRAKE SYSTEMS
(2.00 Lecture, 6.00 Lab Hrs./Wk.) 4 Credits
Theory of vehicle brake systems; repair of drum and disc type brakes; disassembly and reassemble of brake components; and assignments on live projects. **Prerequisite:** IT 121 or instructor approval.

IT 225
HVAC
(2.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
This class enables students to accurately identify the similarities and differences among standard heating and cooling systems and new technology, for example heat pumps, high efficiency furnaces, and reclaiming refrigerants. **Prerequisite:** IT 121 and MTH 65 (or higher) tested equivalent.

IT 226
INDUSTRIAL REFRIGERATION
(2.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) 4 Credits
Students learn to service commercial and industrial refrigeration systems and control circuits. Students learn absorption and centrifugal chiller theory and acquire electrical, mechanical, and tubing skills. **Prerequisite:** IT 225 or equivalent competencies.

IT 230
VEHICLE HEATING AND AIR CONDITIONING SYSTEMS
(80 Lecture/Lab Hrs. Total) 4 Credits
Students learn to service commercial and industrial refrigeration systems and control circuits. Students learn absorption and centrifugal chiller theory and acquire electrical, mechanical, and tubing skills. **Prerequisite:** IT 225 or equivalent competencies.

IT 281
COOPERATIVE WORK EXPERIENCE SEMINAR - INTEGRATED TECHNOLOGIES
(1.00 Lecture Hr./Wk.) 1 Credit
Students develop appropriate and effective work practices through discussing and analyzing their on-site experiences with the instructor. **Prerequisites:** Instructor approval and concurrent enrollment in IT 280 Cooperative Work Experience: Integrated Technologies.

MA MEDICAL ASSISTANT

MA 112
MEDICAL ASSISTANT: CLINICAL PROCEDURES I
(2.00 Lecture, 3.00 Lab Hrs./Wk.) 3 Credits
Students demonstrate knowledge and skills necessary to provide basic care to clients and work in medical office or clinic settings. **Prerequisite:** completion of OA 140 and OA 116 with a C grade or higher, or instructor permission.

MA 113
MEDICAL ASSISTANT: CLINICAL PROCEDURES II
(2.00 Lecture, 6.00 Lab Hrs./Wk.) 4 Credits
Students demonstrate increasing knowledge and skills necessary to provide care to clients and work in medical office or clinic settings, including: preparing clients for examinations and procedures; performing diagnostic tests; recognizing and responding appropriately to emergencies; client teaching; and office management. **Prerequisite:** completion of MA 112 with a C grade or higher.

MA 115
PHARMACOLOGY FOR MEDICAL ASSISTANTS I
(2.00 Lecture Hrs./Wk.) 2 Credits
Students acquire and demonstrate knowledge of basic principles and practice of pharmacology and administering drugs. They identify roles and responsibilities of the medical assistant in safely administering selected medications by various routes. **Prerequisite:** completion of MA 112 with a C grade or higher.

MA 123
MEDICAL INSURANCE & BILLING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn and apply principles, skills, and techniques to manage selected financial aspects of a medical practice. **Prerequisite:** completion of OA 116 with a C grade or higher.

MA 124
MEDICAL ASSISTANT: CLINICAL PROCEDURES III
(2.00 Lecture Hrs./Wk.) 2 Credits
Students demonstrate advanced knowledge and skills necessary to provide care to clients and work in medical office or clinic settings, including: scheduling admissions and procedures; serving as a liaison with other agencies; complying with risk management and safety procedures; and office management. **Prerequisite:** completion of MA 113 and BI 122 with a C grade or higher.

MA 125
PHARMACOLOGY FOR MEDICAL ASSISTANTS II
(2.00 Lecture Hrs./Wk.) 2 Credits
Students increase their knowledge and understanding of basic principles and practice of pharmacology and administering drugs. They identify roles and responsibilities of the medical assistant in safely administering selected medications by various routes. **Prerequisite:** completion of MA 115 and MA 280 with a C grade or higher.

MA 126
MEDICAL LAW AND ETHICS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn and apply legal and ethical principles to their practice as medical assistants.

MA 133
MEDICAL ASSISTANT CLINICAL PRACTICUM I
(12.00 Lab Hrs./Wk.) 4 Credits
Students apply knowledge and skills in a medical office setting to provide direct care for patients and to support office functions. **Prerequisite:** completion of OA 116 and MA 112 with a C grade or higher; documentation of measles and hepatitis B immunizations or signed waiver; current health-care provider CPR, negative TB test or chest x-ray.

MA 231
MEDICAL ASSISTANT CLINICAL PRACTICUM II
(15.00 Lab Hrs./Wk.) 5 Credits
Students apply increasing knowledge and skills in a medical office setting. Students demonstrate increasing independence in providing direct care for patients and supporting office functions. **Prerequisite:** completion of MA 113 and MA 133 with a C grade or higher.

MA 233
MEDICAL ASSISTANT CLINICAL PRACTICUM III
(24.00 Lab Hrs./Wk.) 8 Credits
Students apply advanced knowledge and skills in a medical office setting. Students demonstrate independent practice while providing direct care for patients and supporting office functions. **Prerequisite:** completion of MA 124 and MA 231 with a C grade or higher.

MAS MARITIME SCIENCE

HM 120
HAZWOPER TRAINING
(12 Lecture, 12 Lab Hrs.; 24 Hrs. Total) 1 Credit
A hands-on course with instruction in terminology, toxicology, hazard evaluation, chemical identification systems, personal protective equipment and hazardous waste site operations. Meets Federal requirement for HAZWOPER training as outlined in the Code of Federal Regulations, Part 29.

MAS 100
MARITIME OCCUPATIONS
(40 Lecture/Lab Hrs. Total) 2 Credits
This course is designed for students who are interested in maritime occupations such as towing, commercial fishing, passenger vessels, or research. Students demonstrate and apply skills in safe seamanship onboard the training vessel *Forerunner* while learning about the Columbia River Estuary and its user groups. Students will learn how to apply to the US Coast Guard for an Ordinary Seaman Merchant Mariner's Document.

MAS 110
LIMITED OPERATOR UNINSPECTED PASSENGER VESSEL CERTIFICATION
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
U.S. Coast Guard approved course where students demonstrate knowledge of rules of the nautical road; basic firefighting; marine safety; piloting and dead reckoning; marine electronics; basic seamanship; and tides, currents, and weather. A completion will stand in lieu of the required exam for an original Limited Scope License from the Portland Marine Safety Office. Completers will earn 20 eight-hour days of sea time toward a license. **Note:** Most instruction takes place onboard the college's training vessel.

MAS 111
LIMITED OPERATOR UNINSPECTED PASSENGER VESSEL ENDORSEMENT
(24 Lecture/Lab Hrs. Total) 1 Credit
Students demonstrate knowledge of the Nautical Rules of the Road and U.S. Aids to Navigation System (lateral) and acquire the skills and knowledge required to navigate safely and properly interact with vessel traffic found on navigable inland waters.

MAS 120
U.S. COAST GUARD MARINE LICENSE TRAINING
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students demonstrate knowledge of the information contained on U.S. Coast Guard examinations, Master or Mate (limited tonnage) near coastal and/or inland waters. **Note:** This course is U.S. Coast Guard approved to be taken in lieu of testing for licenses not to exceed 200 gross tons.

MAS 130
RADAR OBSERVER: ORIGINAL ENDORSEMENT, UNLIMITED
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students develop proficiency in radar operations gained through lecture, demonstration, transfer plotting, and direct plotting using radar simulators. Students engage in the simulator use of Automatic Radar Plotting Aids (ARPA).

MAS 131
RADAR OBSERVER: RECERTIFICATION
(24 Lecture/Lab Hrs. Total) 1 Credit
Students increase their proficiency in direct plotting problems, and review plotting techniques, and operation of radar. **Note:** For individuals who would like to refresh their skills before taking the radar endorsement final exam.

MAS 132
RADAR OBSERVER: RIVERS
(24 Lecture/Lab Hrs. Total) 1 Credit
Students demonstrate mastery of the knowledge and skills required to safely navigate a vessel, with the aid of radar, upon rivers covered by the Inland Navigation Rules of the Road.

MAS 133
ARPA TRAINING (AUTOMATIC RADAR PLOTTING AIDS)
(40 Lecture/Lab Hrs. Total) 2 Credits
Students demonstrate the knowledge of the principles and application of ARPA (Automatic Radar Plotting Aids). The U.S. Coast Guard approved course meets or exceeds the minimum level of knowledge specified in the US Coast Guard, STCW and IMO requirements for ARPA. **Prerequisite:** Instructor's approval and successfully completed an approved "Unlimited" Radar Observer's course.

MAS 134
STCW GMDSS TRAINING (GLOBAL MARINE DISTRESS SAFETY SYSTEM)
(70 Lecture/Lab Hrs. Total) 3 Credits
Students demonstrate knowledge and skill in the proper use of GMDSS communications systems and other GMDSS equipment such as Emergency Position Indicating Radio Beacons (EPIRB's), and Search and Rescue Transponder (SART). This U.S. Coast Guard approved course meets or exceeds the minimum level of knowledge specified in the US Coast Guard, STCW and IMO requirements for training in Global Marine Distress Safety System (GMDSS). **Prerequisite:** instructor approval.

MAS 140
INTRO TO SEAMANSHIP & MARITIME CAREERS
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate the knowledge and seamanship skills necessary for identifying different commercial vessels, handling lines while docking and proper ship-board courtesies. Students spend considerable time onboard the training vessel.

MAS 141
INTRODUCTION TO TRAWLING & TRAWL SAFETY
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate knowledge of terminology; back-deck practices; setting and hauling; shipboard repairs of trawl gear; types of shrimp vessels and gear; and handling the product. Students participate in laboratory exercises onboard the training vessel.

MAS 142
INTRO TO FISHING GEAR TYPES & SAFETY I
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate knowledge of the terminology; safe back-deck practices; product handling; and shipboard repairs of different types of fishing gear other than trawl gear. Students participate in laboratory exercises onboard the training vessel.

MAS 143
NET MENDING
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate mastery of the skills used to repair damaged nets. Although the class focuses on the repair of trawl nets, students can apply the skills they learn to repair gillnets, or any item constructed of web.

MAS 145
HANDLING, REPAIR & STORAGE OF FISHING GEAR
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate the knowledge and skills needed for the proper handling, repair and maintenance of pots, longline, and trawl gear. This includes preparing the gear for a season and stowage of the gear after the season.

MAS 146
VESSEL OPERATIONS
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students gain practical experience by participating in the operation of the college's fifty foot training vessel. Activities include preparing for the trip; securing the vessel after the trip; and operations while underway. Many activities are conducted at sea, weather permitting.

MAS 147
VESSEL REGULATIONS
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students learn to use the Code of Federal Regulations for Marine Transportation (46 CFR) for owner/operator drills and inspection and the preparation of a vessel for US Coast Guard inspection. **Prerequisite:** instructor approval.

MAS 148
VESSEL STABILITY
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students demonstrate and apply the principles of stability, including free surface effect, center of gravity, effects of loading, and the rolling period. **Prerequisite:** instructor approval.

MAS 150
MARINE SAFETY
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate mastery of the skills and techniques needed for prevention and treatment of cold water near drowning and hypothermia; cold water survival skills; sea survival; fire fighting and emergency drills; orientation; and emergency instructions.

MAS 153
SEAMANSHIP
(40 Lecture/Lab Hrs. Total) 2 Credits
Students demonstrate mastery of seamanship skills used on different commercial vessels, including tug boats.

MAS 155
INTRODUCTION TO WATCHKEEPING
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate and apply watchkeeping skills including application of compass error; rules of the road; aids to navigation; marine radios; and position fixing and distance measuring on the nautical chart. Class includes practical experience during boat labs.

MAS 160
KNOTS, SPLICES, LINES, AND RIGGING
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students become proficient with basic knots and splices for synthetic line used on fishing vessels. Students participate in demonstrations of knots and splicing used in a variety of types of line and observe splices in wire rope.

MAS 164
INTRODUCTION TO NAVIGATION
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students demonstrate the knowledge and skills required to conduct a vessel safely from one position to another including position, direction, and distance on the water. Celestial navigation is not included in this course.

MAS 165
PRACTICAL NAVIGATION
(10 Lecture, 30 Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate mastery of navigation skills used on Mercator charts, including dead reckoning, fixing a position, and maintaining nautical charts. Students demonstrate proper use of major navigation publications.

MAS 166
ADVANCED NAVIGATION
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students apply piloting and dead reckoning skills to more advanced navigation techniques including navigation problems encountered in sailing across large open ocean bodies. **Prerequisite:** MAS 164.

MAS 167
CELESTIAL NAVIGATION
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students demonstrate knowledge and skill in the practical application of plotting lines of position using the sun, moon, planets and stars by sight reduction tables. Students solve the types of celestial navigation problems incorporated in USCG examinations.

MAS 168
CHARTS, AIDS TO NAVIGATION, AND MARINE COMPASSES
(20 Lecture, 20 Lecture/Lab Hrs..; 40 Hrs. Total) 3 Credits
Students demonstrate in-depth knowledge of the Lateral and International Association of Lighthouse Authorities aids to navigation systems; the charts used in marine navigation; the magnetic compass, its deviation and compensation; and the basics of gyrocompasses.

MAS 170
MARINE WEATHER, TIDES, CURRENTS AND WAVES
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students demonstrate in-depth knowledge of the effects of tides and currents, use of tables for calculating tides and currents, weather patterns found in the Pacific Northwest, and the use and interpretation of various weather instruments found onboard vessels.

MAS 175
RULES OF THE ROAD
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students gain an in-depth knowledge of the Rules of the Road, the USCG Collision Rules, inland rules and rules applicable in western rivers.

MAS 180
MARINE ELECTRONICS
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 2 Credits
Students demonstrate and apply knowledge and skill in the use and operation of marine electronic equipment including radios, sounders, radar, sonar, loran, and Global Positioning System (GPS). **Prerequisite:** instructor approval.

MAS 181
SEAMANSHIP I
(40 Lecture/Lab Hrs. Total) 2 Credits
Students learn and apply knowledge of marlinespike seamanship skills which includes the use of synthetic lines, line handling, and knots and splices, while actively participating in vessel operations. Includes five days of vessel time. **Prerequisite:** instructor approval.

MAS 182
SEAMANSHIP II
(40 Lecture/Lab Hrs. Total) 2 Credits
Students acquire basic skills and knowledge of rigging techniques including the proper use of wire rope and blocks and tackles. Students continue to develop and refine marlinespike seamanship skills. Includes five days of vessel time. **Prerequisite:** completion of MAS 181 and instructor approval.

MAS 183
SEAMANSHIP III
(40 Lecture/Lab Hrs. Total) 2 Credits
Students acquire basic skills and knowledge of the safe operation of deck machinery found on workboats. Students continue to develop marlinespike seamanship skills. Successful completion of the US Coast Guard Able Seaman Practical Knot Exam and demonstration of skills mastered in previous Seamanship classes is required. Includes five days of vessel time. **Prerequisite:** completion of MAS 182 and instructor approval.

MAS 184
GALLEY COOKING
(40 Lecture/Lab Hrs. Total) 2 Credits
Students learn to select healthy, appetizing foods that can be prepared on a vessel underway. Includes safe storage techniques, meal selection, and budgeting. **Prerequisite:** instructor approval.

MAS 185
FCC GMDSS TRAINING
(20 Lecture, 20 Lecture/Lab Hrs.; 40 Hrs. Total) 3 Credits
Students will learn basic radio law and operation practices of marine radios, general information about Global Marine Distress Safety System (GMDSS) as required under STCW and IMO guidelines. Students will be prepared to take an FCC exam on Elements 1 and 7.

MAS 186
SMALL VESSEL OPERATIONS I
(40 Lecture/Lab Hrs. Total) 2 Credits
Students are introduced to the duties and responsibilities of small vessel operations. They demonstrate vessel-handling skills under a variety of conditions while emphasizing standards of safe seamanship. Includes five days of vessel time. **Prerequisite:** instructor approval.

MAS 187
SMALL VESSEL OPERATIONS II
(40 Lecture/Lab Hrs. Total) 2 Credits
Focuses on advancing the skills required to safely handle small vessels under adverse conditions, minimizing the hazards of loading, and organizing and managing a navigational watch. Students are required to demonstrate skills learned in the previous small vessel operation class while onboard the training vessel. **Prerequisite:** completion of MAS 186 and instructor approval.

MAS 188
SMALL VESSEL OPERATIONS III
(40 Lecture/Lab Hrs. Total) 2 Credits
Students develop and demonstrate the skills required for safe operation of a small vessel. Students apply 46 CFR Subchapter T regulations for small passenger vessels, including conducting the required drills and inspections. Students also demonstrate advanced vessel handling skills and bridge management strategies. Demonstration of previously learned skills is required while onboard the training vessel. **Prerequisite:** completion of MAS 187 and instructor approval.

MAS 190
VESSEL PRACTICUM
(40 Lab Hrs. Total) 1 Credit
Students complete predetermined projects onboard the training vessel using skills learned in the classroom. Requires a consultation with an instructor to determine outcome objectives. **Prerequisite:** instructor consultation and predetermination of projects.

