CENTRALIA COLLEGE

2014-15 UPDATE

to the 2013-14 CATALOG

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College Calendar

Centralia College Calendar 2014-15

FALL QUARTER 2014

Labor Day Holiday	September 1	(M)
Faculty Days	September 8-19	
Assessment Day*	September 15	(M)
First Day of Class	September 22	(M)
All Campus Meeting (No Classes)	October 10	(F)
Veterans Day (No Classes)	November 11	(T)
Advising Day (No Classes)*	November 13	(W)
Thanksgiving Holiday (No Classes)	November 27,28	(ThF)
Last Class Day	December 5	(F)
Final Examinations	December 8,9,10	(MTW)
Faculty Days	December 11,12,15,16	(ThFMT)
Winter Holiday	December 25	(Th)
Quarter Break	December 11–January 1	

WINTER QUARTER 2015

New Year's Day Holiday (No Classes)	January 1	(Th)
Faculty Day	January 2	(F)
First Day of Class	January 5	(M)
Martin Luther King Holiday (No Classes)	January 19	(M)
Advising Day (All classes in session)	February 11	(W)
President's Day Holiday (No Classes)	February 16	(M)
Last Class Day	March 16	(M)
Assessment Day (No Classes)*	March 17	(T)
Final Examinations	March 18, 19, 20	(WThF)
Quarter Break	March 21-29	

SPRING QUARTER 2015

First Day of Class	March 30	(M)
Advising Day (No Classes)*	May 14	(Th)
Memorial Day Holiday (No Classes)	May 25	(M)
Last Class Day	June 8	(M)
Assessment Day (No Classes)*	June 9	(T)
Final Examinations	June 10, 11, 12	(WThF)
Commencement	June 12	(F)
Faculty Day	June 15	(M)
Quarter Break	June 13-30	

SUMMER QUARTER 2015

First Day of Class	July 1	(W)
Fourth of July Holiday Observed	July 3	(F)
Last Class Day (6 week session)	August 14	(F)
Last Class Day (8 week session)	August 28	(F)

Centralia College Calendar 2015-16

FALL QUARTER 2015

Labor Day Holiday	September 7	(M)
Faculty Days	September 8-18	
Assessment Day*	September 14	(M)
First Day of Class	September 21	(M)
All Campus Meeting (No Classes)	October 9	(F)
Veterans Day (No Classes)	November 11	(W)
Advising Day (No Classes)*	November 17	(T)
Thanksgiving Holiday (No Classes)	November 26,27	(ThF)
Last Class Day	December 4	(F)
Final Examinations	December 7,8,9	(MTW)
Faculty Days	December 10,11	(ThF)
Winter Holiday	December 25	(Th)
Quarter Break	December 10–January 3	

WINTER QUARTER 2016

New Year's Day Holiday (No Classes)	January 1	(Th)
First Day of Class	January 4	(M)
Martin Luther King Holiday (No Classes)	January 18	(M)
Advising Day (All classes in session)	February 10	(W)
President's Day Holiday (No Classes)	February 15	(M)
Last Class Day	March 14	(M)
Assessment Day (No Classes)*	March 15	(T)
Final Examinations	March 16,17,18	(WThF)
Quarter Break	March 19-27	

SPRING QUARTER 2016

First Day of Class	March 28	(M)
Advising Day (No Classes)*	May 12	(Th)
Memorial Day Holiday (No Classes)	May 30	(M)
Last Class Day	June 6	(M)
Assessment Day (No Classes)*	June 7	(T)
Final Examinations	June 8,9,10	(WThF)
Commencement	June 10	(F)
Quarter Break	June 11-July 4	

SUMMER QUARTER 2016

Fourth of July Holiday	July 4	(M)
First Day of Class	July 5	(T)
Last Class Day (6 week session)	August 12	(F)
Last Class Day (8 week session)	August 26	(F)

Grades

Centralia College uses a numerical grading system. Instructors report passing grades from 4.0 to 1.0 in 0.1 increments. Instructors assign the number 0.0 for failing work and must assign a date of last attendance. Numerical grades are equivalent to letter grades as follows:

4.0-3.9	A	Superior achievement
3.8-3.5	A-	
3.4-3.2	B+	
3.1-2.9	B	High achievement
2.8-2.5	B-	
2.4-2.2	C+	
2.1-1.9	C	Average achievement

Note: 1.9 is below the 2.0 minimum requirement program entrance or completion

1.8-1.5	C-	
1.4-1.2	D+	
1.1-1.0	D	Minimum achievement
0.0	F	Failure to meet minimum course requirements.
	W	Withdrawal. May be awarded only on or before the 35th class day. May only be student-initiated. Requires dated signature of student. Not calculated in the grade point average. The college encourages students to speak with their instructor(s) before withdrawal.
	WP	Passing withdrawal. Indicates student had completed enough work to pass the course (1.0 or above) at the time of withdrawal. May be awarded only after the 35th class day, but before the first day of finals. May only be student initiated. Requires dated signature of the student. Requires dated signature and "WP" grade of the instructor. Not calculated in the grade point average.
	WF	Failing withdrawal. Indicates student was doing failing work (below 1.0) at the timenof withdrawal. May be awarded only after the 35th class day, but before the first day of finals. May only be student initiated. Requires dated signature of the student. Requires dated signature and "WF" grade of the instructor. Not calculated in the grade point average. Receiving institutions may treat this grade as a 0.0.
I		Incomplete; no grade points calculated. The student must have finished a substantial portion of the work, attended past the 35th class day, be passing the course (1.0 or above), and because of circumstances not ordinarily controllable by the student, was not able to finish the course prior to grading. The instructor and student must complete a detailed contract that specifies what work is remaining, and when it is due. The contract must specify the default grade, if the additional work is not accomplished by the time limit. The grade shall revert to the default grade, if no new grade is turned in by the instructor by the time limit. The instructor, student, and the Enrollment Services Office receive copies of the contract. If there is no contract, or an incomplete contract when an "I" has been requested by the instructor, the grade shall be recorded as an *, until a complete contract is on file in the Enrollment Services Office. Incompletes must be completed by the end of the next quarter, except that spring quarter incompletes must be completed by the end of the following fall quarter.
N		Audit. No credit. Not calculated in grade point average.
S		Passing with credit. Not calculated in grade point average. Used only by approved departments. Degrees and certificates may limit the use of S credits.
U		Unsatisfactory progress. Not calculated in grade point average. Used only by approved departments.
Y		In Progress; no grade point calculated. Used in courses, such as correspondence, that do not begin or end with the regular quarter calendar. Not calculated in grade point average. A student has two quarters to complete the class (an extension for a third quarter is available for an additional fee). The instructor will submit a change of grade form to the Enrollment Services Office at the completion of the coursework within the time limit. If no new grade is turned in by the instructor a grade of 0.0 will be issued.