MFG MANUFACTURING TECHNOLOGY

MFG 150
HAZARDOUS MATERIALS & INDUSTRIAL SAFETY
(3.00 Lecture Hrs./Wk.) 3 Credits
This class equips both employees and employers to deal with workplace safety and health issues including hazardous materials (DEQ and material safety data sheets), Occupational Health and Safety Administration (OSHA), and State Accident Insurance Fund (SAIF).

MFG 180
MACHINE TOOLS I
(20.00 Lecture/Lab Hrs./Cr.) 1-6 Credits
Students demonstrate and apply an understanding of safe use, care, and basic maintenance of machine tools including measuring instruments, metal-cutting lathes, pedestal tool grinders, and hand tools. Students interpret mechanical drawings to fabricate parts. **Prerequisite:** MTH 60 or instructor approval.

MFG 181
MACHINE TOOLS II
(20.00 Lecture/Lab Hrs./Cr.) 1-6 Credits
Students demonstrate and apply safe use, care, and basic maintenance in advanced lathe operations with new measuring instruments. They turn grooves and machine external and internal ACME threads on the lathe. **Prerequisite:** MFG 180 or instructor approval.

MFG 250
MANUFACTURING PROCESSES I
(20.00 Lecture/Lab Hrs./Cr.) 1-8 Credits
Students learn and apply principles and practices of production work including the use of jigs and fixtures for multiple work pieces and computerized numerical control (CNC) programming. Each student will complete a manufacturing project. **Prerequisites:** DRF 214 and MFG 282, or instructor approval.

MFG 251
MANUFACTURING PROCESSES II
(20.00 Lecture/Lab Hrs./Cr.) 1-8 Credits
Students expand their knowledge and skills of CNC through practice and application of programming for milling machines and lathes. **Prerequisite:** MFG 250 or instructor approval.

MFG 282
MACHINE TOOLS III
(20.00 Lecture/Lab Hrs./Cr.) 1-6 Credits
Students demonstrate knowledge of technical information and practice safe operation, care and maintenance of drill presses and vertical milling machines. Students utilize various measuring devices and interpret mechanical drawings of parts layout. **Prerequisite:** MFG 181 or instructor approval.

MIC MICROCOMPUTER APPLICATIONS

MIC 145
INTRODUCTION TO INTEGRATED SOFTWARE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn to use an integrated software package which includes word processing, database, spreadsheet, graphics, and communications operations. They use their skill to complete projects in their major or area of interest. **Prerequisite:** Keyboard touch skill.

MIC 171
INTERMEDIATE SPREADSHEETS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students use advanced features and functions of an electronic spreadsheet program which will include: the creation of database tables, analysis of data, and development of complex graphs and advanced macros. **Prerequisite:** CSL 107.

MIC 178
USING THE INTERNET FOR COMMUNICATION AND RESEARCH
(3.00 Lecture Hrs./Wk.) 3 Credits
Students get overview information and hands-on experience in accessing and using the resources of the INTERNET. Students learn the basics of networked communications and have the opportunity to use their knowledge of a networked environment.

MIC 207
PRESENTATION SOFTWARE
(3.00 Lecture Hrs./Wk.) 3 Credits
Students use software packages and creative design principles to create professional quality presentations which may include on-screen, multi-media, slide show, and hard copy applications. **Prerequisites:** CS 131 or MIC 145.

MIC 210
MICROCOMPUTER INTEGRATED APPLICATIONS
(2.00 Lecture & 4.00 Lecture/Lab Hrs./Wk.) 4 Credits
Students use an integrated software applications package (data base, spreadsheet, word processing, graphics, and communications) to develop solutions to problems or case studies from social, business, or other applications. **Prerequisites:** CSD 122, CSL 107, OA 201.

MIC 295
MICROCOMPUTER DIRECTED PROJECT
(2.00 Lecture, 6.00 Lab Hrs./Wk.) 4 Credits
This is the capstone course for the Microcomputer Business Applications and Microcomputer Programming and Networking programs. Students build on knowledge gained in other courses and use critical thinking and problem solving skills to address a significant problem in their area of specialization. Students prepare a comprehensive report and make a professional presentation. **Prerequisite:** completion of all but the last quarter of coursework for the AAS Degree

MTH MATHEMATICS

MTH 10
MATH IMPROVEMENT
(2.00 Lecture, 2.00 Lab Hrs./Wk.) 3 Credits
Students develop skills in functional math concepts including estimating, rounding, whole number review, fractions, decimals and metrics. Instruction emphasizes vocabulary and critical thinking skills. **Prerequisite:** DMTH 07 or ASSET score 26-33 or instructor approval.

MTH 20
BASIC MATHEMATICS I
(3.00 Lecture Hrs./Wk.) 3 Credits
This course is for students who need a review of basic arithmetic. Students solve a variety of application involving fractions, decimals, percents, ratios and proportions, measurements, graphs, and formulas.

MTH 25
MATH REVIEW
(3.00 Lecture Hrs./Wk.) 3 Credits
This course is designed for students who need a review of basic arithmetic that incorporates an introduction to algebra. Students develop skills in using signed numbers and order of operations. Students will also practice using input/output tables and graphing in solving equations. **Prerequisite:** MTH 20, or ASSET score 36-37, or instructor approval.

MTH 60
BASIC MATHEMATICS II
(3.00 Lecture Hrs./Wk.) 3 Credits
Students master the fundamentals of applied algebra with some geometry. They compute simple algebraic expressions, first degree equations, products of binomials, trinomial factorization and do some numerical evaluations. **Prerequisite:** MTH 20 or appropriate score on the ASSET or COMPASS mathematics placement tests.

MTH 65
MATHEMATICS FOR THE APPLIED SCIENCES
(4.00 Lecture Hrs./Wk.) 4 Credits
This course satisfies the general education mathematics requirement for most of the Professional and Technical degrees. Students solve problems from a variety of occupations using fractions, decimals, percents, proportions, right angle trigonometry, graphs, and statistics. **Prerequisite:** MTH 60 or equivalent.

MTH 70
ALGEBRA - BEGINNING
(5.00 Lecture Hrs./Wk.) 5 Credits
This class is for students who have never taken or need a review of high school algebra and geometry. Students employ communication, and problem solving skills that involve mathematic reasoning. Emphasis is placed on modeling from a graphical format, reading tables and generating equations that represent the real data. Topics will include real numbers, factoring, first and second degree equations, exponents, radicals and the quadratic formula. **Prerequisite:** MTH 60 or ASSET placement at MTH 70 level or instructor approval.

MTH 95
ALGEBRA - INTERMEDIATE
(5.00 Lecture Hrs./Wk.) 5 Credits
This course is for students who have had only one year of high school algebra and who need a review in preparation for college algebra. Students demonstrate an understanding of algebraic concepts such as polynomials, exponents, first and second degree equations, inequalities, functions and graphs, systems of equations, and logarithms. **Prerequisite:** MTH 70 or appropriate score on the ASSET or COMPASS Mathematics placement tests.

MTH 105
INTRODUCTION TO CONTEMPORARY MATHEMATICS
(4.00 Lecture Hrs./Wk.) 4 Credits
This course is a survey of applications for non-science majors. Students work with patterns, reasoning, probability, statistics, mathematical modeling, linear programming, and logic to solve problems. **Prerequisite:** MTH 95 or appropriate score on the ASSET or COMPASS Mathematics placement tests.

MTH 111
COLLEGE ALGEBRA
(4.00 Lecture Hrs./Wk.) 4 Credits
This course is for students who have had two years of algebra and one year of geometry in high school. Students model various real life situations using polynomials, exponents, exponential and logarithmic functions, systems of equations, and matrices. Students gain a thorough understanding of relations and functions. **Prerequisite:** MTH 95 or appropriate score on the ASSET or COMPASS Mathematics placement tests.

MTH 112
ELEMENTARY FUNCTIONS - TRIGONOMETRY
(4.00 Lecture Hrs./Wk.) 4 Credits
This class is for students planning to take MTH 251 Calculus I and who have little or no background in trigonometry. Students demonstrate an understanding and are able to apply the following concepts to various situations: circular functions, trigonometric functions, inverse functions, vectors, graphs, complex numbers, and DeMoivre's theorem. **Prerequisite:** MTH 111 or instructor approval.

MTH 211
ELEMENTARY MATHEMATICS I
(3.00 Lecture, 1.00 Lab Hrs./Wk.) 3 Credits
This course is for prospective elementary teachers and does not satisfy the general education mathematics requirement for the AA degree. Students gain knowledge of concepts and teaching techniques used in elementary school mathematics including problem solving strategies; sets; numeration; whole number operations; number theory; and mental, electronic, and written computation. **Prerequisite:** MTH 95 or instructor approval.

MTH 212
ELEMENTARY MATHEMATICS II
(3.00 Lecture, 1.00 Lab Hrs./Wk.) 3 Credits
This course is for prospective elementary teachers and does not satisfy the general education mathematics requirement for the AA degree. Students learn concepts and teaching techniques used in elementary school mathematics including fractions and rational number operations; decimals, ratio and proportion; percent; introduction to algebra; and descriptive statistics. **Prerequisite:** MTH 95 or instructor approval.

MTH 213
ELEMENTARY MATHEMATICS III
(3.00 Lecture, 1.00 Lab Hrs./Wk.) 3 Credits
This course is for prospective elementary teachers and does not satisfy the general education mathematics requirement for the AA degree. Students demonstrate knowledge of concepts and teaching techniques used in elementary school mathematics including the metric system, informal geometry of measurement, graphing, and basic probability theory. **Prerequisite:** MTH 95 or instructor approval.

MTH 241
CALCULUS FOR MANAGEMENT AND THE SOCIAL SCIENCES
(4.00 Lecture Hrs./Wk.) **4 Credits**
This class is for students in non-science programs which require only one term of calculus. Students apply techniques of differential and integral calculus to business and economics problems. **Prerequisite:** MTH 111 or instructor approval.

MTH 243
INTRODUCTION TO PROBABILITY AND STATISTICS
(4.00 Lecture Hrs./Wk.) **4 Credits**
This course is for students majoring in the arts, sciences and business programs. Students demonstrate knowledge of the role of statistics in making inferences based on observed data utilizing graphing calculators. **Prerequisite:** MTH 111 or instructor approval.

MTH 244
INTRODUCTION TO PROBABILITY AND STATISTICS
(4.00 Lecture Hrs./Wk.) **4 Credits**
This course is for students majoring in the arts, sciences and business programs that require two terms of statistics. Students demonstrate knowledge of hypothesis testing, chi-square tests, regression and correlation, analysis of variance, and nonparametric statistics. They will complete a study project. **Prerequisite:** MTH 243.

MTH 251
CALCULUS I
(5.00 Lecture Hrs./Wk.) **5 Credits**
Students will learn differentiation with emphasis on concept applications to the real world. Giving equal time to graphical, numerical, and analytic approaches. Students will read, understand and discuss applied differential calculus concepts. Students will utilize graphing programmable calculator and computer technology. Students will interact with science disciplines in laboratory settings and obtain real data for analysis using calculus principles. **Prerequisites:** MTH 111 and MTH 112 or equivalents.

MTH 252
CALCULUS II
(4.00 Lecture Hrs./Wk.) **4 Credits**
Second course in the standard calculus sequence. Students demonstrate an understanding of Riemann sums, the fundamental theorem of calculus, the definite integral, and differential equations. Students utilize graphing programmable calculator and computer technology to enhance the learning experience. **Prerequisite:** MTH 251.

MUP 275

MTH 253
CALCULUS III
(4.00 Lecture Hrs./Wk.) **4 Credits**
Third course in the standard calculus sequence. Students demonstrate an understanding of polar coordinates, improper integrals, Taylor series, infinite series, and some basic concepts of vectors and linear algebra. Students utilize graphing programmable calculator and computer technology to enhance the learning experience. **Prerequisite:** MTH 252.

MTH 254
VECTOR CALCULUS I
(4.00 Lecture Hrs./Wk.) **4 Credits**
Fourth course in the standard calculus sequence. Students demonstrate an understanding of vectors in space, partial differentiation, multiple integrals, and vector analysis. Students utilize graphing programmable calculator and computer technology to enhance the learning experience. **Prerequisite:** MTH 253.

MTH 255
VECTOR CALCULUS II
(4.00 Lecture Hrs./Wk.) **4 Credits**
Fifth course in the standard calculus sequence. Students demonstrate an understanding of integration of functions of many variables; descriptions in parametric, polar, cylindrical, spherical, and vector forms; motion in space; introduction to vector fields; line and surface integrals. **Prerequisite:** C grade or higher in MTH 254.

MTH 256
DIFFERENTIAL EQUATIONS
(4.00 Lecture Hrs./Wk.) **4 Credits**
Students will demonstrate an understanding of ordinary differential equations, including first order linear differential equations, second order differential equations, series solutions, and systems of equations. **Prerequisite:** MTH 253 or instructor approval.

MUP MUSIC PERFORMANCE

MUP 180
INDIVIDUAL LESSONS - GUITAR
(.50 Lecture, 6.00 Lab Hrs./Wk.) **2 Credits**
Students take individual instruction in guitar and may perform in recitals. **Note:** No more than 12 credits on a major instrument and six credits on a secondary instrument of individual lessons numbered MUP 171-192 and 271-292 may be applied to an associate degree.

INDIVIDUAL LESSONS - VIOLIN
(.50 Lecture, 6.00 Lab Hrs./Wk.) 2 Credits
Students take individual instruction in advanced violin and may perform in recitals. **Note:** No more than 12 credits on a major instrument and six credits on a secondary instrument of individual lessons numbered MUP 171-192 and 271-292 may be applied to an associate degree.

NFM NUTRITION & FOOD MANAGEMENT

NFM 225
HUMAN NUTRITION
(4.00 Lecture Hrs./Wk.) 4 Credit
Students develop an understanding of nutrients, their functions, food sources, effects of deficiency, recommended dietary allowances, assessment of nutritional status, practical human nutrition, and nutritional controversies including food fads and fallacies.

NUR NURSING

NUR 60
NURSING SEMINAR
(1.00 Lecture Hr./Wk.) 1 Credit
Nursing students improve their study skills and enhance learning by recognizing alternative learning styles and methods, organizing for effective study, and preparing for testing. **Prerequisite:** Concurrent registration in nursing courses or instructor permission.

NUR 101
NURSING: FOUNDATIONS OF CARE
(4.00 Lecture, 12.00 Lab Hrs./Wk.) 8 Credits
This class prepares students to provide professional nursing care at the novice level for clients in the hospital or extended care setting. Students learn and apply selected functional health patterns in providing individualized nursing care. Students develop an understanding of and use core concepts, including caring, holistic health, critical thinking, the nursing process, and professional behaviors. **Prerequisite:** admission to Nursing program, current CNA certification or satisfactory completion of a CNA course within the past year, current AHA healthcare provider CPR document, hepatitis B and measles immunizations, TB test within past 3 months.

NUR 102
NURSING: FOCUS ON INDIVIDUALS
(4.00 Lecture, 12.00 Lab Hrs./Wk.) 8 Credits
This course continues to build on concepts and skills learned in NUR 101. Students learn and practice health restoration interventions for individual clients with surgical and/or other health problems. Students learn and apply selected functional health patterns in planning and providing care. Students practice more complex psychomotor skills and develop client teaching strategies. **Prerequisite:** NUR 101 with C grade or higher.

NUR 103
NURSING: FOCUS ON FAMILIES
(4.00 Lecture, 12.00 Lab Hrs./Wk.) 8 Credits
This course continues to build on concepts and skills learned in NUR 102. Students use the concepts of wellness promotion, health maintenance and health restoration and functional health patterns in planning and providing care for clients as individuals and members of families. **Prerequisite:** NUR 102, 112 with C grade or higher.

NUR 109
NURSING: FOCUS ON MENTAL HEALTH
(2.00 Lecture, 5.33 Lab Hrs./Wk.) 4 Credits
This class prepares students to provide nursing care for clients with mental health or psychiatric disorders in an inpatient setting. Students incorporate selected functional health patterns in providing care. Students use the concepts of caring, holistic health, critical thinking, and professional behaviors in the mental health setting. **Prerequisite:** NUR 103, 113 with C grade or higher.

NUR 112
COLLABORATIVE PRACTICE 1: PHARMACOLOGY
(2.00 Lecture Hrs./Wk.) 2 Credits
Students acquire and demonstrate knowledge of basic principles of pharmacology applied to the nursing role in administering medications. Learners identify nursing roles and responsibilities in caring for clients receiving medications used to treat common conditions. **Prerequisite:** NUR 101 with a C grade or higher, concurrent registration in NUR 102, or instructor permission.

NUR 113
COLLABORATIVE PRACTICE 2: PATHOPHYSIOLOGY & PHARMACOLOGY
(1.00 Lecture Hr./Wk.) 1 Credit
Students acquire knowledge of pathophysiology and pharmacology that they can apply to the nursing role. Students identify nursing and responsibilities in administering selected medications. **Prerequisite:** NUR 102 and NUR 112 with a C grade or higher, and concurrent registration in NUR 103.