Time Limitation to Change a Grade

Instructor may authorize a grade change within the next quarter of the academic year. Summer quarter is excluded (i.e., spring quarter grade changes must be made by end of fall quarter; summer quarter changes must be made by end of fall quarter).

Course Audit

You may attend a class but not receive credit. To do this, register as an "auditor." Auditors pay regular credit hour and lab fees. An auditor does not take examinations or receive credit for the course. Your transcript will show an "N" for an audited course.

Grade Forgiveness

The Centralia College grade forgiveness policy may allow you to repair your Centralia College grade point average by not counting poor grades you earned. This can be done only under certain circumstances:

A. Only grades below a 2.0 may be forgiven.

B. The grades must be at least two years old.

C. You must demonstrate improvement by earning a cumulative GPA of 2.5 or higher in all courses taken after the most recent course for which you are requesting forgiveness. You must have completed a minimum of 24 credits to demonstrate improvement since that last date.

To apply for grade forgiveness, complete a "Grade Forgiveness Request Form." Obtain this form from the Enrollment Services Office. Submit this form to that office. Enrollment Services staff will review your academic record and determine which grades, if any, may be forgiven. Enrollment Services staff will notify you of the results. You may appeal the decision in writing to the Director of Enrollment Services. The Director of Enrollment Services will notify you by mail of the results of your appeal.

Forgiven grades and credits will remain on your transcript but will not be calculated in your GPA at Centralia College. You cannot use forgiven credits towards any degree, certificate, program, or course requirement at Centralia College. You may not have forgiven grades reinstated later.

ADVISING NOTE: If you transfer to another college, that college may choose not to recognize the forgiveness. This means that staff at another college could recalculate your GPA, counting all your grades for admission and transfer purposes.

Repeating a Course

You may repeat a class, but you will receive credit for taking it once. To have a higher grade in a repeated class count in your GPA, you must request the Enrollment Services Office staff to count only the higher grade in your GPA. Both grades will remain on your permanent record.

ADVISING TIP: If you transfer to another college, that college may choose either grade or the average of your grades.

Degrees/Certificates

Centralia College offers different degrees to meet varied student needs. All associate degrees require a minimum of 90 credits. Students must complete the last 15 credits or 35 of the final 45 credits at Centralia College to be eligible for a degree from Centralia College. It is possible to earn a second degree if you satisfy all the requirements of both degrees.

Bachelor of Applied Science Degrees

Please see page 64 for more information.

General Transfer degrees are accepted by all state colleges and universities in Washington State through formal agreements, including the Direct Transfer Agreement (DTA), between the universities and the community college system. Students who complete a General Transfer degree will, upon acceptance to a Washington State public or signatory private college or university, generally be granted 90 transfer credit. Students may still need to complete more than 90 quarterly credits to graduate in their major. Centralia College General Transfer degrees include:

Associate in Arts and derivative degrees

Associate in Science and derivative degrees

Limited Transfer degrees may be accepted by select baccalaureate institutions, but there is no state-wide agreement guaranteeing 90 credits will be accepted in transfer. Depending upon the institution, students may have their credits evaluated on a course by course basis. Centralia College Limited Transfer degrees include:

Associate in Applied Science – Transfer

Workforce Education degrees are designed to provide detailed skills related to a profession and are not primarily intended for transfer.

Some institutions do accept these degrees under an "upside down" model that allows the student to do content specific work in the first two years and round out his or her education by completing general university requirements (GURs) in the second two years of the baccalaureate. Centralia College Workforce Education degrees include:

Associate in Applied Science

Associate in Technical Arts

The General Studies degree allows the student more latitude in designing a degree based upon personal interests, but does not necessarily meet the requirements for direct transfer. As with all degrees not designated as General Transfer, there is no guarantee all 90 credits required for the degree will transfer.

Certificates of Proficiency are Workforce Education programs that require at least 45 credits and which provide job specific skills.

Certificates of Completion are similar to Certificates of Proficiency except requiring less than 45 credits.

High School Diplomas and GEDs can be obtained by meeting all requirements for the Centralia College High School Diploma or by passing the GED tests, respectively.

Educational Outcomes

Student learning is central to the college's mission. All degrees offered by Centralia College are designed to provide experiences that lead to the attainment of general education outcomes as embodied in the following Learning Themes:

Reasoning: The ability to extract information from data, develop ideas and solutions, establish logical progression in thinking, and problem solve using such procedures as literary analysis or the scientific method.

Written, Oral and Visual Communication: The ability to make oneself understood in public, interpersonal, professional, artistic, and technical arenas.

Exploration – Self and Others: An awareness of the values, beliefs, customs, and contributions from one's own and other traditions, ethnicities, classes and genders.

Resourcefulness: The ability to adapt to change, such as technological innovations or environmental conditions.

Responsibility: The ability to be accountable to self, society, and the natural world.

To support the attainment of these general educational outcomes, instruction in major areas of inquiry is required for all degrees. The transfer degrees include courses in the Distribution Areas of communication, quantitative skills, humanities, social sciences, natural sciences, diversity, and health and fitness. Workforce Education degrees and certificates of proficiency achieve this end through the inclusion of related instruction in communication, computation, human relations, and health and fitness.

Program Outcomes

Distribution Area Outcomes, found at the end of this section, define the program outcomes for degrees based on the Direct Transfer Agreement (DTA) and Associate in Science. In addition to the general outcomes, individual transfer programs have content designed to prepare students for success in that field.

Each Workforce Education degree or certificate includes courses that enable students to achieve profession-specific learning outcomes. These program outcomes are listed on the program pages on the college Web site.

General Transfer Degrees

Associate in Arts Degree

In addition to the general requirements listed below, derivative programs may have additional requirements as listed in the programs of study in the next section. The Associate in Arts degree represents the broad knowledge generally acquired in the first two years of a four-year program leading to a Bachelor of Arts degree. When you have earned the AA, you may transfer to a baccalaureate institution within the state of Washington with assurance that you have satisfied all or most of the basic requirements (General University Requirements/ Distribution Requirements). This means, generally, that AA transfer students can begin work on their specialized, major-area course work as soon as they transfer.

Degree requirements:

To qualify for an Associate in Arts degree, you must complete a minimum of 90 credits in courses numbered 100 or above, with a cumulative grade point average (GPA) of at least 2.0 ("C" average).

The 90 credits must include the following:

Core Skills **15 credits**

a. Communication Skills 10 credits
   ENGL& 101
   ENGL& 102
   ENGL& 235

b. Quantitative Skills 5 credits

Humanities **15 credits**

Select from at least three of the disciplines listed on the distribution list. No more than 5 credits in foreign language at the 100 level may apply.

Social Sciences **15 credits**

Select from at least three disciplines listed on the distribution list.

Natural Sciences **15 credits**

Select from at least three disciplines on the distribution list.

Include at least one laboratory course.

Health and Fitness **3 credits**

Selected from either discipline listed on the distribution list.