NUR 201
NURSING: CLIENTS IN CRISIS
(3.00 Lecture, 12.00 Lab Hrs./Wk.) 7 Credits
This course continues to build on previously learned concepts and skills. It prepares the developing professional nurse to apply functional health patterns in caring for clients with acute and/or critical problems in the hospital setting. Students learn and use complex psychomotor skills and incorporate core concepts into practice. Nursing management strategies such as delegation and supervision are introduced. **Prerequisite:** NUR 109 and all first year nursing program course requirements with C grade or higher, current AHA healthcare provider CPR document, TB test within past 3 months.

NUR 202
NURSING: FAMILIES IN CRISIS
(4.00 Lecture, 12.00 Lab Hrs./Wk.) 8 Credits
This course continues to build on previously learned concepts and skills. Students develop the ability to use functional health patterns in providing care for individuals and families in times of crisis. Students demonstrate increasing independence and use of nursing management strategies in providing care. **Prerequisite:** NUR 201, 231 with C grade or higher.

NUR 208
NURSING: TRANSITION INTO PRACTICE
(2.00 Lecture/ 15 Lab Hrs./Wk.) 7 Credits
This course continues to build on concepts and skills in the previous terms. It prepares students for the transition from nursing student to registered nurse. Students apply learned skills and concepts, providing client care in a community or institutional setting under the guidance of a preceptor nurse. They incorporate concepts in professional behavior and leadership/management issues. **Prerequisites:** NUR 202, 232 with a C grade or higher.

NUR 215
PHYSICAL ASSESSMENT
(2.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Reviews principles and techniques of physical assessment for the practicing nurse or nursing student. Each section will include a review of related anatomy and physiology; principles, techniques, and practice of physical examination; and common changes from the norm. Students should be able to perform a complete history and physical examination in an organized, systematic manner by the end of the course. **Prerequisite:** limited to currently enrolled nursing students, currently licensed nursing personnel, or those employed or employable in the field of nursing.

NUR 231
COLLABORATIVE PRACTICE 3:
PATHOPHYSIOLOGY & PHARMACOLOGY
(2.00 Lecture Hrs./Wk.) 2 Credits
Students acquire knowledge of pathophysiology and pharmacology that they can apply to the nursing role. Learners demonstrate an increasing understanding of the effects of acute and chronic diseases and trauma on clients. Students identify nursing roles and responsibilities in administering selected medications used to treat acute, chronic, and critical conditions. **Prerequisite:** NUR 109 and all first year nursing program course requirements with grade C or higher and concurrent registration in NUR 201.

NUR 232
COLLABORATIVE PRACTICE 4:
PATHOPHYSIOLOGY & PHARMACOLOGY
(1.00 Lecture Hr./Wk.) 1 Credit
Students acquire knowledge of pathophysiology and pharmacology that they can apply to the nursing role. Learners demonstrate an understanding of the effects of HIV infection and its complications on the client. Students identify the effects of various pediatric disorders, poisoning, enteritis, and spinal cord disorders. Students identify nursing roles and responsibilities in administering blood, selected medications and immunizations. **Prerequisite:** NUR 201, 231 with grade C or higher, concurrent registration in NUR 202.

OA OFFICE ADMINISTRATION

OA 104
ENGLISH FOR BUSINESS
(4.00 Lecture Hrs./Wk.) 4 Credits
Students improve their skill in grammar, spelling, vocabulary, punctuation, and the use of reference sources and electronic aids. **Prerequisite:** Score of 37+ on the ASSET English placement test, concurrent enrollment in DRD 40, or instructor approval.

OA 116
OFFICE PROCEDURES
(4.00 Lecture Hrs./Wk.) 4 Credits
Students become proficient in procedures of office work including business communication skills, office management and support duties, and human relations skills. **Prerequisite:** OA 121 or instructor approval.

OA 120
COMPUTER KEYBOARDING
(2.00 Lecture/Lab Hrs./Wk.) 1 Credit
Students develop basic keyboarding techniques using a computer terminal. Applicable to all disciplines.

OA 121
KEYBOARDING I
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop skill in keyboarding techniques, proofreading, and machine composition. They acquire skill in producing simple letters, reports, and memorandums. **Note:** Students are placed in keyboarding classes according to their demonstrated proficiency.

OA 122
KEYBOARDING II
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students apply keyboarding skill to moderately complex letters, tables, forms, and manuscripts; increase production words per minute; and master computer word processing vocabulary and concepts. **Prerequisite:** OA 121 or instructor approval.

OA 124
KEYBOARDING SKILL BUILDING
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Based on their current skill level, students identify and correct keyboarding problems, develop overall keyboarding skill, and evaluate skill development progress. **Prerequisite:** OA 121 or ability to key at least 20 words per minute.

OA 135
LEGAL TERMINOLOGY
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop a vocabulary of legal terminology and a basic understanding of the United States court system.

OA 139
LEGAL TRANSCRIPTION
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students become proficient in the transcription of legal correspondence and documents. **Prerequisites:** OA 122 and OA 135 or instructor approval.

OA 140
MEDICAL TERMINOLOGY I
(3.00 Lecture Hrs./Wk.) 3 Credits
Students master basic medical terminology.

OA 141
MEDICAL TERMINOLOGY II
(3.00 Lecture Hrs./Wk.) 3 Credits
Students master medical terminology dealing with specific body systems.

OA 142
MEDICAL TRANSCRIPTION
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students review and apply their knowledge of medical terminology through simulated transcription of medical correspondence and reports. **Prerequisites:** OA 141 and OA 121 or instructor approval.

OA 201
WORD PROCESSING PROCEDURES I
(2.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop word processing knowledge and skills necessary for using IBM-compatible computers and Windows software to prepare and edit documents.

OA 202
WORD PROCESSING PROCEDURES II
(2.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students increase their proficiency in using word processing, develop skill in using advanced-level functions, and practice desktop publishing operations and detailed office-style formatting.

OA 205
DESKTOP PUBLISHING
(2.00 Lecture, 2.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students develop skill in using desktop publishing software to create presentations, reports, and camera-ready copy. **Prerequisite:** OA 202 or MIC 145 or equivalent.

OA 225
MACHINE TRANSCRIPTION
(6.00 Lecture/Lab Hrs./Wk.) 3 Credits
Students demonstrate skill in using transcribing equipment in rough-draft, memorandum, and letter formats. They become proficient in proofreading and editing copy. **Prerequisite:** OA 121 or instructor approval.

OA 240
FILING AND RECORDS MANAGEMENT
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop competence in basic filing rules; proficiency in setting up manual filing systems; and an understanding of the overall records management function in both small and large businesses.

OA 281
COOPERATIVE WORK EXPERIENCE - BUSINESS
(1.00 Lecture Hr./Wk.) 1 Credit
Students develop appropriate and effective work practices through discussing and analyzing their cooperative field experience with the instructor. **Prerequisite:** Concurrent enrollment in OA 280 and instructor approval.

OA 295
OFFICE SYSTEMS DIRECTED PROJECT
(2.00 Lecture & 6.00 Lab Hrs./Wk.) 4 Credits
This is the capstone course for the Office Systems programs. Students build on knowledge gained in other courses and use critical thinking and problem solving skills to address a significant problem in their area of specialization. Students prepare a comprehensive report and make a professional presentation. **Prerequisite:** completion of all but the last quarter of coursework for the AAS Degree.

PE PHYSICAL EDUCATION

No more than 6 credits of PE 185 earned in different activities at different levels may be applied to an associate degree.

PE 185
AEROBIC EXERCISE - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students participate in aerobic exercises designed to increase the strength of the cardiovascular system, promote coordination, and develop total body strength and flexibility.

PE 185
AEROBIC EXERCISE - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students increase cardiovascular strength and understand the importance of exercise as a lifestyle. Students practice simple routines and develop their own routines to achieve individual goals. **Prerequisite:** PE 185 Aerobic Exercise - Beg.

PE 185
BASKETBALL - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop and practice basketball skills. They develop sufficient skill and knowledge to serve their recreational interest as a player or spectator.

PE 185
BASKETBALL - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students will develop and practice more advanced offensive and defensive patterns of basketball play. **Prerequisite:** PE 185 Basketball - Beg.

PE 185
BICYCLING - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop knowledge and skills and engage in bicycling and bicycle maintenance. They develop cycling skills as a means of aerobic conditioning, transportation and recreation.

PE 185
BICYCLING - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Bicycle enthusiast students will engage in longer day rides and develop the skills necessary for bicycle maintenance, planning a bicycle tour, or preparing for club racing. **Prerequisite:** PE 185 Bicycling - Beginning.

PE 185
FOIL FENCING - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students learn the basic skills of foil fencing. Stresses rules, techniques, and bouting strategies. Emphasizes practice rather than competition.

PE 185
FOIL FENCING - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students continue to develop fundamental skills acquired in beginning foil fencing. Emphasizes perfection of basic techniques and the development of bouting tactics and strategy. Advanced competitive foil techniques and beginning sabre and epee are introduced. **Prerequisite:** PE 185 Fencing - Beginning.

PE 185
GOLF - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop their golf swing and learn the rules and etiquette of the game of golf.

PE 185
GOLF - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
While playing golf each week, students refine their golf swing with emphasis on making special shots. **Prerequisite:** PE 185 Golf - Beg.

PE 185
HATHA YOGA - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students practice the yoga of physical well being, emphasizing breathing techniques and the development of a strong, flexible, relaxed and well-toned body.

PE 185
HATHA YOGA - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students practice the basic techniques of Hatha Yoga and understand its philosophy as related to western culture. **Prerequisite:** PE 185 Hatha Yoga - Beg.

PE 185
PHYSICAL CONDITIONING - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop and actively practice an individualized conditioning program emphasizing cardiovascular fitness, muscular strength, endurance, and flexibility. They apply knowledge of weight control and nutrition.

PE 185
PHYSICAL CONDITIONING - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop and actively practice an individualized conditioning program emphasizing cardiovascular fitness, muscular strength, endurance, and flexibility.
Prerequisite: PE 185 Physical Conditioning - Beg

PE 185
SOFTBALL - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students practice the fundamental skills of slow-pitch softball emphasizing game strategy, tactics, rules, and playing each position.

PE 185
SOFTBALL - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students practice advanced skills of slow pitch softball emphasizing the development of team play, umpiring, and coaching. **Prerequisite:** PE 185 Softball - Beg.

PE 185
TENNIS - BEGINNING
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop and apply the basic skills, strategies, and rules needed to play the game of tennis at a recreational level.

PE 185
TENNIS - INTERMEDIATE
(3.00 Lab Hrs./Wk.) 1 Credit
Students develop and apply more advanced skills and strategies needed to play the game of tennis at an advanced recreational level. **Prerequisite:** PE 185 Tennis - Beg.

PE 185
VOLLEYBALL - BEGINNING
(3.00 Lab Hrs./Wk.) **1 Credit**
Students develop and apply the fundamental skills, strategies, rules, and etiquette of volleyball.

PE 185
VOLLEYBALL - INTERMEDIATE
(3.00 Lab Hrs./Wk.) **1 Credit**
Students improve volleyball skills, develop team play and strategies and acquire advanced individual and team skills and techniques. **Prerequisite:** PE 185 Volleyball-Beginning.

PE 185
WEIGHT TRAINING - BEGINNING
(3.00 Lab Hrs./Wk.) **1 Credit**
Students engage in various methods of weight training which emphasize personal lifetime fitness.

PE 185
WEIGHT TRAINING - INTERMEDIATE
(3.00 Lab Hrs./Wk.) **1 Credit**
Students engage in methods of weight training which emphasize the planning of personal weight work-out goals. **Prerequisite:** PE 185 Weight Training - Beg.

PH PHYSICS

PH 201
GENERAL PHYSICS **5 Credits**
(4.00 Lecture, 2.00 Lect./Lab & 1.00 Lab Hr./Wk.)
Students develop a general knowledge of physics from mechanics to nuclear physics, particularly the law of conservation of energy and how it relates to humans in everyday life. **Prerequisite:** MTH 95, concurrent or prior.

PH 202
GENERAL PHYSICS
(3.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) **5 Credits**
Students utilize direct inquiry, discussion with peers, and a microcomputer to take the role of a physicist. Students develop mathematical descriptions of mechanical motion. **Prerequisite:** MTH 111, concurrent or prior.

PH 203
GENERAL PHYSICS
(3.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) **5 Credits**
Students utilize direct inquiry, discussion with peers, and a microcomputer to take the role of a physicist. Students develop mathematical descriptions of thermodynamics, electrical current, and nuclear radiation. **Prerequisite:** PH 202.

PH 211
GENERAL PHYSICS WITH CALCULUS
(3.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) **5 Credits**
This sequence is for students planning further study in science or engineering. Students utilize direct inquiry, discussion with peers, and a microcomputer to take the role of a physicist: observing, taking data, and analyzing results rapidly and accurately. Students develop mathematical descriptions of mechanical motion. **Prerequisite:** MTH 251 or MTH 241, concurrent or prior.

PH 212
GENERAL PHYSICS WITH CALCULUS
(3.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) **5 Credits**
Students develop mathematical descriptions of mechanical energy and electricity. **Prerequisite:** PH 211; and MTH 252 or MTH 241, concurrent or prior.

PH 213
GENERAL PHYSICS WITH CALCULUS
(3.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) **5 Credits**
Students develop mathematical descriptions for electricity, magnetism and thermodynamics. **Prerequisite:** PH 212; and MTH 252 or MTH 241, concurrent or prior.

PHC PHARMACOLOGY

PHC 211
PHARMACOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of basic pharmacologic principles as they relate to specific drug groups, usage, means of drug administration, and precautions. **Prerequisite:** None. Chemistry and human anatomy and physiology strongly recommended.

PHL PHILOSOPHY

PHL 101
PHILOSOPHICAL PROBLEMS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students learn to view philosophy as a discipline integrating the sum of human knowledge to "see it whole," develop a concept of self in relation to the world, and understand the dilemmas of contemporary life as well as the great historical ideals of East and West.

PHL 102
ETHICS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Within a multi-cultural perspective, students develop an understanding of the main ethical problems that have confronted mankind in all cultures throughout all time. **Note:** Need not be taken in sequence.

PHL 103
CRITICAL REASONING
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop a practical understanding of creative thinking, critical analysis, the devices and ploys which undercut the rational process, and the fallacious argumentation pervasive in our society. **Note:** Need not be taken in sequence.

PS POLITICAL SCIENCE

PS 101
AMERICAN POLITICS
(4.00 Lecture Hrs./Wk.) **4 Credits**
Students acquire and demonstrate knowledge of the American political system through analysis and description of the American Constitution, problems of federalism, political behavior, political parties, interest groups civil rights and liberties, elections, and the role of the media.

PS 201
AMERICAN GOVERNMENT
(3.00 Lecture Hrs./Wk.) **3 Credits**
Institutions and their relation to modern American society. Economic, social, and ideological aspects of modern America in relation to our national goals, emphasizing government institutions.

PS 202
AMERICAN GOVERNMENT
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop an understanding of the economic, social, and ideological aspects of modern America in relation to our national goals, emphasizing government institutions.

PS 203
STATE AND LOCAL GOVERNMENT
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students will be develop an understanding of the American political institutions and their relationship to the broad American community. Includes an overview of political, economic and social aspects of our society, and their relationship to our national goals. Explores the practical operation and contemporary reforms in government at the state and local levels.

PS 205
INTERNATIONAL POLITICS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students will study ten major issues of the global community, including American foreign policy, and the nature of relations between nations-specifically contemporary international issues; nationalism, economic rivalries, and quest for security; and the problem of international cooperation, changing threats to security in the post-Cold War era, and the increasing importance of economic competition.

PSY PSYCHOLOGY

PSY 101
PSYCHOLOGY OF HUMAN RELATIONS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop an understanding of factors that influence communication in relationships, including personality differences, learned behaviors, and conflict styles. Students practice interpersonal skills and self-observation.

PSY 201
GENERAL PSYCHOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
In this year long sequence, students develop an understanding of psychology as a behavioral and social science including its history, theories, research methods, current knowledge, and its application to human problems. This term students gain knowledge of research methods, the nervous system, various mental states, sensation and perception, and learning. **Note:** strong reading and writing skills. Recommend courses be taken in sequence, but not required.

PSY 202
GENERAL PSYCHOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students gain knowledge of memory, cognition, language, motivation, personality, and emotion. **Note:** strong reading and writing skills. Recommend courses be taken in sequence, but not required.

PSY 203
GENERAL PSYCHOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop an understanding of psychological development, assessment, disorders and their treatment, social cognition and behavior, and psychological aspects of physical health. **Note:** strong reading and writing skills. Recommend courses be taken in sequence, but not required.

PSY 215
INTRODUCTION TO DEVELOPMENTAL PSYCHOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of human development from conception to old age and death, with emphasis on the physical, social, personality, and cognitive changes over the life span. **Note:** PSY 201, 202 or 203 strongly recommended.

PSY 216
SOCIAL PSYCHOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students will analyze and explore human social behavior from a social psychology perspective. The course surveys how psychological processes influence the behavior of groups and how individuals are influenced by culture, society, and other groups.

PSY 219
INTRODUCTION TO ABNORMAL PSYCHOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop a basic understanding of the variety of emotional, mental, and behavioral disorders experienced by humans. **Note:** At least two terms of PSY 201, 202, 203 strongly recommended.