Diversity **3 credits**

A 3 to 5 credit course listed as a Diversity (D) course. Diversity courses may carry another distribution designation that can be counted toward both distribution requirements.

Academic Electives **27 credits**

A minimum of 27 elective credits are required. Elective courses may be selected to satisfy major emphasis requirements (see program summaries section), or to satisfy department requirements of the college/ university you have chosen for transfer. If desired, you may include up to a maximum

of 15 credits from courses numbered 100 and above that are not included on the ICRC approved electives list. A maximum of three (3) PE credits may be included in the AA degree.

Associate in Science Degree

The Associate in Science degree represents attainments generally required by four-year colleges and universities for pre-professional programs in scientific disciplines. The need for early concentration on coursework in the chosen scientific major diminishes the general educational experience demonstrated by the Associate in Arts degree.

By working with an advisor in the completion of one of the two Associate in Science tracks, you can transfer to one of the Washington state baccalaureate institutions with reasonable assurance that you have completed all or most of the prerequisite courses for the targeted science major.

Degree requirements:

1. A minimum of 90 credits is required for the degree.
2. A minimum grade point average (GPA) of 2.0 ("C" average) is required for the degree.
3. Students completing this Associate in Science will receive the same priority consideration for admission to most Washington state baccalaureate institutions as they would for completing the direct transfer Associate in Arts degree and will be given junior status by the receiving institution.
4. Additional general education requirements, cultural diversity requirements, and foreign language requirements, as required by the transfer institution, must be met prior to the completion of a baccalaureate degree.
5. Students are responsible for checking specific major requirements of baccalaureate institutions in the year prior to transferring.

Courses for programs of study fall into two tracks that are listed in the program section of this catalog. These programs are designed to match specific major requirements and also to meet the general distribution requirements listed below:

Core Skills **15 credits**

a. Communication Skills 5 credits
ENGL& 101
b. Quantitative Skills 10 credits
MATH& 151
MATH& 152

Humanities & Social Sciences 15 credits

Select from at least three disciplines listed on the distribution list with at least 5 credits from humanities (H) and 5 credits from social sciences (SS). The remaining 5 credits can be from either category.

Health and Fitness **3 credits**

Select three (3) credits from the list of courses approved for health and fitness (HF) distribution.

Diversity **3-5 credits**

A 3 to 5 credit course listed as a Diversity (D) course. Diversity courses may carry another distribution designation that can be counted toward both distribution requirements.

Track I - Biological Sciences, Environmental/Resource Sciences, Chemistry, Geology, Earth Science

Core Requirements: **46-54 credits**

a. CHEM& 161, 162, 163
b. MATH& 146 or MATH& 163
c. BIOL& 221, 222, 223 or PHYS& 221, 222, 223
d. Additional requirements: 10 – 18 science credits from courses normally taken by science majors, preferably in a 2 or 3 quarter sequence (biology majors should select physics or organic chemistry).

Remaining Credits: 3–11 credits

Track II - Atmospheric Science, Computer Science, Engineering, Physics

Core Requirements: **30 credits**

a. PHYS& 221, 222, 223
b. CHEM& 161
c. Computer programming (4 credits minimum)
d. MATH& 163 or MATH& 146

Remaining Credits: 27 credits

Electives up to a maximum of 15 credits from courses numbered 100 or above that are not included on the ICRC approved electives list should be planned with the help of an advisor, based on the requirements of the specific discipline at the baccalaureate institution you wish to attend and using the programs listed later in this catalog.

Associate in Liberal Arts Degree

The Associate in Liberal Arts degree provides a broad background of knowledge rather than a course of study narrowly focused on preparation for a specific field of employment or profession. This degree develops reasoning, judgment, and expression abilities that are desirable no matter what you do in life. When you have earned the ALA degree, you may transfer to a baccalaureate institution within the state of Washington with assurance that you have satisfied all or most of the basic requirements (General University Requirements). This means, generally, that the ALA transfer student can begin work on their specialized, major course work as soon as they transfer.

Degree requirements:

To qualify for this degree you must complete a minimum of 90 credits in courses numbered 100 or above, with a cumulative grade point average (GPA) of at least 3.0 ("B" average).

The 90 credits must include the following:

Core Skills **15 credits**

a. Communication Skills 10 credits
ENGL& 101
ENGL& 102
ENGL& 235
b. Quantitative Skills 5 credits

Any (M) designated math course numbered 131 or higher.

Foreign Languages **15 credits**

Fifteen (15) credits in one foreign language, five (5) of which count toward Humanities Distribution.

Health and Fitness **3 credits**

Three (3) credits from the list of courses approved for Health and Fitness distribution.

Humanities **20 credits**

A minimum of twenty (20) credits in humanities, including one course from at least three of these subjects: Art, Drama, Literature, Music, Philosophy. No more than five (5) credits from performance/skill courses. Five (5) credits of Foreign Language count toward Humanities. Select courses from the distribution list.

Natural Science **20 credits**

At least twenty (20) credits in Math/Science, including at least ten (10) credits in laboratory science or one course each from at least three of the following subjects: Astronomy, Biology, Botany, Chemistry, Forensic Science, Geography, Geology, Mathematics, Oceanography, Philosophy, Physics, Zoology.

Social Sciences **20 credits**

At least twenty (20) credits in social sciences, including one course from at least three of these subjects: Anthropology, Sociology, Psychology, History, Economics, Political Science.

Diversity **3-5 credits**

A 3 to 5 credit course listed as a Diversity (D) course. Diversity courses may carry another distribution designation that can be counted toward both distribution requirements.

Major Related Programs

In addition to the transfer degrees listed above, the college offers degrees derived from both the Associate in Arts degree (AA) and the Associate in Science degree (AS). These degrees have been developed through collaboration between the State Board for Community and Technical Colleges (SBCTC) and the public colleges and universities in Washington state.

These degrees may have specific requirements beyond those required by the AA or AS as listed in the program plan.

Limited Transfer Degrees

Associate in Applied Science-Transfer

The Associate in Applied Science-Transfer degree is for transfer to schools offering baccalaureates in applied science. This degree combines the technical focus of the Associate in Technical Arts with a minimum of 20 credits of transferable academic courses.

This degree is not generally transferable. If transfer is your intent you should work with your advisor to make sure this is the degree for you.

Degree Requirements:

To qualify for the degree you must complete a minimum of 90 credits in subjects numbered 100 or above. You must also achieve a grade point average (GPA) of at least a 2.0 ("C" average).

Your courses must be selected in accordance with a college programs of study. Check with an advisor for a current list of programs. These programs are designed to incorporate specific and major requirements as well as meet general education and related instruction requirements.

The program must include:

a. English Communications ENGL& 101	5 credits
b. Quantitative Reasoning (see distribution list)	5 credits
c. Humanities & Social Science (see distribution list)	10 credits
d. Health & Fitness (see distribution list)	3 credits

Workforce Degrees

Associate in Technical Arts Degree & Associate in Applied Science Degree

If your plan is to prepare to compete for employment in an occupational field, you may choose to earn an Associate in Technical Arts or an Associate in Applied Science degree. Since this degree concentrates on a particular trade or skill, it does not have broad general education requirements.

Whether a technical course will transfer or count as a degree requirement for a baccalaureate degree is at the discretion of the transfer college or university.

Degree requirements:

To qualify for the Associate in Technical Arts or Associate in Applied Science degree, you must complete a minimum of 90 credits in subjects numbered 100 or above. You must also achieve a grade point average (GPA) of at least a 2.0 ("C" average).

Your courses must be selected in accordance with one of the programs of study outlined in the program section of this catalog. The programs of study are designed to incorporate specific major requirements and also to meet the general distribution requirements listed below.

The 90 credits must include the following related instruction minimum requirements:

a. Written Communication Skills	3 credits
b. Health and Fitness from list of approved health or PE courses in Health and Fitness distribution (HF)	3 credits
c. Computation Skills	5 credits
d. Human Relations	5 credits

Occupational Major

Programs vary in total credits necessary to obtain a degree, although the minimum requirement is 90 credits. Core program credits are designed to meet occupational skills standards.

Associate in General Studies Degree

The Associate in General Studies degree is designed for those students who do not plan to transfer to a four-year college or pursue an Associate in Technical Arts degree in a specific occupational area. It is a terminal degree with emphasis on improvement of basic skills, general knowledge in the areas of humanities, natural science and social science, and some specialty of your choice. This degree is designed to prepare the student to lead a full and useful life.

To qualify for the Associate in General Studies degree you must complete 90 credits in courses numbered 100 or above, with a cumulative grade point average of at least a 2.0 ("C" average).

The 90 credits must include the following:

- Forty-three (43) credits taken in communication skills, humanities, math/natural sciences, social sciences, and health and fitness consisting of the following:
  a. A minimum of ten (10) credits in communication skills ENGL& 101, ENGL& 102, or ENGL& 235.
  b. A minimum of ten (10) credits in each of the three general areas of knowledge (humanities, math/natural sciences, and social sciences). See the AA distribution list.
  c. Three (3) credits from the list of courses approved for Health and Fitness distribution.
- An additional 47 credits which you choose to satisfy your own educational plans or interests. Your choices can be occupational, personal enjoyment, physical education, or academic courses.

Certificates and Programs

Certificates of Completion

You may be awarded a certificate of completion by successfully completing a set group of courses from a professional/technical program. These certificates require significantly fewer credits than a certificate of proficiency. The courses tend to concentrate on one set of skills.

The U.S. Education Department's Gainful Employment regulations require disclosure of certain program information to students and prospective students. For additional information and updates, please visit http://www.centralia.edu/academics/GE-disclosure.html.

Certificates of Proficiency

You may earn a Certificate of Proficiency by completing a professional/technical program which requires a minimum of 45 credits, includes related instruction, and a grade point average (GPA) of at least 2.0 ("C"). Certificates of Proficiency are awarded in these programs:

Accounting Clerk, Automation Maintenance Technician, Child Care Specialist, Crime Scene Investigation, Practical Nursing, Medical Office Assistant, Office Assistant, Welding

High School Completion Program

The High School Completion program is offered to students 21 and older, or enrolled in the TEEN Program. For more information contact the TEEN Program Office at 360-736-9391, ext. 341.

GED High School Equivalency

As an official GED (General Equivalent Development) testing center, Centralia College administers GED tests under contract with the GED Testing Service of the American Council of Education. The GED consists of five separate tests covering the areas of writing, social studies, sciences, literature and mathematics. The GED measures the academic ability of adults who have not completed a formal high school education.

Students must be at least 16 years old to participate in the program. Students between 16 and 19 years of age must have on file at Centralia College a "Request for Approval to Test for Certificate on Educational Competence" form, (SBCTC/GED 1000) signed by a local school official, or if home schooled, a notarized release form (SBCTC/GED 2000) signed by the parent before beginning the program. These forms may be obtained from the high school counselor from the last high school the student attended, or from the district in which the student resides. Students 19 and over do not need these forms.

The program maintains an open enrollment policy, and all classes and pre-testing for readiness and/or class placement are available at the Phoenix Center in the Library Building on the Centralia College campus, Centralia College East, and selected locations. Students who are testing for their GED at Centralia College must:

1. Make an appointment for testing.
2. Provide picture identification and a Social Security number.
3. Provide "Request for Approval to Test for Certificate" form SBCTC/GED 1000 obtained from and completed by a high school counselor or administrator if under 19.

For additional information regarding age limits, fees, testing times and preparation, contact the Phoenix Center (360) 736-9391, ext. 216 or Centralia College East ext. 380.

Adult Basic Education

The Adult Basic Education program is for students who have not completed high school or whose skill level in reading, writing, or mathematics is 8th grade level or below. Preparation for GED testing, as well as basic computer applications, are included.

Students under 19 years of age must provide a high school release form from the last high school attended or from the district in which the student currently resides. Students must be at least 16 years old.

Distribution Area Outcomes & Courses

In this catalog, courses that satisfy distribution requirements are identified by a capital letter at the end of the course description. Use the following guide to identify the distribution categories:

C = Communication
H = Humanities
M = Mathematics/Quantitative Skills
SS = Social Science
S = Science
HF = Health and Fitness
D = Diversity

Distribution Requirements (also known as General University Requirements or GURs) are part of each transfer degree. Courses that fulfill Distribution Requirements meet specific criteria listed below:

Core Requirements

Communication Skills (C)

1. The course carries three or more credits.
2. The course objectives address three or more of the following outcomes. Upon successful completion of designated courses, students will have demonstrated the ability to:
   - Recognize structures and modes of development that are used to inform, persuade, or entertain (Themes: Communication & Responsibility).
   - Apply analytical thinking to reading, writing, revising, and discussion activities (Themes: Reasoning, Communication and Responsibility).
   - Prepare clearly organized and well-supported written works, including specific documentation formats, which meet the conventions of assignments (Themes: Communication & Reasoning).
   - Collaborate with others respectfully and with attention to guidelines given for various projects (Themes: Responsibility & Exploration of Self and Others).
   - Discuss and respond to writings drawn from diverse traditions, ethnicities, cultures, classes, and genders (Themes: Exploration of Self and Others).
   - Access and utilize appropriate technologies and library resources in the preparation of written and oral projects (Themes: Resourcefulness, Responsibility, and Communication).