PSY 231
INTRODUCTION TO HUMAN SEXUALITY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of the psychological, social, and biological aspects of human sexual functioning with emphasis on sexual response patterns, sexual attitudes, and sexual myths and fallacies. The class addresses cultural and value aspects of human sexuality. **Note:** PSY 201 strongly recommended.

R RELIGION

R 201
GREAT RELIGIONS OF THE WORLD
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop an understanding of Joseph Campbell's perspective on myths and world religion, as well as knowledge of the philosophy of religion, early religion, American Native religion, Egyptian religion, the goddess in religion, and Hinduism. **Note:** Need not be taken in sequence.

R 202
GREAT RELIGIONS OF THE WORLD
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of Joseph Campbell's perspective on myths and world religions as well as knowledge of philosophy of religion Buddhism, Yoga, Tibetan Buddhism, Taoism, and Confucianism. **Note:** Need not be taken in sequence.

R 203
GREAT RELIGIONS OF THE WORLD
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of Joseph Campbell's perspective on myths and world religion, as well as knowledge of the philosophy of religion, Zoroastrianism, Judaism, Greek mystery religions, Christianity, the spiritual dimension of Arthurian romances, and Islam. **Note:** Need not be taken in sequence.

SCIENCE: SEE BI, CH, G, GS, PH
SECRETARIAL: SEE OA

SOC SOCIOLOGY

SOC 204
GENERAL SOCIOLOGY: INTRODUCTION TO SOCIOLOGY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students become familiar with the terms, concepts, and theories employed by sociologists. Students demonstrate knowledge of social processes, patterns and institutions, and the historical development of social theory and method.

SOC 205
GENERAL SOCIOLOGY: SOCIAL ISSUES
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of the sociology of everyday life and social issues with emphasis on descriptive studies, relating forms of interpersonal relationships, conceptual studies, and definitions of the situations by participants.

SOC 210
MARRIAGE, FAMILY & INTIMATE RELATIONS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students examine intimate relationships, courtship, marriage, and family patterns; address how relationships are built, maintained, changed, and terminated; and consider the influence of intimacy, marriage and family on human development.

SOC 213
MINORITIES: DEALING WITH DIVERSITY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop an awareness of the variety of cultural perspectives in contemporary American society; the values, beliefs, problems, and communication patterns of minorities; and the historic, economic, and political aspects of prejudice and discrimination.

SOC 221
JUVENILE DELINQUENCY
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate a theoretical and practical understanding of juvenile delinquency and crime; diversity of delinquent expression; roles of law enforcement, social service agencies, and the court system; relationships with family and schools; and treatment models.

SOC 223
SOCIOLOGY OF AGING
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge of biological and behavioral research on the process of aging and its sociological implications, particularly viewing the aged as a minority group subject to prejudice and discrimination.

SOC 225
GENERAL SOCIOLOGY: SOCIAL PROBLEMS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students utilize the sociological perspective to analyze contemporary social problems in the United States particularly primary social problems including poverty, prejudice and discrimination, overpopulation, and deviance.

SP SPEECH

SP 111
FUNDAMENTALS OF PUBLIC SPEAKING
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students practice public communication skills both as presenters and as involved audience members. Students learn to research, organize, and deliver the major types of speeches.

SP 112
PERSUASIVE SPEECH
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students study and apply persuasion for a variety of purposes, including debate, irony, stumping, and the jeremiad. Students become aware of their unique strengths as speakers. **Prerequisite:** SP 111 or instructor approval.

SP 115
INTRODUCTION TO INTERCULTURAL COMMUNICATIONS
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students explore stereotypes, general attitudes, values, life styles and cultural patterns of communication in an effort to understand different cultures, how individuals react to change and differences, and how languages shape our perspective.

SP 219
SMALL GROUP DISCUSSION
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students demonstrate knowledge and skill in the social and task functions of small groups. Social functions include leadership, participation, verbal and non-verbal communication and interpersonal interaction.. Task functions include problem solving, conflict management, agenda setting and group presentations. **Prerequisite:** SP 111 recommended.

SPAN SPANISH

SPAN 101
FIRST YEAR SPANISH
(4.00 Lecture, 1.00 Lecture/Lab Hrs./Wk.) **4 Credits**
Students develop skill in reading, writing, hearing, and speaking Spanish and develop an insight into Spanish culture.

SPAN 102
FIRST YEAR SPANISH
(4.00 Lecture, 1.00 Lecture/Lab Hrs./Wk.) **4 Credits**
Students expand their comprehension and communication skills in Spanish. **Prerequisite:** SPAN 101 or instructor approval.

SPAN 103
FIRST YEAR SPANISH
(4.00 Lecture, 1.00 Lecture/Lab Hrs./Wk.) **4 Credits**
Students further expand their comprehension and communication skills in Spanish. **Prerequisite:** SPAN 102 or instructor approval.

SPAN 111
CONVERSATIONAL SPANISH
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students develop skill in Spanish conversation using basic vocabulary, grammatical structures, present tense, and cultural concepts. **Note:** This sequence focuses on oral communication—speaking and hearing, with less emphasis on reading and writing.

SPAN 112
CONVERSATIONAL SPANISH
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students improve their skill in Spanish conversation including the use of past tense, more complex grammatical structures, and vocabulary related to traveling, jobs and shopping. **Prerequisite:** SPAN 111 or instructor approval.

SPAN 113
CONVERSATIONAL SPANISH
(3.00 Lecture Hrs./Wk.) **3 Credits**
Students become more proficient in Spanish conversation through using past and future tense and learning vocabulary related to sports, health sciences and everyday situations. **Prerequisite:** SPAN 112 or instructor approval.

SPAN 201
SECOND YEAR SPANISH
(4.00 Lecture Hrs./Wk.) 4 Credits
Students advance their listening, speaking, reading, and writing skills. This class is conducted entirely in Spanish and stresses grammatical correctness and communicative ability. **Prerequisite:** SPAN 103 or three years of high school Spanish.

SPAN 202
SECOND YEAR SPANISH
(4.00 Lecture Hrs./Wk.) 4 Credits
Students continue to advance their listening, speaking, reading, and writing skills in Spanish. Students use authentic magazine and newspaper articles to expand their cultural awareness. **Prerequisites:** SPAN 201 or instructor approval.

SPAN 203
SECOND YEAR SPANISH
(4.00 Lecture Hrs./Wk.) 4 Credits
Students continue to advance their listening, speaking, reading, and writing skills in Spanish. Students use authentic materials dealing with politics, environmental discussions, and health related issues. **Prerequisite:** SPAN 202 or instructor approval.

TA THEATER ARTS

TA 101
INTRODUCTION TO THEATRE ARTS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students explore the various arts and skills involved in theatre including dramatic literature, acting, scenic design, directing, lighting, costuming, and stagecraft. Students gain the skills to critique theatrical performances.

TA 121
FUNDAMENTALS OF ACTING
(3.00 Lecture, 3.00 Lab. Hrs./Wk.) 4 Credits
Students explore the craft of acting through vocal and physical exercises to heighten awareness, creativity, and imagination. The class emphasizes improvisation, character analysis, and characterization.

TA 122
FUNDAMENTALS OF ACTING
(3.00 Lecture, 3.00 Lab. Hrs./Wk.) 4 Credits
Students develop audition and improvisational skills while enhancing physical and vocal techniques, including dialects. **Prerequisite:** TA 121 or instructor approval.

TA 123
FUNDAMENTALS OF ACTING
(3.00 Lecture, 3.00 Lab. Hrs./Wk.) 4 Credits
Students complete acting exercises emphasizing duet acting and character analysis in roles which include dialects, Shakespeare, and other classical period styles. **Prerequisite:** TA 122 or instructor approval.

TA 129
DANCE FOR MUSICAL THEATRE
(2.00 Lecture, 3.00 Lab Hrs./Wk.) 3 Credits
Students develop dance technique and movement vocabulary necessary to stage and choreograph for musical theatre. **Prerequisite:** None. Previous experience in dance, music, and/or acting is helpful.

TA 161
FUNDAMENTALS OF TECHNICAL THEATRE I - COSTUME DESIGN AND MAKEUP
(3.00 Lecture Hrs./Wk.) 3 Credits
Students investigate theory and practice of designing costumes and makeup for the theatre including design for dance, children's theatre, film, and stage production. **Prerequisite:** TA 101 or instructor approval.

TA 162
FUNDAMENTALS OF TECHNICAL THEATRE II - SET DESIGN AND STAGE LIGHTING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students complete scenic design and stage lighting projects for CCC Theatre and Dance productions. **Prerequisite:** TA 101, TA 161, or instructor approval.

TA 165
TECHNICAL THEATRE WORKSHOP
(4.00 Lab Hrs./Wk./Cr.) 1-3 Credits
Students prepare the physical background for theatre productions, including construction of sets and costumes, painting, lighting, and stage for CCC Theatre and Dance productions. **Note:** A maximum of six credits of TA 165 may be applied to an associate degree.

TA 227
STAGE MAKEUP
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn and apply the basic theories and techniques of theatrical stage makeup.

TA 254
FUNDAMENTALS OF DIRECTING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students develop research, interpretation, rehearsal, and staging techniques for a public performance of a one-act or an extended scene from a three-act play. **Prerequisite:** TA 101, TA 121, or TA 122.

TA 265
TECHNICAL THEATRE WORKSHOP
(3.00 Lab Hrs./Wk./Cr.) 1-3 Credits
Students prepare the physical background for theatre productions, including construction, painting, lighting, and stage management for CCC Theatre and Dance productions. **Note:** A maximum of six credits of TA 265 may be applied to an associate degree.

TA 282
THEATRE REHEARSAL & PERFORMANCE
(3.00 Lab Hrs./Wk./Cr.) 1-3 Credits
Students explore the principles of acting and dramatic production through participation in auditions, rehearsal, and performance of a theatrical production.

TA 285
THEATRE PRODUCTION WORKSHOP
(3.00 Lab Hrs./Wk./Cr.) 1-3 Credits
Students explore the principles of theatre production through participation in technical design, construction, and running crew for a theatrical production.

WLD WELDING

WLD 100
MATERIALS PROCESSING
(20.00 Lecture/Lab Hrs./Cr.) 1-4 Credits
Students gain and apply knowledge of the principles, equipment and skills necessary to identify and process varied material utilized in the fabrication industry. Course curriculum follows AWS specifications for qualification and certification of QC 10-95 Entry Level Welder. **Prerequisite:** student must have instructor approval.

WLD 101
SHIELDED METAL ARC WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-10 Credits
Students gain and apply knowledge of the principles, equipment and skills related to the shielded metal arc welding process, involving various base metals and joints common to industry. Course curriculum follows AWS specifications for qualification and certification of QC 10-95 Entry Level Welder. **Prerequisite:** student must have instructor approval.

WLD 102
GAS METAL ARC WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-9 Credits
Students gain and apply knowledge of the principles, equipment and skills related to the gas metal arc welding process, involving various base metals and joints common to industry. Course curriculum follows AWS specifications for qualification and certification of QC 10-95 Entry Level Welder. **Prerequisite:** student must have instructor approval.

WLD 103
FLUX CORE ARC WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-9 Credits
Students gain and apply knowledge of the principles, equipment and skills related to the flux core arc welding process, involving various base metals and joints common to industry. Course curriculum follows AWS specifications for qualification and certification of QC 10-95 Entry Level Welder. **Prerequisite:** student must be have instructor approval.

WLD 104
GAS TUNGSTEN ARC WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-9 Credits
Students gain and apply knowledge of the principles, equipment and skills related to the gas tungsten arc welding process, involving various base metals and joints common to industry. Course curriculum follows AWS specifications qualification and certification of QC 10-95 Entry Level Welder. **Prerequisite:** student must have instructor approval.

WLD 150
BEGINNING WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-9 Credits
In this flexible, variable credit course, students develop basic skills in oxy-acetylene and/or shielded metal arc welding. Student entry level depends on previous experience. Credit earned per term depends on the number of new skills mastered.

WLD 160
INTERMEDIATE WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-12 Credits
Students develop welding skills to industrial standards in any or all of the following processes: shielded metal arc welding, gas metal arc welding, and flux cored arc welding in all positions; and tungsten inert gas welding on carbon steel, stainless steel and aluminum. Students learn basic welding metallurgy and weld testing methods. Entry level dependent on completion of WLD 150 or previous experience.

WLD 170
ADVANCED WELDING
(20.00 Lecture/Lab Hrs./Cr.) 1-15 Credits
Students develop advanced welding skills including weldment design and fabrication methods, joint design, and fundamental welding metallurgy. **Prerequisite:** WLD 160 or instructor approval.

WLD 190
WELDING CERTIFICATION PREPARATION
(20.00 Lecture/Lab Hrs./Cr.) 1-9 Credits
Students develop skill in the forms of welding tested in various welding certification examinations including pipe and plate welding skills. A maximum of five credits may be applied to an associate degree. **Prerequisite:** WLD 160 or instructor approval.

WLD 296
LAYOUT, FABRICATION, AND REPAIR PRACTICES
(2.00 Lecture, 4.00 Lecture/Lab Hrs./Wk.) 4 Credits
Students demonstrate advanced knowledge and/or skills required for welding fabrication repairs. Students complete group and individual projects including a major welded project, as well as repair projects. **Prerequisite:** DRF 139 and WLD 160 or instructor approval.

WR WRITING

WR 40
ENGLISH FUNDAMENTALS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students write descriptive, narrative, and expository paragraphs and essays to improve organization, coherence, sentence control, mechanics, and usage. **Note:** This class is for students who have ASSET writing scores below 45 or need practice before enrolling in WR 121.

WR 121
ENGLISH COMPOSITION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students read and write essays to explore the writing process, investigate the essay form, and improve thinking, reading, and writing skills. **Prerequisite:** Writing ASSET placement score of 45 or above or equivalent.

WR 122
ENGLISH COMPOSITION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students write effective essays arguing their own ideas, as well as responding to other texts. **Prerequisite:** WR 121.

WR 123
ENGLISH COMPOSITION
(3.00 Lecture Hrs./Wk.) 3 Credits
Students apply library skills, conduct research, and produce integrated, evaluative, and appropriately documented academic papers using multiple sources. **Prerequisite:** WR 122.

WR 227
TECHNICAL REPORT WRITING
(3.00 Lecture Hrs./Wk.) 3 Credits
Students research, organize, and present written and oral technical communications in a variety of fields. **Prerequisite:** WR 121.

WR 241
CREATIVE WRITING - FICTION
(3.00 Lecture Hrs./Wk.) 3 Credits
This three-course sequence focuses on the techniques of creative writing in varied forms. This term students write short stories or novel chapters and read and critique short stories written by members of the class and published authors. **Prerequisite:** instructor approval or WR 121.

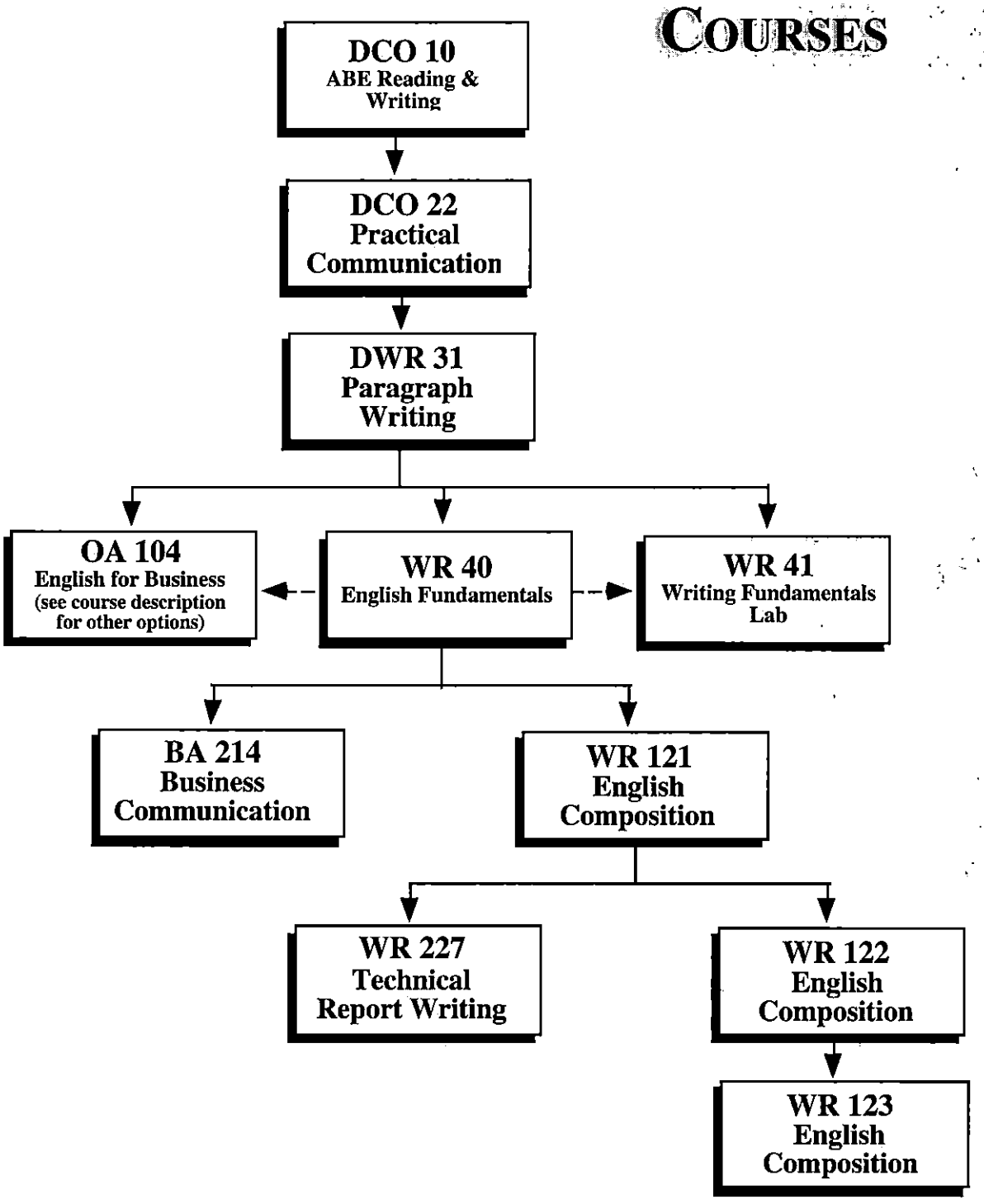
WR 242
CREATIVE WRITING - POETRY
(3.00 Lecture Hrs./Wk.) 3 Credits
This term students read and write poetry with or without meter, rhyme, or stanzas and critique poems written by members of the class and published authors. **Prerequisite:** instructor approval or WR 121.

WR 243
CREATIVE WRITING - DRAMA
(3.00 Lecture Hrs./Wk.) 3 Credits
This term students read plays written for stage, radio, TV, and reading; write monologues and 1-3 act plays; and critique plays written by members of the class and published authors. **Prerequisite:** instructor approval or WR 121.

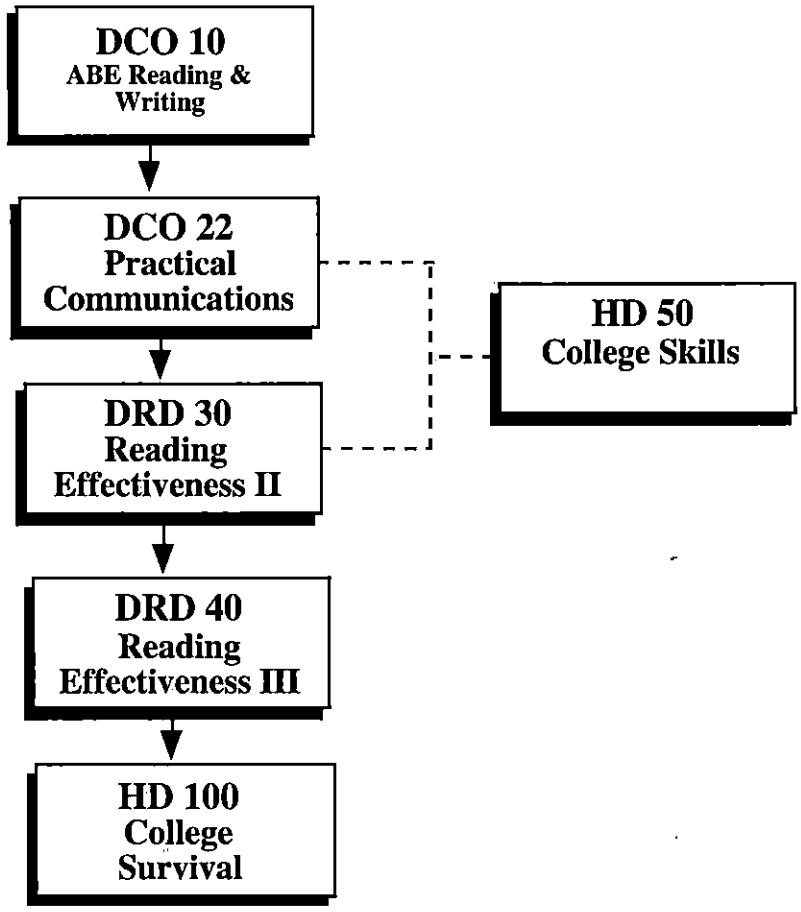
WR 249
WRITING CHILDREN'S BOOKS
(3.00 Lecture Hrs./Wk.) 3 Credits
A creative writing course designed for those who want to learn the techniques of writing for children: choosing an appropriate topic, creating vivid characters, using visual imagery, editing for young readers, and determining age appropriateness. Students will write fiction, non-fiction, and poems, and will design a picture book. Publishing will also be discussed.

WR 270
LITERARY PUBLICATIONS
(3.00 Lecture Hrs./Wk.) 3 Credits
Students learn the fundamentals of professionally editing a literary magazine. Students develop a philosophy of editing and, through active participation in publishing a college literary magazine, develop an understanding of the principles and procedures of editing and publishing. **Prerequisite:** instructor approval or WR 121.

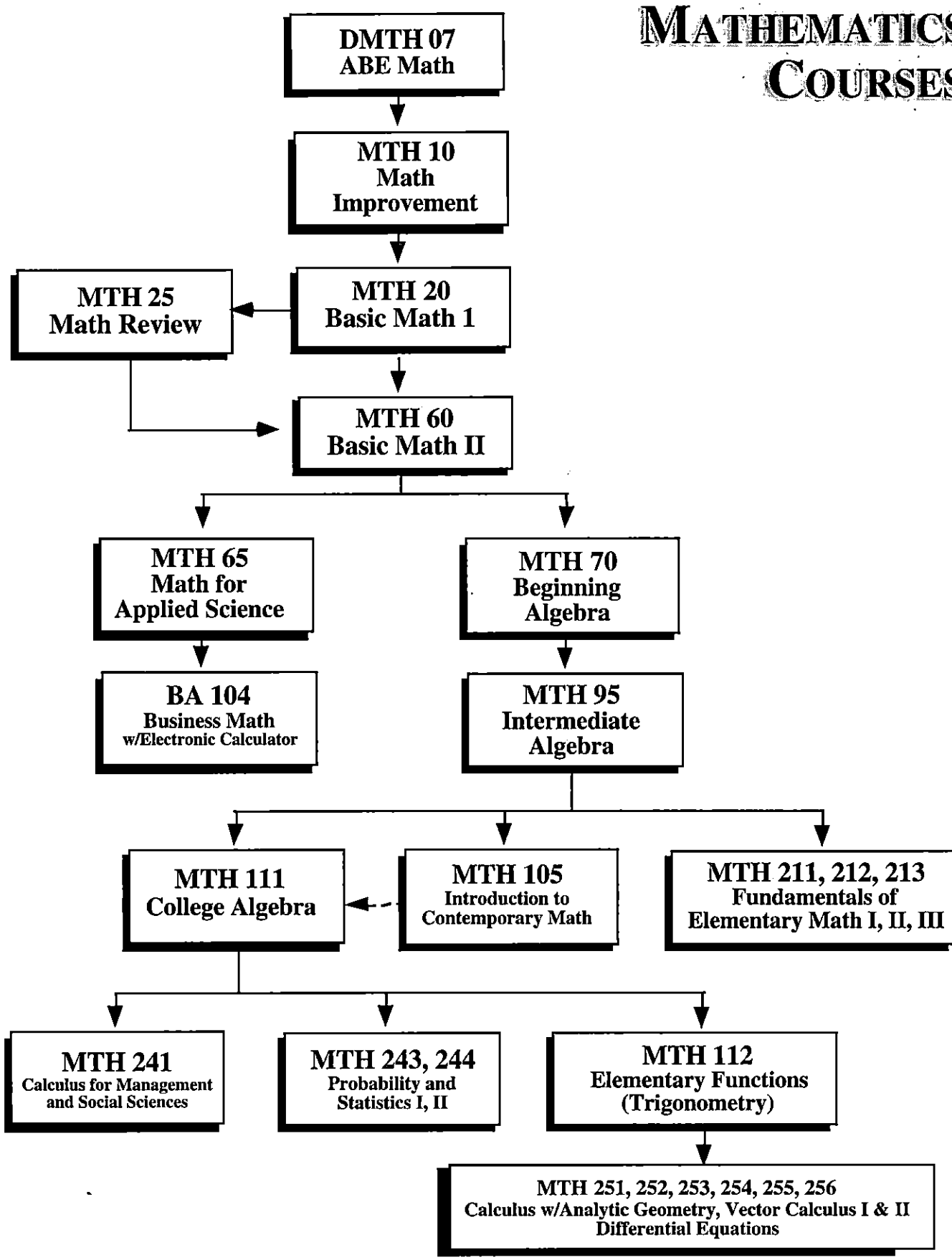
Sequence of Writing Courses



Sequence of Reading Courses



SEQUENCE OF MATHEMATICS COURSES



Jesse Hale received an AA-OT degree from CCC in 1997, and then went on to graduate with high honors in law enforcement at Western Oregon University. Currently, Jesse works as a reserve with the Monmouth Police Force.

"My son Jesse received an excellent education at CCC, and the individual attention from the instructors provided him with the confidence to be very successful at Western Oregon University."

Sharon Hale, English and Speech Teacher at Astoria High School - mother of CCC graduate Jesse Hale.

"I got a great start and saved a lot of money by attending Clatsop Community College my first two years of college. The instructors at CCC are very personable and willing to spend time with students."

Jesse Hale

APPENDIX A

The following courses are on the Oregon State Lower Division Collegiate Course List and are eligible to transfer to Oregon University System (OUS) institutions. They are applicable to AA, AGS, and AAS degrees. For courses which fulfill the distribution requirements of the AA degree, see the Distribution Requirements list on pages 25 & 26. **Consult an advisor at Clatsop and the four-year school regarding the transferability of specific programs and/or courses.**

Arts and Letters

ART 115,116,117 ..... Basic Design
ART 118 ..... Introduction to Calligraphy
ART 131,132,133 ..... Introduction to Drawing
ART 194, 195, 196 ..... Introduction to Watercolor
ART 204,205,206 ..... History of Western Art
ART 211,212,213 ..... Survey Visual Arts of the 20th Century
ART 218,219,220 ..... Calligraphy - Intermediate
ART 231,232.233 ..... Drawing - Intermediate
ART 250,251,252 ..... Introduction to Ceramics
ART 253,254,255 ..... Ceramics - Intermediate
ART 270, 271,272 ..... Introduction to Printmaking
ART 273,274,275 ..... Printmaking - Intermediate
ART 276,277,278 ..... Introduction to Sculpture
ART 279 ..... Intro Mixed Media-Hybrid Forms: Multidisciplinary
ART 281,282,28 ..... Introduction to Painting
ART 284,285,286 ..... Painting - Intermediate
ART 294,295,296 ..... Watercolor - Intermediate
ENG 104,105,106 ..... Introduction to Literature
ENG 107,108,109 ..... World Literature
ENG 110 ..... Introduction to Film Studies
ENG 201,202,203 ..... Shakespeare
ENG 204,205,206 ..... Survey of English Literature
ENG 220 ..... Non-European Minority Literature
ENG 221 ..... Introduction to Children's Literature
ENG 253,254,255 ..... Survey of American Literature
ENG 260 ..... Introduction to Women's Literature
FR 101,102,103 ..... First Year French
FR 201,202,203 ..... Second Year French
GER 101,102,103 ..... First Year German
GER 201,202,203 ..... Second Year German
PHL 101 ..... Philosophical Problems
PHL 102 ..... Ethics
PHL 103 ..... Critical Reasoning
R 201,202,203 ..... Great Religions of the World
SP 111 ..... Fundamentals of Public Speaking
SP 112 ..... Persuasive Speech
SP 115 ..... Intro. to Intercultural Communications
SP 219 ..... Small Group Discussion
SP 241 ..... Media
SPAN 101,102,103 ..... First Year Spanish
SPAN 111,112,113 ..... Conversational Spanish
SPAN 201,202,203 ..... Second Year Spanish
TA 101 ..... Introduction to Theatre Arts
TA 121,122,123 ..... Fundamentals of Acting
TA 254 ..... Fundamentals of Directing
WR 121,122,123 ..... English Composition
WR 227 ..... Technical Report Writing
WR 241,242,243 ..... Creative Writing
WR 249 ..... Writing Children's Books
WR 270 ..... Literary Publications

Business

BA 101 ..... Introduction to Business
BA 104 ..... Business Math with Electronic Calculators
BA 177 ..... Payroll & Business Tax Accounting
BA 206 ..... Management Fundamentals
BA 211,212,213 ..... Principles of Accounting
BA 214 ..... Business Communications
BA 222 ..... Financial Management
BA 223 ..... Principles of Marketing
BA 224 ..... Human Resource Management
BA 226,227 ..... Introduction to Business Law I & II
BA 228 ..... Computer Accounting Applications
BA 230 ..... Management Information Systems
BA 250 ..... Small Business Management
BA 256 ..... Income Tax
BA 285 ..... Human Relations in Business

Social Science

ANT 110 ..... General Anthropology: Cultural
ANT 150 ..... General Anthropology: Archeological
ANT 170 ..... General Anthropology: Physical
ANT 232 ..... Native North Americans
CJ 100 ..... Careers in Criminal Justice
CJ 101 ..... Introduction to Criminology
CJ 107 ..... Criminal Justice Workshop
CJ 110 ..... Introduction to Law Enforcement
CJ 120 ..... Introduction to the Judicial Process
CJ 121 ..... Concepts of Criminal Law
CJ 130 ..... Introduction to Corrections
CJ 132 ..... Introduction to Parole and Probation
CJ 203 ..... Crisis Intervention
CJ 210 ..... Criminal Investigation
CJ 215 ..... Issues in Criminal Justice Supervision & Administration
CJ 232 ..... Introduction to Corrections Casework
CJ 243 ..... Alcohol & other Dangerous Drugs
CJ 244 ..... Sexual Exploitation of Children
CJ 281 ..... Cooperative Work Experience Seminar - Criminal Justice
CPL 120 ..... Credit for Prior Learning
EC 115 ..... Introduction to Economics
EC 201,202 ..... Principles of Economics
GEO 100 ..... Introduction to Physical Geography
GEO 110 ..... Cultural & Human Geography
GEO 120 ..... World/Regional Geography
GEO 130 ..... Economic/Resource Geography
HD 100 ..... College Survival & Success
HD 110 ..... Career Planning
HD 202 ..... Life Transitions
HD 209 ..... The Complete Job Finder

HD 215 ..... Transition to the University
HFS 226 ..... Growing Years - Child Development, Birth through Age Eight
HS 101 ..... Alcohol Use, Misuse & Addiction
HS 102 ..... Drug Use, Misuse & Addiction
HS 154 ..... Community Resources
HS 155 ..... Interviewing for Social Services
HS 201 ..... Family Alcoholism/Addiction
HS 202,203,204 ..... Counseling/Chemically Dependent Client
HS 205 ..... Youth Addiction
HST 101,102,103 ..... History of Western Civilization
HST 201,202,203 ..... History of the United States
PS 201, 202 ..... American Government
PS 203 ..... State & Local Government
PS 205 ..... International Politics
PSY 101 ..... Psychology of Human Relations
PSY 201,202,203 ..... General Psychology
PSY 215 ..... Intro. to Developmental Psychology
PSY 216 ..... Social Psychology
PSY 219 ..... Introduction to Abnormal Psychology
PSY 231 ..... Introduction to Human Sexuality
SOC 204 ..... General Sociology: Intro. to Sociology
SOC 205 ..... General Sociology: Social Issues
SOC 210 ..... Marriage & Family & Intimate Relations
SOC 213 ..... Minorities: Dealing with Diversity
SOC 221 ..... Juvenile Delinquency
SOC 223 ..... Sociology of Aging
SOC 225 ..... General Sociology: Social Problems

Science/Mathematics/Microcomputers

BI 101,102,103 ..... General Biology
BI 121, 122 ..... Basic Human Anatomy & Physiology
BI 211, 212, 213 ..... Principles of Biology
BI 222 ..... Human Genetics
BI 231,232,233 ..... Human Anatomy and Physiology
BI 234 ..... Introduction to Microbiology
BOT 101 ..... Botany
CH 104,105,106 ..... Introductory Chemistry
CH 221,222,223 ..... General Chemistry
CS 101 ..... Fundamentals of Computing
CS 125GR ..... Computer Graphics
CS 125H ..... Beginning Web Site Design & Development
CS 135H ..... Advanced Web Site Design & Development
CS 131 ..... Intro. to Computer Information Systems
CS 161 ..... Computer Science I
CS 162 ..... Computer Science II
CS 171 ..... Principles of Computer Organization
CS 260 ..... Data Structures
CS 271 ..... Computer Architecture
CS 278 ..... Data Communications & Networking
CS 279M ..... Network Management-LAN NT
CS 279N ..... Network Management-LAN Novell
CSB 133 ..... Beg. Visual Basic Programming
CSB 233 ..... Adv. Visual Basic Programming
CSB 234 ..... Visual Basic III
CSD 122 ..... Beg. Database Program Development
CSD 275 ..... Adv. Database Program Development
CSL 107 ..... Spreadsheets
ES 150 ..... Introduction to Environmental Science
ES 160 ..... Techniques in Environmental Information Analysis
GS 104,105,106 ..... Physical Science
MTH 105 ..... Intro. to Contemporary Mathematics
MTH 111 ..... College Algebra
MTH 112 ..... Elementary Functions - Trigonometry
MTH 211,212,213 ..... Fundamentals of Elementary Mathematics
MTH 241 ..... Calculus for Management &Social Sciences
MTH 243,244 ..... Intro. to Probability & Statistics
MTH 251,252,253 ..... Calculus I, II & III
MTH 254 ..... Vector Calculus I
MTH 255 ..... Vector Calculus II
MTH 256 ..... Differential Equations
PH 201,202,203 ..... General Physics
PH 211,212,213 ..... General Physics with Calculus