ENGL

&101	English Composition I	5
&102	Composition II	5
&235	Technical Writing	5

Quantitative Skills (M)

1. The prerequisite for the course is Algebra II (MATH 099 or equivalent).
2. The course objectives address the following outcomes. Upon successful completion of designated courses, students will have demonstrated the ability to:
   - Recognize and then apply mathematical concepts to personal, professional and scientific situations. (Theme: Reasoning)
   - Communicate ideas through mathematics graphically, symbolically, numerically and verbally with clarity and accuracy. (Theme: Written, Oral, and Visual Communication)
   - Utilize technology as a tool in the application of mathematical concepts. (Theme: Resourcefulness)

MATH

&107	Math in Society	5
115	College Algebra	5
118	Linear Algebra	5
&131	Math for Elementary Education I	5
&132	Math for Elementary Education II	5
135	Precalculus Refresher	5
&141	Precalculus I	5
&142	Precalculus II	5
&146	Introduction to Stats	5
150	Survey of Calculus	5
&151	Calculus I	5
&152	Calculus II	5
228	Discrete Mathematics	5

Other Requirements

Humanities (H)

1. The course carries three or more credits.
2. The course objectives address three or more of the following outcomes. Upon successful completion of designated courses, students will have demonstrated the ability to:
   - Demonstrate an appreciation of the manner in which language, philosophy, and/or the arts influence and interact with the cultures in which they exist (Themes: Reasoning & Exploration).
   - Assess the significance and value of the record of human creativity (Themes: Reasoning & Communication).
   - Articulate the roles, purposes, and functions of the Humanities using discipline specific vocabulary (Themes: Communication & Reasoning).
   - Recognize and apply the discipline-specific structures used to communicate critically and/or creatively (Themes: Reasoning & Communication).
   - Explore the humanities as a vehicle for increased understanding of social issues that face individuals and their communities and cultures (Themes: Exploration & Responsibility).
   - Access and utilize appropriate technologies to research, experience, and respond to the Humanities (Themes: Resourcefulness, Reasoning & Communication).

ART

&100	Art Appreciation	5
102*	Drawing I	5
160*	Intro to Fibers	5
170*	Black & White Photography	5
174*	Digital Photography	4
200	Art History : Ancient	5
201	Art History: 15th-17th C	5
202	Art History: 18th-20th C	5
203	History of American Art	5

CHIN

&121**	Chinese I	5
&122**	Chinese II	5
&123**	Chinese III	5

DRMA

&101	Intro to Theater	5
105	Theater History	3
107*	Beginning Acting	5
108*	Intermediate Acting	5
115*	Dramatic Performance	3
120	Introduction to Play writing	5
201*	Advanced Acting	5

ENGL

&111	Introduction to Literature	5
&113	Introduction to Poetry	5
&114	Intro to Dramatic Literature	5
160	Women's Literature	5
180	Short Fiction	5
204	Introduction to Shakespeare	5
208	Intro to Creative Writing	5
209	Hero's Quest: Survey of English Literature, 7th Century-1616	5
210	Crisis of Faith: Survey of English Literature, 1616-1798	5
211	Romance and Revolution: Survey of English Literature, 1798-Present	5
220	American Drama	3
233	Literature for Children & Adolescents	5
&244	American Literature	5
249	The Great American Novel	5
260	Non-Western World Literature	5

FRCH

&121**	French I	5
&122**	French II	5
&123**	French III	5

HUM

110	Ethics and Cultural Values	5
&116	Intro to Humanities I	5
&117	Intro to Humanities II	5
&118	Intro to Humanities III	5
270	Survey of Films Studies	5

JOUR		
160	Intro to Mass Media	5
170	Racism, Sexism, & the Media	3
MUSC		
105	Music Appreciation	5
&121	Ear Training I	2
130	History of Western Music	5
&131	Music Theory I	3
139	Music of the World	5
140	History of American Music	5
250*	Musical Theatre Production	5
PHIL		
&101	Introduction to Philosophy	5
103	Introduction to Ethics	5
SPAN		
&121**	Spanish I	5
&122**	Spanish II	5
&123**	Spanish III	5
&221	Spanish IV	5
&222	Spanish V	5
&223	Spanish VI	5
SPEE		
101	Fund of Public Speaking	3
110	Principles of Speech Communications	5
220	Theory/Practice of Public Speaking	5
250	Intercultural Communication	5

*No more than five credits allowed for distribution in performance/skills courses.

**No more than five credits in a foreign language at the 100 level allowed for distribution.

Social Science (SS)

1. The course carries three or more credits.
2. The course objectives address all of the following outcomes. Upon successful completion of designated courses, students will have demonstrated the ability to:
   - Describe social, political, economic, linguistic, cultural, historical, and religious factors that explain human behavior and mental processes at individual and group levels (Theme: Communications & Exploration).
   - Identify and apply terminology, concepts, theories, data, and principles used by the various social science disciplines (Theme: Reasoning & Exploration).
   - Develop an informed sense of self that demonstrates tolerance and respect for diverse perspectives (Themes: Exploration, Resourcefulness & Responsibility).
   - Demonstrate critical thinking skills through formulating questions, analyzing data, and distinguishing between objective fact and subjective interpretation (Theme: Reasoning).

ANTH		
&100	Survey of Anthropology	5
&206	Cultural Anthropology	5
&210	Indians of North America	5
225	Cultural & Ethnic Pluralism	5
235	Myth, Ritual, and Magic	5
ECON		
&201	Microeconomics	5
&202	Macroeconomics	5
GEOG		
&200	Human Geography	5
HIST		
&116	Western Civilization I	5
&117	Western Civilization II	5
&118	Western Civilization III	5
&146	U.S. History I	5
&147	U.S. History II	5
&148	U.S. History III	5
&214	Pacific NW History	5
POLS		
&101	Intro to Political Science	5
&202	American Government	5
&204	Comparative Government	5
PSYC		
&100	General Psychology	5
&200	Lifespan Psychology	5
SOC		
&101	Intro to Sociology	5
125	Sociology of the Family	5
&201	Social Problems	5
225	Cultural & Ethnic Pluralism	5

Natural Science (S)

1. The course is broad in scope, covering major concepts.
2. The course objectives address all of the following outcomes. Upon successful completion of designated courses, students will have demonstrated the ability to:
   - Communicate key scientific concepts in oral, written, and/or visual format using the language of science. (Theme: Communication)
   - Apply the scientific method to solve problems, conduct experiments, evaluate data, and test hypotheses. (Themes: Reasoning, Resourcefulness & Communication)
   - Critically evaluate scientific information and its sources . (Themes: Exploration, Responsibility & Reasoning)