Health, Physical Education, Dance

D 192 ..... Dance - Beginning Jazz
D 192 ..... Dance - Beginning Modern
D 192 ..... Dance - Beginning Tap
D 292 ..... Dance - Intermediate Jazz
D 292 ..... Dance - Intermediate Modern
D 292 ..... Dance - Intermediate Tap
D 294 ..... Dance - Advanced Jazz
D 294 ..... Dance - Advanced Modern
D 294 ..... Dance - Advanced Tap
HE 112 ..... Standard First Aid & Emergency Care
HE 207 ..... Stress Management
HPE 295 ..... Health & Fitness for Life
NFM 225 ..... Human Nutrition
PE 185 ..... All Beginning/Intermediate Activity Classes

Performing Arts

D 260 ..... Dance Performance
MUP 171 - 192 ..... Individual Lessons
MUP 271 - 292 ..... Individual Lessons
TA 129 ..... Dance for Musical Theatre
TA 161,162 ..... Fundamentals of Technical Theatre I & II
TA 165 ..... Technical Theatre Workshop
TA 265 ..... Technical Theatre Workshop
TA 282 ..... Theatre Rehearsal & Performance
TA 285 ..... Theatre Production Workshop

Cooperative Work Experience (all 280 numbers)

AGR - Agriculture
ANT - Anthropology
ART - Art
BA - Accounting
BA - Business Admin.
BI - Biology
BOT - Botany
CH - Chemistry
CJ - Criminal Justice
CS - Computer Science
CWE - Career Explor.
DH - Dental Hygiene
EC - Economics
ED - Education
EGR - Engineering
ENG - English
ES - Environ. Science
F - Forestry
FA - Film Arts
FR - French
FW - Fish & Wildlife
G - Geology
GEO - Geography
GER - German
GS - General Science
HE - Health
HPE - Health & PE
HR - Human Resources
HS - Human Services
HST - History
J - Journalism
MTH - Mathematics
MUS - Music
PA - Public Admin.
PE - Physical Ed.
PH - Physics
PHL - Philosophy
PS - Political Science
PSY - Psychology
RE - Real Estate
SPAN - Spanish
SOC - Sociology
SP - Speech
TA - Theatre
Z - Zoology

APPENDIX B

The following courses are generally applicable to AGS and AAS certificate and degree programs. They may be accepted by Oregon University System (OUS) institutions. Effective Fall term 1998, up to 12 credits of Professional/Technical courses, numbered 100 and higher from the list below, can be used as elective credit for the AA-OT degree. **Consult an advisor at Clatsop and the four-year school regarding the transferability of specific programs and/or courses.**

BA 131,132,133 ..... Accounting Procedures I, II & III
BA 281 ..... CWE Seminar: Accounting & Business Mgmt.
CS 281 ..... CWE Seminar: Programming & Networking
DRF 139 ..... Blueprint Reading & Sketching
DRF 185 ..... Computers in Design
DRF 213 ..... AutoCAD - Beginning
DRF 214 ..... AutoCAD - Intermediate
DRF 215 ..... AutoCAD - Advanced
DRF 228 ..... AutoCAD Exam Preparation
DRF 280 ..... CWE - CADD Technician
DRF 281 ..... CWE Seminar: CADD
DRF 295 ..... CADD Directed Projects
ECE 101 ..... Language Arts Activities for Young Children
ECE 103 ..... Math and Science for Young Children
ECE 105 ... Nutrition, Health & Safety for Young Children
ECE 109 ..... Early Childhood Environments
ECE 119 ..... Self-concept, Guidance & Self-discipline of Young Children
ECE 124 ... Physical Fitness Activities for Young Children
ECE 125 ..... Creative Activities for Young Children: Art
ECE 128 ..... Program Planning and Evaluation for Young Children
ECE 129 ..... Observation & Developmental Screening of Young Children
ECE 131 ..... Child Development for the Day Care Worker
ECE 134Statutes, Liability & Licensure Considerations for Childcare Facilities
ECE 137 ..... Child Abuse and the Law
ECE 139 ..... Infant and Toddler Programs
ECE 145 ..... Toys and Games for Learning
ECE 146 ..... Handicapping Conditions in Young Children
ECE 149 ..... Disease Control in ECE Settings
ECE 175 .... Infant/Toddler Learning & Social Growth in a Group Setting
ECE 281 ..... CWE Seminar: Early Childhood Education
ELT 150 ..... Intro. to Direct Current Circuit Analysis
ELT 155 ..... Intro. to Alternating Current Circuit Analysis
ELT 206 ..... Semiconductor Devices
ELT 207 ..... Industrial Process Controls
ELT 208 ..... Programmable Logical Controllers
ELT 219 ..... Digital Computer Electronics
ELT 220 ..... Introduction to Robotics
ELT 231 ..... Digital Circuits
EMT 151 ..... Emergency Medical Tech. Basic, Part 1
EMT 152 ..... Emergency Medical Tech. Basic, Part 2
EMT 165 ..... Emergency Med. Tech. Intermediate, Part 1
EMT 166 ..... Emergency Med. Tech. Intermediate, Part 2
EMT 169 ..... Emergency Medical Tech. Rescue
EMT 170 ... Emergency Communication & Transportation
EMT 175 ..... Intro. to Emergency Medical Services
EMT 280 ..... CWE - Emergency Medical Tech.
EMT 281 ..... CWE Seminar: Emergency Med. Tech.
FRP 150 ..... Introduction to Fire Protection
FRP 151 ..... Firefighter Skills
FRP 154 ..... Water Distribution Systems
FRP 155 ..... Instructional Methodology
FRP 156 ..... Firefighter Law
FRP 157 ..... Firefighter Safety
FRP 158 ..... Pump Construction & Hydraulics
FRP 160 ..... Fundamentals of Fire Protection
FRP 164 ..... Hazardous Materials
FRP 166 ..... Building Construction
FRP 169 ..... Fire Department Leadership
FRP 170 ..... Firefighting Strategy & Tactics
FRP 171 ..... Fire Protection Systems & Extinguishers
FRP 172 ..... Fire Codes & Ordinances
FRP 181 ..... Fire Prevention & Inspection
FRP 280 ..... CWE: Fire Science
FRP 281 ..... CWE Seminar: Fire Science
HD 50 ..... College Skills
IT 101 ..... Engine Rebuilding - Gasoline
IT 102 ..... Engine Rebuilding - Diesel
IT 105,106,107 ..... Principles of Technology I,II & III
IT 108 ..... Engine Principles
IT 110 ..... Applied Technology Projects
IT 206, 207 ..... Vehicle Electricity I, II
IT 208 ..... Mechanical Drives & Trans. of Power
IT 209 ..... Fluid Drives & Hydraulic Transmissions
IT 210 ..... Vehicle Tune Up and Instrumentation
IT 218 ..... Vehicle Steering and Suspension Systems
IT 219 ..... Vehicle Brake Systems
IT 225 ..... HVAC
IT 226 ..... Industrial Refrigeration
IT 230 ..... Vehicle Heating & Air Conditioning Systems
IT 280 ..... CWE: Integrated Technologies
IT 281 ..... CWE Seminar: Integrated Technologies
MA 112 ..... Medical Assistant: Clinical Procedures I
MA 113 ..... Medical Assistant: Clinical Procedures II
MA 115 ..... Pharmacology For Medical Assistants I
MA 123 ..... Medical Insurance & Billing
MA 124 ..... Medical Assistant: Clinical Procedures III
MA 125 ..... Pharmacology For Medical Assistants II
MA 126 ..... Medical Law And Ethics
MA 133 ..... Medical Assistant Clinical Practicum I
MA 231 ..... Medical Assistant Clinical Practicum II

MA 233 ..... Medical Assistant Clinical Practicum III
MA 280 ..... CWE: Medical Assistant
MA 281 ..... CWE Seminar: Medical Assistant
MAS 100 ..... Maritime Occupations
MAS 110 ..... Limited Operator Uninspected Passenger Vessel Certification
MAS 111 ..... Limited Operator Uninspected Passenger Vessel Endorsement
MAS 120 ..... U.S. Coast Guard Marine License Training
MAS 130 ..... Radar Observer: Original Endorsement, Unlimited
MAS 131 ..... Radar Observer: Recertification
MAS 132 ..... Radar Observer: Rivers
MAS 133 ..... ARPA Training
MAS 134 ..... STCW GMDSS Training
MAS 140 ..... Intro. to Seamanship & Maritime Careers
MAS 141 ..... Intro. to Trawling & Trawl Safety
MAS 142 ..... Introduction to Fishing Gear Types & Safety, Part I
MAS 143 ..... Net Mending
MAS 145 ..... Handling, Repair, & Storage-Fishing Gear
MAS 146 ..... Vessel Operations
MAS 147 ..... Vessel Regulations
MAS 148 ..... Vessel Stability
MAS 150 ..... Marine Safety
MAS 153 ..... Seamanship
MAS 155 ..... Introduction to Watchkeeping
MAS 160 ..... Knots, Splices, Lines & Rigging
MAS 164 ..... Introduction to Navigation
MAS 165 ..... Practical Navigation
MAS 166 ..... Advanced Navigation
MAS 167 ..... Celestial Navigation
MAS 168 ..... Charts, Aids to Navigation & Marine Compasses
MAS 170 ..... Marine Weather, Tides, Currents, & Waves
MAS 175 ..... Rules of the Road
MAS 180 ..... Marine Electronics
MAS 181 ..... Seamanship I
MAS 182 ..... Seamanship II
MAS 183 ..... Seamanship III
MAS 184 ..... Galley Cooking
MAS 185 ..... FCC GMDSS Training
MAS 186 ..... Small Vessel Operations I
MAS 187 ..... Small Vessel Operations II
MAS 188 ..... Small Vessel Operations III
MAS 190 ..... Vessel Practicum
MAS 280 ..... CWE: Maritime Science
MAS 281 ..... CWE Seminar: Maritime Science
MFG 150 ..... Hazardous Materials & Industrial Safety
MFG 179 ..... Orientation to Machine Tools
MFG 180,181 ..... Machine Tools I & II
MFG 250,251 ..... Manufacturing Processes I & II
MFG 282 ..... Machine Tools III
MIC 145 ..... Introduction to Integrated Software
MIC 171 ..... Intermediate Spreadsheets
MIC 178 ..... Internet for Communication & Research
MIC 207 ..... Presentation Software
MIC 210 ..... Microcomputer Integrated Applications
MIC 280 ..... CWE: Microcomputer
MIC 281 ..... CWE Seminar: Microcomputer
MIC 295 ..... Microcomputer Directed Project
MTH 10 ..... Math Improvement
MTH 20 ..... Basic Mathematics I
MTH 25 ..... Math Review
MTH 60 ..... Basic Mathematics II
MTH 65 ..... Math for the Applied Sciences
MTH 70 ..... Algebra - Beginning
MTH 95 ..... Algebra - Intermediate
NUR 101 ..... Nursing: Foundations of Care
NUR 102 ..... Nursing: Focus on Individuals
NUR 103 ..... Nursing: Focus on Families
NUR 109 ..... Nursing: Focus on Mental Health
NUR 111 ..... Nursing Concepts & Clinical Practice
NUR 112 ..... Collaborative Practice I: Pharmacology
NUR 113 ..... Collaborative Practice 2: Pathophysiology and Pharmacology
NUR 118,119,120 ..... Nursing Science Skills I,II, & III
NUR 121 ..... Nursing Clinical Practicum: LPN Trans.
NUR 201,202,203 ..... Nursing IV ,V & VI
NUR 206,208,209 ..... Clinical Nursing of Adults & Children I, II, III
NUR 207 ..... Advanced Nursing: Mental Health
NUR 215 ..... Physical Assessment for Nurses
NUR 280 ..... CWE: Nursing
NUR 281 ..... CWE Seminar: Nursing
PHC 211 ..... Pharmacology
OA 104 ..... English for Business
OA 116 ..... Office Procedures
OA 120 ..... Computer Keyboarding
OA 121,122 ..... Keyboarding I, II
OA 124 ..... Keyboarding Skill Building
OA 135 ..... Legal Terminology
OA 139 ..... Legal Transcription
OA 140,141 ..... Medical Terminology I & II
OA 142 ..... Medical Transcription
OA 201,202 ..... Word Processing Procedures I & II
OA 205 ..... Desktop Publishing
OA 225 ..... Machine Transcription
OA 240 ..... Filing & Records Management
OA 280 ..... CWE: Office Systems
OA 281 ..... Directed Field Experience - Business
OA 295 ..... Office Systems Directed Project
WLD 100 ..... Materials Processing
WLD 101 ..... Shielded Metal Arc Welding
WLD 102 ..... Gas Metal Arc Welding
WLD 103 ..... Flux Core Arc Welding
WLD 104 ..... Gas Tungsten Arc Welding
WLD 150 ..... Beginning Welding
WLD 160 ..... Intermediate Welding
WLD 170 ..... Advanced Welding
WLD 190 ..... Welding Certification Preparation
WLD 195 ..... General Shop Practices
WLD 296 ..... Layout, Fabrication & Repair Practices
WR 40 ..... English Fundamentals

APPENDIX C

CORE REQUIREMENTS FOR AGS OPTION A:

Effective 2000-2001

Emphasis in Accounting:

BA 131, 132, 133 - General Accounting I, II, III
BA 228 - Computer Accounting Applications
BA 177 - Payroll
BA 256 - Income Tax

Emphasis in Business Management:

BA 101 - Introduction to Business
BA 223 - Principles of Marketing
BA 131 - Accounting Procedures I or
BA 211 - Principles of Accounting
BA 250 - Small Business Management

Emphasis in Criminal Justice

CJ 101 - Criminology
CJ 110 - Introduction to Law Enforcement
CS 130 - Introduction to Corrections
SOC 221 - Juvenile Delinquency

Emphasis in Fire Science

FRP 150 - Introduction to Fire Protection
FRP 157 - Firefighter Safety
FRP 158 - Pump Construction and Hydraulics
FRP 164 - Hazardous Materials
FRP 166 - Building Construction
FRP 169 - Fire Department Leadership
FRP 170 - Firefighting Strategy and Tactics
FRP 172 - Fire Codes and Ordinances

Emphasis in Integrated Technology

DRF 213 - AutoCAD-Beginning
ELT 150 - Intro to Direct Circuit Analysis
IT 101 - Engine Rebuilding - Gasoline, or (4 cr)
IT 102 - Engine Rebuilding - Diesel (4 cr)
IT 140 - Industrial Safety (1 cr)
IT 141 - Tool and Shop Basics (1 cr)
MFG 180 - Machine Tools I (3 cr)
WLD 150 - Beginning Welding (3 cr)

Emphasis in Microcomputer Business Applications:

CS 131 - Intro.- Computer Information Systems
CSL 107 - Spreadsheets
CSD 122 - Beginning Database
OA 201 - Word Processing I

Emphasis in Microcomputer Programming and Networking

CS 161 - Computer Science I (4 cr)
CS 162 - Computer Science II (4 cr)
CS 260 - Data Structures (4 cr) -or-
CSB 133 and CSB 233 (6 cr total)

Emphasis in Office Systems - Legal Word Processing:

OA 116 - Office Procedures
OA 201 - Word Processing I
OA 139 - Legal Transcription
OA 240 - Filing and Records Management

Emphasis in Office Systems - Medical Word Processing:

OA 116 - Office Procedures
OA 201 - Word Processing I
OA 142 - Medical Transcription
OA 240 - Filing and Records Management

Emphasis in Office Systems - Office Management:

OA 116 - Office Procedures
OA 201 - Word Processing I
OA 240 - Filing and Records Management
BA 250 - Small Business Management

"The teachers here really care about how we do in our classes. Many go above and beyond what they need to do, making sure we excel in class."
Charnell Waller

Liliya Ignashova - In 1993 Liliya immigrated from Russia with her sister, Nadezhda. Neither could speak English but they quickly enrolled in Job Corp and took ESOL classes. From there they both graduated from: Job Corp Dental Assisting program in 1996, CCC with High Honors in 1998, and OHSU with honors in Dental Hygene this year. They are the first CCC graduates to be accepted to OHSUY's dental hygiene program.

"At CCC I met supportive and caring instructors and staff members who helped me achieve my dream of becoming a dental hygienist. I participated in the Plus program, received help with financial aid and housing, and my advisor gelped me know what I needed to do to transfer. CCC is a great school."
Liliya Ignashova

Clatsop Community College Faculty

ADCOCK, SUSAN K. — **INSTRUCTOR, NURSING**
B.S.N. Nursing, Oregon Health Science University, 1970; MS Nursing, University of Portland, 1990. Three years home health experience; twelve years hospital staff nurse; at Clatsop Community College since 1987.

ANTILLA, WILLIAM — **INSTRUCTOR, MARITIME SCIENCE**
Has twenty-three years of commercial fishing experience and licensing through US Coast Guard; at Clatsop Community College since 1995.

BLACK, JO ANN — **INSTRUCTOR, NURSING**
B.S. Nursing, Arizona State, 1971; MS in Community Health Nursing, University of Portland, 1997. Three years experience as Infection Control Nurse as well as seventeen years as Staff Nurse; at Clatsop Community College since 1992.

BROWN, JULIE — **INSTRUCTOR, WRITING**
B.S. English, Oregon State University, 1979; M.F.A. Creative Writing, University of Montana, 1985; Ph.D. English, University of Wisconsin, Milwaukee, 1990; at Clatsop Community College since 1995.

BUNCH, MICHAEL — **INSTRUCTOR, BIOLOGY**
B.A. Zoology, M.A. Biology, Humboldt State University, 1970; M.Ed., Educational Technology, Arizona State University, 1985; Doctor of Arts, Biology, Idaho State University, 1975. Three years in research; over fifteen years of teaching, administration, and instructional development in higher education; at Clatsop Community College since 1993.

CAMPBELL, SARA — **TECHNICAL SERVICES LIBRARIAN**
M.L.S. Librarianship, University of Washington; B.A. South Asian Area Studies, University of CA at Berkeley; at Clatsop Community College since 1996.

CHOATE, LAURIE — **INSTRUCTOR, BIOLOGICAL SCIENCES**
M.S.N. Maternal Child Nursing, University of Washington, 1978; B.S. Nursing, University of Washington 1976; at Clatsop Community College since 1997.

CONNAWAY, DEBRA — **INSTRUCTOR, MEDICAL ASSISTING**
Nationally certified Medical Assistant Program Educator; at Clatsop Community College since 2000.

DEGNER, DENNIS — **INSTRUCTOR, MARITIME SCIENCE**
Has twenty-six years experience of commercial fishing experience and licensing through U.S. Coast Guard; at Clatsop Community College since 1994.

EAKIN-WEBER, RENAE — **INSTRUCTOR, MATH**
B.S. Math, OSU, 1987; M.S. Math/Computer Education, OSU, 1989. Taught at Linfield College and at the secondary level; at Clatsop Community College since 1995.

ELLSBERG, ROBERT A. — **INSTRUCTOR, CRIMINAL JUSTICE**
B.A. Political Science, University of California, 1969; M.A. Criminal Justice, California State University-Sacramento, 1976. Four years police officer; three years criminal justice specialist; two years elementary special education instructor; at Clatsop Community College since 1977.

ENTLER, JIM — **INSTRUCTOR, SMALL BUSINESS MANAGEMENT**
B.A., Ambassador College; M.M., Adkison Graduate School of Management Willamette University, 1991. Nine years experience consulting for EMC2 Consulting/ Business and Management; at Clatsop Community College since 1992.

FISHER, DON R. — **INSTRUCTOR, INTEGRATED TECHNOLOGIES**
A.S., Oregon Institute of Technology, 1965; B.T. Auto-Tuneup and Instrumentation, Oregon Institute of Technology, 1972; M.Ed. Education, Oregon State University, 1981; at Clatsop Community College since 1972.

GOODFRIEND, HEATHER — **INSTRUCTOR, CHEMISTRY**
B.A. Chemistry, University of Minnesota; M.S. Physical Chemistry, University of Minnesota; at Clatsop Community College since 2000.

GUIDI, DALE (DEAC) — **INSTRUCTOR, SPEECH**
B.A. Speech Communication, Montana State University; M.A. Speech Communication, Idaho State University; at Clatsop Community College since 2000.

GUNDERSON, LUANN — **INSTRUCTOR, OFFICE/MICROCOMPUTERS**
M.A. Business & Industry Education, University of Minnesota, 1997; B.S. Business Education/Vocational Education, Minot State University, 1994; at Clatsop Community College since 1997.

HAM, BILL — **INSTRUCTOR, MARITIME SCIENCE**
Has thirty years service in the U.S. Coast Guard and licensing through U.S. Coast Guard; at Clatsop Community College since 1998.

HARRISON, BRIAN F. — **INSTRUCTOR, SOCIOLOGY & ANTHROPOLOGY**
B.A., M.A. Sociology, 1969, 1970, Gonzaga University. Post-graduate work at National Science Foundation Institute and Oregon State University; three years industry experience in archaeology; at Clatsop Community College since 1978.

HAUSER, JOHN D. — **INSTRUCTOR, HISTORY, PHILOSOPHY & WORLD RELIGION**
B.A. Economics, Miami University, 1965; Ph.D. History, Washington State University, 1973; at Clatsop Community College since 1972.

HOFFMAN, NANCY — **INSTRUCTOR, ENGLISH & LITERATURE**
B.A. Political Science, University of California, Davis, 1970; M.A. English, California State University, Sacramento, 1992. Fourteen years experience management and analysis, state of California; one year political columnist; at Clatsop Community College since 1993.

JACKSON, MICHAEL R. — **INSTRUCTOR, BUSINESS ADMINISTRATION & DATA PROCESSING**
B.A. Biological Science, Stanford University, 1965; M.B.A. Business Administration, Brigham Young University, 1967. Fifteen years U.S. Government, Department of State; at Clatsop Community College since 1986.

JONES, JAMES — **INSTRUCTOR, ART**
B.F.A. Kent State University, 1980; M.F.A. Northern Illinois University 1989; at Clatsop Community College since 1999.

KASPAR, DEBBIE E. — **INSTRUCTOR, DEVELOPMENTAL PROGRAMS**
B.S. Secondary Education, 1973, M.A. History, 1975, University of Idaho; at Clatsop Community College since 1981.

KEEFE, PAT — **INSTRUCTOR, PHYSICS/PHYSICAL SCIENCE**
B.S. Physics, Baker University, 1986; M.S. Physics, Portland State University, 1990. Two years training staff of volunteers at OMSI for public hands-on experiments; at Clatsop Community College since 1991.

KNIPPA, AUDREY E. — **INSTRUCTOR, NURSING**
B.A. English, Colgate University, 1976; M.S.N. Nursing, Pace University, 1979; M.P.H. Public Health, University of California, 1983. Registered Nurse; four years staff nurse; at Clatsop Community College since 1983.

KNUTSON-HAWES, CAROL — **INSTRUCTOR, WRITING**
B.A. English and Language Arts Degree in secondary ed., 1977; M.A. English, University of Oregon, 1985; at Clatsop Community College since 1998.

KOEHMSTEDT, MARIA D. — **AUDIO-VISUAL/ PERIODICALS LIBRARIAN**
B.A. English, North Dakota State University, 1972; M.L. Librarianship, University of Washington, 1977. Three years library technician; at Clatsop Community College since 1977.

McNARY, MARGERY F. — **INSTRUCTOR, BUSINESS EDUCATION**
B.S. Business Education, Oregon State University, 1965; M.A. Counseling/ Psychology, Stanford University, 1969. Over eighteen years teaching business and office practice courses; at Clatsop Community College since 1990.

MOHA, CARLA — **INSTRUCTOR, ACCOUNTING**
B.A. Accounting, Western State College, Colorado; M.B.A. at Regis University; at Clatsop Community College since 2000

MORRISSEY, PATRICIA — **INSTRUCTOR, FOREIGN LANGUAGES/SPANISH**
Masters in Marine Affairs, University of Rhode Island, 1991; M.S Marine Biology, ITESM, Mexico, 1983; five years adjunct Spanish instructor at CCC; at Clatsop Community College since 1997.

NEBEKER, ROYAL G. — **INSTRUCTOR, ART**
B.A. Art, 1970, M.F.A. Design, 1971, Brigham Young University. Two years graphic design, motion picture art direction, interior design experience; at Clatsop Community College since 1974.

NEWTON, JOHN R. — **INSTRUCTOR, INTEGRATED TECHNOLOGIES**
Seventeen years high school industrial education instructor; at Clatsop Community College since 1989.

REED, G. EDWARD — **INSTRUCTOR, INTEGRATED TECHNOLOGIES**
A.A. Fine Arts, Ventura College, 1969. State, Federal and NASA Welding Certification; twenty-four years industry experience; one year elementary instructor; at Clatsop Community College since 1976.

RICHARDSON, SUSAN C. — **INSTRUCTOR, MATHEMATICS**
B.S. Mathematics, University of Portland, 1965; M.S. Education, Portland State University, 1966. Two years high school mathematics instructor; at Clatsop Community College since 1979.

SAGE, FLORENCE E. — **INSTRUCTOR, SOCIAL SCIENCE/COUNSELOR**
M.Ed. Counseling, Montana State University, 1986; M.A. English, University of New Brunswick, 1967. Seven years journalist and public information experience; two years college, mental health, and displaced homemaker counselor; Licensed Professional Counselor; at Clatsop Community College since 1987.

SELIGMAN, ROSS — **INSTRUCTOR, PSYCHOLOGY**
Advanced B.A. Psychology, Occidental College, 1989; M.A. Clinical Psychology, California State University at Los Angeles, 1991; at Clatsop Community College since 1998.

SIMON, STEPHEN — **INSTRUCTOR, COMPUTER APPLICATIONS**
M.S. Computer Education and Cognitive Systems, University of North Texas; B.S. Information Science, University of North Texas; at Clatsop Community College since 1996.

TYSON, MARIAN — **INSTRUCTOR, COLLEGE PREP/BASIC SKILLS/ESL/GED**
B.A. Spanish, George Fox College, 1973; M.A. TESOL, Portland State University, 1989; at Clatsop Community College since 1998.

VORWERK, MICHAEL — **INSTRUCTOR, MATH**
B.S. Applied Mathematics, Western Carolina University, 1987; M.S. Applied Mathematics, Georgia Institute of Technology, 1989; Ph.D. Zoology/Limnology, Clemson University, 1997; at Clatsop Community College since 1998.

Board of Directors

	Term Expires in May
Jean Danforth	2000
Patricia Garrett	2001
Sara Meyer	2001
Frank Satterwhite	2001
Paul Gillum	2003
Dr. Russel Hunter	2003
Marilyn Lane	2003

Dr. John Wubben, President and Clerk of the District

Administrative & Supervisory Staff

ADAMS, JUDY — **PROGRAM FACILITATOR, JOBS PROGRAM**
B.A. Social Service, University of Portland, 1971. Twenty one years industry experience; at Clatsop Community College since 1989..

ANDERSON, KAREN — **GUIDANCE COORDINATOR EDUCATIONAL TALENT SEARCH**
B.A. Psychology and Experimental Education, Goddard College, Vermont, 1969; M.A. Marriage, Family, Child Counseling, University of La Verne, San Diego, 1978. Twenty years experience in counseling, education, management, and staff development in human service programs, and organizational consulating; at Clatsop Community College since 1994.

BEATTY, LAURIE — **PROGRAMMER/ANALYST**
A.S. Data Processing, Clatsop Community College, 1973. 20 years computer experience; at Clatsop Community College since 1973.

BOHART, B. EDWARD — **DIRECTOR, EDUCATIONAL TALENT SEARCH, UPWARD BOUND**
B.A. Social Sciences, Michigan State University, 1967; M.A. Counseling and Guidance, University of Montana, 1974; two years postsecondary counseling; eight years secondary counseling; seven years administration and part-time teaching in higher education; at Clatsop Community College since 1991.

BORING, SHARON — **FINANCIAL AID SPECIALIST**
Twelve years legal experience, two years financial aid experience; at Clatsop Community College since 1990.

BRICE, BOBBI — **GUIDANCE COORDINATOR, EDUCATIONAL TALENT SEARCH**
B.S. Special Education, University of Wisconsin, 1972. Thirteen years teaching experience, special education K-12; three years experience career counselor/ academic advisor, community college level; at Clatsop Community College since 1994.

BURKE, KAREN — **DIRECTOR, HEALTH OCCUPATIONS**
Diploma, Nursing, Emanuel Hospital School of Nursing, 1967; B.S. Nursing, Oregon Health Sciences University, 1981; M.S. Nursing, University of Portland, 1983. Registered Nurse; fourteen years staff nurse; two years college nursing instructor; at Clatsop Community College since 1983.

CLARRY, EVERETT — **FOOD SERVICE MANAGER**
B.A. English, Portland State University, 1972. A.A. Human Services, Clatsop Community College, 1993; at Clatsop Community College since 1999.

DORCHEUS, GREGORY — **DIRECTOR, FACILITIES MAINTENANCE**
Eighteen years of extensive training and working in the physical plant maintenance field; at Clatsop Community College since 1997.

FOSTER, MICHAEL — **DIRECTOR, COLLEGE FOUNDATION**
B.A. History, Willamette University, 1962; M.A. History, University of Oregon, 1965; Post graduate work Southern Oregon State College, 1976; at Clatsop Community College since 1999.

FRIESEN, ROGER — **DIRECTOR OF ENROLLMENT SERVICES & INSTITUTIONAL RESEARCH**
B.A. Management of Human Resources Colorado Christian University, 1988; M.A. Human Communication, University of Northern Colorado, 1990; at Clatsop Community College since 1999.

GALLINO, LINDA K. — **DEAN, STUDENT SERVICES**
A.S. Data Processing/Accounting, Clatsop Community College, 1978; B.S. Management, Linfield College, 1983; M.B.A. Business Administration, Oregon State University, 1987. Two years coordinator Linfield off-campus program; at Clatsop Community College since 1987.

GOERGES, CAROL — **DIRECTOR, HUMAN RESOURCES**
B.S. Business Administration, Southern Oregon State College, 1987; M.B.A. Business Administration, Southern Oregon State College, 1992; at Clatsop Community College since 1998.

HANSON-ELLER, VAN — **NETWORK SUPPORT SPECIALIST**
A.A. Liberal Arts/Social Sciences; A.A. Computer Science Business Data Processing, Clatsop Community College, 1988. Five years of computer consulting/programming experience; at Clatsop Community College since 1993.

HORSMAN, KELLEY — **DIRECTOR, JOBS PROGRAM**
B.A. Communication Studies, Eastern Washington University, 1987; M.S. Human Resource Development, Eastern Washington University, 1993. Sixteen years in the service delivery and administration of employment programs; at Clatsop Community College since 1994.

IVERSON, SUZANNE — **EXTENDED LEARNING SPECIALIST**
Thirteen years education experience; twenty-five years in business; small business owner; at Clatsop Community College since 1987.

JANIS, ANITA — **DIRECTOR, STUDENT SUPPORT SERVICES (Plus)**
B.A. English/History, Mount Mary College, 1974; M.Edu. Professional Development, University of Wisconsin/LaCrosse, 1981; at Clatsop Community College since 2000.

JAQUES, AL — **DIRECTOR, INTEGRATED MANUFACTURING TECHNOLOGIES**
Over 25 years of professional experience in project management/supervision - product development - training; at Clatsop Community College since 1995.

KELLY, BETSY — **COORDINATOR, COMPUTER SUPPORT**
B.A. Liberal Studies, Linfield, 1988; over seven years experience in computer support; at Clatsop Community College since 1990.

LATTIG, LAURA — **DIRECTOR, DEVELOPMENTAL EDUCATION**
B.A. Philosophy and Education, Portland State University, 1977; B.A. English Literature, Portland State University, 1986; M.A. English Literature, Portland State University, 1988. At Clatsop Community College since 1998

LEE, KRISTIN — **SPECIAL PROGRAM MANAGER (Carl Perkins Grant)**
B.A. Political Science, Pepperdine University, 1994; M.P.A.. Public Administration, Portland State University, 1996; at Clatsop Community College since 1999.

MERRILL, MARY J. — **DIRECTOR, COOPERATIVE EDUCATION**
B.S. Management Technology, Lewis-Clark State College, Lewiston, Idaho, 1987; Outstanding Graduate Award 1987. Four years experience State of Oregon Employment Department; two years Job Training and Partnership Act, Clatsop County; three years experience, North Idaho College Office Occupations instructor; at Clatsop Community College since 1990.

MORFITT, MICHELLE — **REGISTRATION COORDINATOR**
B.S. Liberal Studies, Eastern Oregon University; at Clatsop Community College since 1995.

MORRISSON, PATRICK S. — **GUIDANCE COORDINATOR, EDUCATIONAL TALENT SEARCH**
B.S. Liberal Studies, California State University-Sacramento, 1977; Multiple Subject Teaching Credential, California State University-Sacramento, 1978; Veteran's Counselor, American River College-Placerville. Three years elementary school teaching; six years as itinerant teacher/coordinator of Academic Talented and Gifted Program; independent video producer; mentor, Upward Bound Grant Program, 1993; at Clatsop Community College since 1993.

OLDRIDGE, MARGARET — **DIRECTOR, ACCOUNTING SERVICES**
A.A.S. Accounting, College of the Albemarle, NC; at Clatsop Community College since 1995.