ASTR		
125	The Solar System	3
126	Stars & Galaxies	3
127	The Solar System & Universe	5
128	Observational Astronomy w/lab	2
BIOL		
&100	Survey of Biology w/lab	5
&170	Human Biology	5
175	Microbes and Society	5
&221	Majors Ecology/Evolution w/lab	5
&222	Majors Cell/Molecular w/lab	5
&223	Majors Organismal Phys w/lab	5
&241	Human A & P 1 w/lab	5
&242	Human A & P 2 w/lab	5
243	Adv Topics Human A & P w/lab	5
250	Intro to Marine Biology w/lab	5
&260	Microbiology w/lab	5
BOTA		
110	Survey of Botany (lab)	5
113	Plant Identification w/lab	5
150	Dendrology-Trees in Our Env w/lab	5
CHEM		
&121	Intro to Chemistry w/lab	5
&131	Intro to Organic/Biochemistry w/lab	5
&161	General Chemistry w/lab I	6
&162	General Chemistry w/lab II	6
&163	General Chemistry w/lab III	6
&261	Organic Chemistry w/lab I	6
ENVS		
&100	Survey of Env Science	5
100L	Survey of Environmental Science Lab	1
&101	Intro to Env Science	5
120	Watersheds: Connecting Mtns to the Sea	5
170	Intro to Natural Resources	3
GEOG		
201	Physical Geography w/lab	5
GEOL		
100	Geology for Engineers and Environmental Science w/lab	3
&101	Intro to Physical Geology w/lab	5
102	Earth Evolution and Global Change w/lab	5
108	Natural Hazards & Catastrophe	5
180	Cascade & Plateau Geology	3
&208	Geology of the Pacific NW w/lab	5
NUTR		
&101	Nutrition	5
203	Issues in Nutrition	5
OCEA		
&101	Intro to Oceanography w/lab	5
PHYS		
&110	Phys: Non-Science Majors w/lab	5
&114	General Physics I w/lab	5
&115	General Physics II w/lab	5
&116	General Physics III w/lab	5
&221	Engineering Physics I w/lab	5
&222	Engineering Physics II w/lab	5
&223	Engineering Physics III w/lab	5
SCIE		
104	Intro to Physical Science	5
115	Weather and Climate w/lab	5

Health and Fitness (HF)

The course provides the student with knowledge and skills that enable them to achieve and maintain optimal health over a lifetime.

HLTH		
120	Women's Health Issues	3
130	Health and Wellness	3
135	Eating & Weight Control	2
140	Exercise and Nutrition	3
145	Safety and Fitness	3

P E (No more than 3 credits may be taken as academic electives)

107	Cycling Basics	2
110	Physical Fitness	1
120	Lifestyle Management & Exercise	2
123	Weight Training	1
125	Free Weights	1
140	Boot Camp Basics	1
142	Cardio Combo	1
150	Yoga	1
151	Aerobic Fitness	1
152	Pilates	1
153	Tai Chi Basics	1
158	Beginning Tae Kwon Do	2
163	Step Aerobics	1
168	Lifetime Fitness	2
169	Cardio Kick boxing	1
210	Advanced Physical Fitness	1
223	Advanced Weight Training	1
229	Physical Fitness Concepts	3
251	Advanced Aerobic Fitness	1
263	Advanced Step Aerobics	1
269	Advanced Cardio Kick boxing	1

Diversity (D)

Courses designated with a "(D)" focus on experiences of people traditionally under-represented in American history. At least one D-course is required for an Associate Degree.

1. The course carries three to five credits.
2. The purpose of a diversity requirement is to prepare students to critically understand, appreciate, and respect culturally diverse thought and behavior.
3. Courses that address cultural diversity provide a focus on the historical and/or contemporary experiences and contributions of people from diverse backgrounds.
4. A course must have as its central focus or theme (not as a secondary interest) a topic pertaining to non-western culture or to excluded groups within western culture and engage students in critical inquiry about issues related to the complex interactions of cultural differences and commonalities.
5. Diversity courses may also meet other Distribution Requirements.

ANTH

&100	Survey of Anthropology	5
&206	Cultural Anthropology	5
&210	Indians of North America	5
225	Cultural & Ethnic Pluralism	5
235	Myth, Ritual, and Magic	5

ART

200	Art History : Ancient	5
201	Art History: 15th-17th C	5
202	Art History: 18th-20th C	5

CHIN

&121	Chinese I	5

ENGL

255	Women's Literature	5
260	Non-Western World Literature	5

GEOG

&200	Human Geography	5

HLTH

120	Women's Health Issues	3

HUM

110	Ethics and Cultural Values	5

JOUR

170	Racism, Sexism & Media	3

MUSC

139	Music of the World	5
140	History of American Popular Music	5
264	Music History I	5

POLS

&204	Comparative Government	5

SOC

225	Cultural & Ethnic Pluralism	5

SPEE

250	Intercultural Communication	5

InterCollege Relations Commission (ICRC) Approved Academic Electives

Accounting	201, 202, 203
Anthropology	all courses numbered 100 and above
American Sign Language	121, 122, 123
Art	100, 102, 111, 130, 160, 170, 174, 200, 201, 202, 203, 210, 211
Astronomy	125, 126, 127, 128
Biology	all courses numbered 100 and above
Botany	all courses numbered 100 and above
Business Administration	101, 201
Chemistry	all courses numbered 100 and above
Chinese	all courses numbered 100 and above
Computer Science Technology	100, 215, 224
Criminal Justice	101, 104, 105, 106, 110, 240
Drama	all courses numbered 101 and above
Early Childhood Education	105
Economics	201, 202
Education	115, 201
English	all courses numbered 101 and above
Environmental Science	all courses numbered 100 and above
French	all courses numbered 100 and above
General Engineering	all courses numbered 111 and above
Geography	all courses numbered 100 and above
Geology	all courses numbered 100 and above
Health	120, 130, 140, 145
History	all courses numbered 100 and above
Humanities	all courses numbered 100 and above
Journalism	160, 170, 180
Mathematics	all courses numbered 107 and above except 110 and 116
Media Studies	125, 220, 225, 230, 260
Music	all courses numbered 100 and above
Nutrition	101, 202, 203
Oceanography	101
Philosophy	all courses numbered 100 and above
Physical Education	all courses numbered 100 and above (3 credits maximum on P E activity courses)
Physics	all courses numbered 100 and above
Political Science	all courses numbered 100 and above
Psychology	all courses numbered 100 and above
Science	103, 104, 115
Sociology	all courses numbered 100 and above
Spanish	all courses numbered 100 and above
Speech	all courses numbered 100 and above

Programs of Study

These Educational Plans are intended as a guide for students who wish to emphasize a specific area of study. It is not a guarantee that the courses listed in the plan will be available in the sequence suggested. In some instances, due to low enrollment, some courses may not be offered at all.

Students should consult with their advisor for recommended electives. It is strongly recommended that students intending to transfer to a four-year college or university consult with the intended transfer institution for any prerequisites or additional requirements.

Accounting

Emphasis: ***Accounting/Finance***
Degree: ***Associate in Technical Arts***

PURPOSE: The ATA program in Accounting provides students with necessary skills to compete for entry-level accounting positions in private industry, state, and local government, and public accounting firms.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Perform bookkeeping tasks in the service of the business public.
- Assist in the production of financial reporting in accordance with generally accepted accounting principles (GAAP).
- Assist in the conduct of audits in accordance with generally accepted audit standards (GAAS).
- Demonstrate familiarity with the application of computer accounting information systems software (AIS).
- Assist in the determination and disposition of tax liability as it applies to individuals and business entities.
- Prepare industry standard written and oral communications to include the use of Microsoft Word and Excel.
- Successfully complete qualification examinations for either Certified Professional Bookkeeper (CPB)

Suggested Order of Classes

Fall Quarter, First Year			Credits
ACCT&	201	Principles of Accounting I	5
BTEC	214	Excel I	5
HR	110	Human Relations	5
			15

Winter Quarter, First Year			Credits
ACCT&	202	Principles of Accounting II	5
BTEC	210	Word I	5
BUS	121	Business Math	5
			15

Spring Quarter, First Year			Credits
ACCT&	203	Principles of Accounting III	5
BTEC	221	Business Communications	5
ECON&	202	Macroeconomics (SS) OR	
ECON&	201	Microeconomics (SS)	5
Health Distribution-Choose one of the following:			
HLTH	130	Health and Wellness	
HLTH	140	Exercise and Nutrition	
HLTH	145	Safety and Fitness	3
			18

Fall Quarter, Second Year			Credits
ACCT	260	Individual Income Tax	5
ACCT	220	Accounting Info Systems	5
BUS	215	Principles of Finance	5
			15

Winter Quarter, Second Year			Credits
ACCT	240	Business Entity Tax	5
ACCT	270	Payroll Accounting	5
BUS&	201	Business Law	5
			15

Spring Quarter, Second Year			Credits
ACCT	210	Intro to Audit	5
ACCT	285	Bookkeeper Cert. Course	5
BUS	275	Principles of Mgmt	5
			15

Emphasis: ***Accounting Clerk***
Degree: ***Certificate of Proficiency***

PURPOSE: The Accounting Clerk program prepares students for an entry level accounting position. Some advancement is possible with this background, but students may wish to acquire additional training in accounting to allow broader advancement opportunities. Prerequisite: demonstrate proficiency in math, reading, and English.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Perform basic bookkeeping and accounting tasks both manually and on the computer.
- Demonstrate the relationships among the various business functions such as accounting, finance, marketing, purchasing, operations, and human resources.
- Demonstrate computer proficiency on the computer keyboard and ten-key calculator as well as Quick Books Pro.
- Prepare written and oral business communications.
- Demonstrate familiarity with business law concepts such as contract law and the Uniform Commercial Code.

Suggested Order of Classes

Fall Quarter			Credits
ACCT&	201	Principles of Accounting I	5
BUS&	201	Business Law	5
BUS	121	Business Math	5
			15

Winter Quarter			Credits
ACCT&	202	Principles of Accounting II	5
BTEC	210	Word I	5
BTEC	214	Excel I	5
BTEC	221	Business Communications	5
			20

Spring Quarter			Credits
ACCT	220	Accounting Information Systems	5
ACCT&	203	Principles of Accounting III	5
ACCT	270	Payroll Accounting	3
H R	110	Human Relations-Workplace	5
			18

Acting

See Dramatic Arts

Anthropology

Emphasis: ***Anthropology***
Degree: ***Associate in Arts***

PURPOSE: The Associate of Arts Degree with an emphasis in anthropology is for students wishing to transfer to a four-year college or university. A student acquiring the Associate in Arts degree in anthropology will achieve an understanding of the diversity of humans and human cultures past and present around our globe.

While preparing the student for further study and eventual employment in the field of anthropology, this educational plan also is relevant for students preparing for a broad range of jobs in both government and international agencies that focus on cross-cultural issues and involve working with people from different cultural backgrounds. These jobs, in addition to work in international and government agencies, might include working in agricultural development and educational reform or as a consultant, planner, market analyst, survey researcher, forensic scientist, or refugee coordinator.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ANTH&	100	Survey of Anthropology	5
ENGL&	101	English Composition I	5
Humanities Distribution*			5
			15

Winter Quarter, First Year			Credits
ANTH&	210	Indians of North America	5
ENGL&	102	Composition II	5
Humanities Distribution*			5
			15

Spring Quarter, First Year			Credits
ANTH	235	Myth, Ritual and Magic	5
Quantitative Skills Distribution**			5
Science Distribution			5
			15

Fall Quarter, Second Year			Credits
ANTH&	206	Cultural Anthropology	5
Science Distribution			5
Social Science Distribution ***			5
			15

Winter Quarter, Second Year			Credits
Electives			7-10
Health & Fitness Distribution			3
Social Science Distribution ***			5
			15-18

Spring Quarter, Second Year			Credits
ANTH	225	Cultural & Ethnic Pluralism in Contemporary Society	5
Elective			5
Humanities Distribution			5
			15

ANTH 260 or ANTH 290 the Anthropology Fieldtrip is strongly recommended.

*A language is strongly recommended.

**MATH& 146 Introduction to Stats is recommended.

***HIST& 116 Western Civilization I is recommended for Anthropology students desiring to specialize in Archaeology.

Anthropology majors are encouraged to develop a broad base in the social sciences to include SOC& 101 Intro to Sociology, PSYC& 100 General Psychology or HIST& 116 Western Civilization I.

Art

See Fine Arts or Graphic Design

Astronomy

See Earth Science

Biology

Emphasis: ***Biology***
Botany
Ecology
Zoology

Degree: Associate in Biology-DTA/MRP

PURPOSE: This program is for students who wish to complete a bachelor's degree in such disciplines as general or molecular biology, zoology, microbiology, genetics, entomology, botany, horticulture, soil science, phycology, ecology, marine biology, fisheries biology, or wildlife management. This program assumes that a student is prepared to start college-level math and English courses. Students who are not prepared to begin at this level may require additional quarters.

To ensure optimal course selection, plan your program of study with your advisor and with the specific requirements of your likely transfer institution.

Suggested Order of Classes

Fall Quarter, First Year			Credits
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
Elective*			5
			16

Winter Quarter, First Year			Credits
CHEM&	162	General Chemistry w/lab II	6
ENGL&	102	Composition II	
		OR	
ENGL&	235	Technical Writing	5
Elective*			5
			16

Spring Quarter, First Year			Credits
CHEM&	163	General Chemistry w/lab III	6
MATH&	151	Calculus I	5
Humanities Distribution **			OR
Social Science Distribution **			5
			16

Fall Quarter, Second Year			Credits
BIOL&	221	Majors Ecology/Evolution	5
Humanities Distribution			5
Elective**			5
			15

Winter Quarter, Second Year			Credits
BIOL&	222	Majors Cell/Molecular	5
Social Science Distribution			5
Elective**			5
Health & Fitness Distribution			3
			18

Spring Quarter, Second Year			Credits
BIOL&	223	Majors Organismal Phys	5
Humanities Distribution			5
Social Science Distribution			5
			15

*Students requiring Precalculus I (MATH 141) or Precalculus II (MATH& 142) should do so now. These students would use one of the second year electives for a third social science of humanities distribution course. Other students should satisfy a social science or humanities elective.