OVERTON, LINDI — **VICE PRESIDENT, COLLEGE SERVICES**
B.A. English, Lindenwood College, 1973; M.S. Accounting, University of Missouri, 1987; Ph.D. Education, St. Louis University, 1997; at Clatsop Community College since 1998.

PANICHELLO, GREG — **DIRECTOR, SMALL BUSINESS DEVELOPMENT CENTER (SBDC)**
B.A. Business, Portland State University, 1975; licensed as a securities agent; at Clatsop Community College since 1999.

PAINO, KATHLEEN — **DEAN, COMMUNITY EDUCATION**
B.S. Humanities Education, Oregon State University, 1974; M.S. Art Education, 1978, M.S. Curriculum and Instruction, 1984, University of Oregon; at Clatsop Community College since 1979.

PHILLIPS, DAVID W. — **VICE PRESIDENT, INSTRUCTIONAL PROGRAMS/STUDENT SERVICES**
B.S. Forest Management, Humboldt State University, 1965; M.F. Forest Management, Oregon State University, 1969; Graduate U.S. Army Command and General Staff College, 1980. U.S. Coast Guard License - Operator Passenger Carrying Vessels (Ocean); three years private, state and federal forest experience; two years college forestry instructor; at Clatsop Community College since 1972.

PIERIE, TERRI — **STUDENT SERVICES SPECIALIST**
Seven years student services and financial aid experience, ten years business experience; at Clatsop Community College since 1989.

RICHARDS, ALAN T. — **DIRECTOR, COMPUTER SERVICES**
B.A. Mathematics, University of Oregon, 1969; M.A. Sociology, University of Washington, 1973. Twenty-one years industry experience; at Clatsop Community College since 1985.

RIVERS, CLAIRE — **DIRECTOR, LEARNING RESOURCE CENTER**
B.A. Multi-cultural literature/writing/editing/gender studies, Evergreen State College, 1990; M.F.A. Creative Writing, Eastern Washington University, 1993; M.A. Library Science, University of Arizona, 1994; at Clatsop Community College since 1999.

SAMUEL, CONNIE — **PROGRAMMER/ ANALYST**
A.A. Business/Liberal Arts, Clatsop Community College, 1978. Seven years secretarial and office management experience, eight years experience as programmer/analyst; at Clatsop Community College since 1978.

SAWYERS, REBECCA J. — **GUIDANCE COORDINATOR, STUDENT SUPPORT SERVICES (Plus)**
B.A. Speech Communication, University of Utah, 1993; M.S. Counseling, Portland State University, 1999; at Clatsop Community College since 1999.

SEELEY, ESTELLE — **GUIDANCE COORDINATOR, STUDENT SUPPORT SERVICES (Plus)**
B.S. Sociology, 1987; Graduate Certificate Women's Studies, 1989; M.S. Counseling Psychology, 1989, University of Oregon. Twenty-two years special education/counseling experience. Certified Mental Health Counselor; National Certified Counselor; Trauma and Critical Incident Response Team Member; at Clatsop Community College since 1993.

ST. JAMES, PAULA — **DIRECTOR, COMMUNICATIONS**
B.S. Business Administration, Portland State University, 1997; at Clatsop Community College since 1999.

WALKER, INTZ — **GUIDANCE COORDINATOR UPWARD BOUND**
B.A. History, North Texas University, 1964, M.S.L.S., University of Southern California, 1967, M.A. Counseling/ Psychology, John F. Kennedy University, 1987. Thirteen years librarian, seven years Alternative Education teaching, four years marriage and family counseling experience; at Clatsop Community College since 1992.

WALSH, KARI — **EXECUTIVE ASSISTANT TO THE PRESIDENT**
Experience in office/secretarial field; at Clatsop Community College since 1999.

WHITE, FRED — **ASSESSMENT CENTER SPECIALIST**
B.A. Sociology, 1966, University of Portland (Oregon); M.S. Human Resource Management, 1975, University of Utah; at CCC since 1997.

WHITMAN, JENNIFER — **DISABILITY SPECIALIST**
B.S. Psychology, College of Charleston, 1994; M.S.W. University of Washington, 1996; at Clatsop Community College since 1998.

WONDER, JOHN — **BOOKSTORE MANAGER**
B.A. Political Science & Economics, University of California at Davis, 1966. Fourteen years experience business management experience; at Clatsop Community College since 1981.

WUBBEN, JOHN W. — **PRESIDENT**
A.A. Liberal Arts, Mesa College, 1959; B.A. Social Sciences, Adams State College, 1961; M.A. Education, Adams State College, 1961; Ed.D. Higher Education Administration, University of Northern Colorado, 1984. Twenty-seven years of higher education administrative experience in Colorado, Alaska, Wyoming, and Oregon; at Clatsop Community College since 1993.

ZEA, ELAINE — **DIRECTOR, LIVES IN TRANSITION**
B.A. Business Management, Linfield College, 1991. Three years experience as coordinator of Adult Education; at Clatsop Community College since 1992.

GENERAL EDUCATION OUTCOMES

Clatsop Community College has adopted the following list of general education outcomes as they apply to our Degrees and Certificates. Upon completing the specified degree program, the successful student should be able to:

1. Demonstrate recognition of the significance of science and mathematics. Applies to: AA-OT
2. Demonstrate awareness of the value of the arts and letters and social sciences. Applies to: AA-OT
3. Demonstrate introductory or intermediate college level knowledge in the sciences and mathematics. Applies to: AA-OT, AAS, AGS
4. Demonstrate introductory or intermediate college level knowledge in the social sciences. Applies to: AA-OT, AAS, AGS
5. Demonstrate introductory or intermediate college level knowledge in arts and letters. Applies to: AA-OT, AAS, AGS
6. Demonstrate the ability to communicate effectively through writing, reading, speaking and listening. Effective communications include the ability to:
   a. Write clear, correct, effective prose.
   b. Argue a point using appropriate supporting evidence.
   c. Analyze a written or spoken argument.
   d. Read and analyze college level prose.
   Applies to: AA-OT, AAS, AGS, Certificates
7. Demonstrate the ability to use current information technology. Applies to: AA-OT, AAS, AGS, Certificates
8. Demonstrate the ability to work as a member of a team. Applies to: AA-OT, AAS, AGS, Certificates

Additionally, the Applied Science Programs have developed more specific expected outcomes upon completion of each degree or certificate.

BUSINESS DEPARTMENT OUTCOMES

DEGREES/CERTIFICATES/PROGRAMS: The Business Department offers five degree and two certificate programs, as follows:

- AAS, Accounting
- AAS, Business Management
- AAS, Computer Programming and Networking
- AAS, Microcomputer Business Applications
- AAS, Office Systems, with options in Office Management, Legal Word Processing, and Medical Word Processing
- Certificate, General Office
- Certificate, Microcomputer Applications

Accounting Outcomes:

1. Students will demonstrate competency with accounting procedures and practices.
2. A majority of program graduates will report satisfaction with the Business Management education received at Clatsop.
3. Eighty percent (80%) of students receiving an Accounting degree will be employed in a related field within six months of completing degree requirements OR be continuing in a four-year degree program.

Business Management Outcomes:

1. Students will demonstrate competence with personal productivity software by satisfactorily completing coursework in specific disciplines and by using those skills in general classes.
2. Students will demonstrate oral and written communications competencies across the disciplines as instructors teach and require those skills in a variety of classes. Students will practice standard forms of communication such as resumes, letters, and reports.
3. Students will practice across the curriculum ethical and effective interpersonal skills in their relations with fellow students and instructors. They will demonstrate those skills in classroom and small group and workplace settings. Work experience supervisors will report satisfaction with students' skills, performance, and judgment during their cooperative work experience.
4. Students will demonstrate familiarity with economic and managerial concepts and quantitative controls in the business environment by satisfactorily completing specific coursework.
5. A majority of the students who begin the program will complete the AAS degree requirements within three years.
6. A majority of program graduates will report satisfaction with the Business Management education received at Clatsop.
7. Eighty percent (80%) of students receiving a Business Management degree will be employed in a related field within six months of completing degree requirements OR be continuing in a four-year degree program..

Computer Programming and Networking Outcomes:

1. At least 50 percent of the students who begin the program will complete the AAS degree requirements within three years.
2. A majority of program graduates will report satisfaction with the Programming and Networking education received at Clatsop Community College.
3. Work experience supervisors will report satisfaction with students' skills, performance, and judgment during their cooperative work experience.
4. Students will demonstrate course content integration through the successful completion and presentation of a professional-level directed project in their final term.
5. Eighty percent (80%)of students receiving a Computer Programming and Networking degree will be employed in a related field within six months of completing degree requirements OR be continuing in a four-year degree program.

Microcomputer Business Applications Outcomes:

1. A majority of the students who begin the program will complete the Certificate requirements within two years and the AAS degree requirements within three years.
2. A majority of program graduates will report satisfaction with the Microcomputer Business Applications education received at Clatsop Community College.

BUSINESS DEPARTMENT OUTCOMES (continued)

3. Students will demonstrate knowledge of various application programs by multitasking and integrating the programs while solving problems.
4. Work experience supervisors will report satisfaction with students' skills, performance, and judgment during their cooperative work experience.
5. Eighty percent (80%) of students receiving a Microcomputer Business Applications certificate or degree will be employed in a related field within six months of completing degree requirements OR be continuing in a four-year degree program.

Office Systems Outcomes:

1. A majority of the students who begin the program will complete the Certificate requirements within two years and the AAS degree requirements within three years.
2. Students will demonstrate growth in skill development, knowledge, and professional workplace behavior as they progress through the Office Systems program.
3. A majority of program graduates will report satisfaction with the Office Systems education received at CCC.
4. Work experience supervisors will report satisfaction with students' skills, performance, and judgment during their cooperative work experience.
5. Eighty percent (80%) of students receiving an Office Systems certificate or degree will be employed in a related field within six months of completing degree requirements OR be continuing in a four-year degree program.

INDUSTRIAL & MANUFACTURING TECHNOLOGIES OUTCOMES

DEGREES/CERTIFICATES/PROGRAMS: The Industrial and Manufacturing Technologies Department offers one degree and four certificate programs, as follows:

- AAS, Integrated Technologies
- Certificate, Automotive Technician
- Certificate, Computer-Aided Design and Drafting
- Certificate, Machinist
- Certificate, American Welding Society Entry Level

Students will comply with all personal and environmental safety practices that relate to industrial and manufacturing industries associated with clothing, eye protection, hand- tools, power equipment and handling, storage and disposal of chemicals in accordance with local, state, and federal safety and environmental regulations.
Students will comply with all industrial and manufacturing shop policies with respect to shop operations, tools and equipment, chemicals, clothing and professional skills in the workplace.
Students will work collaboratively by expressing opinions with tact, listening to others, and shouldering an appropriate share of the workload.
Students will obtain, evaluate and use technical information from a variety of resources.
Students will develop critical thinking (problem solving) and both oral and written communication skills.
Students will develop the ability to work in a professional and ethical manner.
Goals: To provide the most current industrial related education to meet the goals of:

1. Obtaining entry-level job skills for individuals
2. Gaining professional certifications for individuals
3. Specialized industrial training for business and industry
4. Retraining/Skill Upgrading for individuals seeking occupational advancement or placement
5. Non-professional students to gain basic industrial related skills

HEALTH OCCUPATIONS OUTCOMES

DEGREES/CERTIFICATES/PROGRAMS: The Health Occupations Department offers three degree and two certificate programs, as follows:

- AAS, Fire Science
- AAS, Medical Assistant
- AAS, Nursing
- Certificate, EMT
- Certificate, Practical Nursing

Fire Science-Outcomes:

1. At least 80% of students completing the associate degree in fire science will attain certification as a Department of Public Safety Standards and Training (DPSST) Firefighter II.
2. Students will report satisfaction with the quality of fire science education received at Clatsop Community College and their preparation for employment.
3. Seventy-five percent (75%) of students enrolled full-time in the fire science program will complete the associate degree in fire science within three years.
4. Seventy-five percent (75%) of students enrolled part-time in the fire science program will complete the associate degree in fire science within five years.

Medical Assistant-Outcomes:

1. At least 80% of students who begin the Medical Assistant program will complete the associate degree program within 3 years.
2. Students will demonstrate growth in knowledge and skills development, judgement, and health promotion behaviors as they progress through the medical assistant program.
3. A majority (70% or more) of program graduates will become employed as medical assistants within 6 months of graduation.
4. Employers will report satisfaction with graduates' skills, performance, and judgement at approximately 6 to 9 months after graduation and/or employment
5. When eligible, a majority (70% or more) of program graduates will seek and obtain national certification for medical assistants.

Nursing-Outcomes:

1. At least 80% of students accepted into the nursing will complete the associate degree nursing program within three (3) years.
2. Students will demonstrate growth in critical thinking, caring, and health promotion behaviors as they progress through the nursing program.
3. At least 90% of graduates will pass the RN licensing examination on their first attempt; 100% will pass by second attempt.
4. Those graduates who become licensed as registered nurses (RNs) and seek employment will be employed as RNs within six (6) months of licensure.
5. Employers will report satisfaction with graduates' skills, performance, and use of critical thinking at approximately 6-9 months after graduation.
6. A majority of program graduates will report satisfaction with their nursing education.
7. The majority of associate degree graduates will seek further education, either by continuing their education toward a baccalaureate degree or by enrolling in a nursing specialty course such as ACLS, critical care or emergency nursing, etc.

EMT-Outcomes:

1. At least 75% of students completing the EMT-Basic or EMT-Intermediate courses will pass all written and practical components of the required certification examination within two attempts.
2. Students will report satisfaction with the quality of EMT education received at Clatsop Community College and their preparation for practice.
3. Students completing the one-year certificate program will be adequately prepared for admission to an associate degree paramedic program.

Practical Nursing-Outcomes:

1. At least 80% of students accepted into the nursing program will complete the practical nursing program within two (2) years.
2. Students will demonstrate growth in critical thinking, caring, and health promotion behaviors as they progress through the nursing program.
3. Ninety-five percent (95%) of students completing the practical nursing program and applying for licensure will pass the LPN licensing examination on their first attempt 100% will pass by second attempt.
4. Those students who become licensed as practical nurses (LPNs) and who seek employment will be employed as LPNs within six (6) months of licensure.
5. The majority of students completing the practical nursing program will continue their education to the associate degree in nursing (ADN) or registered nurse level.

MARITIME SCIENCES DEPARTMENT OUTCOMES

DEGREES/CERTIFICATES/PROGRAMS: The Maritime Sciences Department offers one degree and one certificate program, as follows:

- AAS, Vessel Operations
- Certificate, Maritime Sciences

- and -

- Maritime Sciences Specialized Training Programs

1. Two-thirds of those students completing 12 credits, or more, of the One-year Certification Program or Degree Program will find employment in the maritime industry.
2. Ninety percent (90%) of all individuals who have successfully completed Marine License Training, and who are approved by the U.S. Coast Guard for license testing, will obtain their U.S. Coast Guard license or document within a six-month period of taking the class.
3. Ten percent (10%) of the students taking Modular Classes at the Maritime Science Department will be nonprofessional mariners.
4. Ten percent (10%) of the classes offered each year by the Maritime Science Department will be new and meet specific training needs of the industry.

SOCIAL SCIENCES OUTCOMES

DEGREES/CERTIFICATES/PROGRAMS: The Social Sciences Department offers one degree and one certificate program, as follows:

- AAS, Criminal Justice
- Certificate, Early Childhood Education

Criminal Justice-Outcomes:

Students will learn:

1. The history and application of Criminal Justice and its relationship to other Social Sciences
2. Written and oral use of language for application to formal and crisis work situations in the Criminal Justice field
3. Concepts and terms to communicate accurately in the Criminal Justice profession and to prepare for further studies
4. Both traditional and change-enhancing attitudes and views for use in the Criminal Justice profession
5. Effective working contact with Criminal Justice professionals

Early Childhood Education-Outcomes:

Students will learn:

1. Basic knowledge of child development.
2. How to access current resources for early childhood education settings.
3. Current childcare practices that are developmentally appropriate
4. Program planning for early childhood education that is developmentally appropriate and makes use of up-to-date resources
5. Skills to plan and carry out appropriate practices and programs in early child hood education settings.

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ACADEMIC CALENDAR 2000 - 2001

	SUMMER 2000	FALL 2000	WINTER 2001	SPRING 2001	SUMMER 2001
EARLY REGISTRATION	May 30	May 30 - August 10	November 27 - December 22	March 5	May 29
REGISTRATION	June 19	September 5	January 2	March 26	June 25
CLASSES BEGIN	June 19	September 25	January 8	April 2	June 25
HOLIDAYS	July 4	November 10, Nov 23 & 24	January 15, February 19	May 28	July 4
FINAL EXAMS	Aug. 7-10	Dec. 11-15	March 20-23	June 11-15	Aug. 13-16
VACATIONS	Aug. 11 - Sept. 24	Dec 16 - Jan 7	March 24 - April 1	June 16-24	August 17- Sept. 23
END OF TERM	August 10	December 15	March 23	June 15	August 16
GRADUATION				June 15	

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