**Recommended electives include a full year sequence of organic chemistry, or additional math classes at the pre-calculus level, statistics, or additional calculus.

Emphasis: ***Animal Biology (Zoology)/***
Plant Biology (Botany)

Degree: ***Associate in Science***

PURPOSE: This program is for students who wish to complete a bachelor's degree in such disciplines as general or molecular biology, zoology, microbiology, genetics, entomology, botany, horticulture, soil science, phycology, ecology, marine science, fisheries or wildlife management.

If you are not well prepared in high school mathematics and science, you should plan, with your advisor, a three-year program at Centralia College in preparation for transfer to a four-year college or university.

The main emphasis in the first year at Centralia should be on strengthening your mathematics, basic sciences, communications, and reading skills.

To ensure optimal course selection, plan your program of study with your advisor.

Suggested Order of Classes

Fall Quarter, First Year			Credits
BIOL&	221	Majors Ecology/Evolution	5
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
			16

Winter Quarter, First Year			Credits
BIOL&	222	Majors Cell/Molecular	5
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I	5
			16

Spring Quarter, First Year			Credits
BIOL&	223	Majors Organismal Phys	5
CHEM&	163	General Chemistry w/lab III	6
MATH&	152	Calculus II	5
			16

Fall Quarter, Second Year			Credits
Biology/Chemistry/Physics sequence*			5-6
Social Science Distribution			5
Health & Fitness Distribution			3
			13-14

Winter Quarter, Second Year			Credits
Biology/Chemistry/Physics sequence			5-6
MATH&	146	Introduction to Stats	
		OR	
MATH&	163	Calculus III	5
Humanities Distribution			5
			15-16

Spring Quarter, Second Year			Credits
Biology/Chemistry/Physics sequence			5-6
Social Science Distribution			OR
Humanities Distribution			5
Elective			5
			15-16

Science electives:

BIOL& 241, 242, 243 Human A & P w/lab series I-III

CHEM& 261, 262, 263 Organic Chemistry w/ lab I-III;

PHYS& 221, 222, 223; Engineering Physics I-III

*Biology majors should select Organic Chemistry or Physics for second year sequence.

Business

Emphasis: Business Administration

Degree: Associate in Business-DTA/MRP

PURPOSE: The Associate in Business is designed for students who plan to transfer to a four-year college or university to complete a bachelor's degree in business.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ECON&	202	Macroeconomics	5
ENGL&	101	English Composition I	5
Humanities Distribution			5
			15

Winter Quarter, First Year			Credits
ECON&	201	Macroeconomics	5
ENGL&	102	Composition II	5
Science Distribution**			5
			15

Spring Quarter, First Year			Credits
MATH&	146	Introduction to Stats	5
SPEE	110	Prin of Speech Communication	5
MATH&	141	Precalculus I (if needed)	5
		or 2 elective credits	2
Health & Fitness Distribution			3
			15-18

Fall Quarter, Second Year			Credits
ACCT&	201	Principles of Accounting I	5
BUS&	201	Business Law	5
MATH&	142	Precalculus II (if needed)	5
Social Science Distribution			5
			15-20

Winter Quarter, Second Year			Credits
ACCT&	202	Principles of Accounting II	5
MATH&	151	Calculus I *	5
Science Distribution**			5
			15

Spring Quarter, Second Year			Credits
ACCT&	203	Principles of Accounting III	5
MATH&	152	Calculus II*	5
Humanities Distribution			5
			15

Students should confer with an advisor at their baccalaureate institution regarding the course choices in each area where options are listed: Humanities, Social Sciences, Natural Sciences and electives.

*Five of the 10 Quantitative credits required may include the pre-requisite for Calculus (MATH& 141 and/or MATH& 142) and can be substituted for MATH& 152.

**At least 10 credits in physical, biological and/or earth sciences including at least one lab course.

Business Administration

Emphasis: Management

Degree: Associate in Applied Science

PURPOSE: The Associate in Applied Science with a Business Administration Emphasis of Management, provides students with a broad exposure to the principles and philosophies of business and management. Successful completion of the two-year program will help facilitate the process of graduates pursuing meaningful careers in a dynamic, changing business environment. It will also satisfy the requirements necessary for students to pursue additional advanced degrees.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Prepare statements to monitor, evaluate, and assess financial performance of the entity.
- Evaluate the performance of a business by using tools of pricing, promotion, product development, and distribution.
- Recognize and analyze how economic forces shape the environment of business and aid in decision making.
- Demonstrate the ability to apply acquired skills to workplace scenerios.
- Demonstrate human relations skills and professional behavior necessary for successful job performance.
- Apply rules of grammar, punctuation, and spelling to written communications.
- Define and compare and contrast characteristics and traits of leadership and management.
- Explain the importance and challenges of diversity, employee motivation, and emplyee engagement in the workplace.
- Identify and describe various forms of business ownership.
- Summarize basic laws in regards to business ownership, recruitment and hiring practices, OSHA, and liability.
- Explain communication, social resposibility, ethics, morals, and values as they relate to the workplace.
- Create a personal code of ethics and explain how it relates and impacts the workplace.
- Identify the impact of international business and explain various methods for a business to enter the global market.
- Describe the activites involved in each function of management and at various levels of management in the workplace.

Suggested Order of Classes

Fall Quarter, First Year*			Credits
ACCT&	201	Principles of Accounting I	5
BUS&	101	Intro to Business	5
BTEC	210	Word I	5
			15

Winter Quarter, First Year			Credits
ACCT&	202	Principles of Accounting II	5
BUS	121	Business Math	5
BTEC	214	Excel I	5
HLTH	145	Safety and Fitness	3
			18

Spring Quarter, First Year			Credits
ACCT&	203	Principles of Accounting III	5
BUS&	201	Business Law	5
ENGL&	101	English Composition I **	OR
BTEC	221	Business Communications	5
ACCT	130	Basic Computer Accting	3
			18

Fall Quarter, Second Year			Credits
BUS	215	Principles of Finance	5
BUS	220	Principles of Marketing	5
HR	110	Human Relations-Workplace	5
			15

Winter Quarter, Second Year			Credits
HR	210	Human Resource Management	5
SPEE	110	Principles of Speech	
		OR	
SPEE	220	Theory & Practice of Speaking	5
BUS	240	Negot. & Art of Persuasion	5
			15

Spring Quarter, Second Year			Credits
BUS	232	Entrepreneurship	5
BUS	275	Principles of Management***	5
ECON&	201	Microeconomics	
		OR	
ECON&	202	Macroeconomics	5
			15

*Students going into BAS-AM take MATH& 146 Introduction to Stats.

**Students going into BAS-AM take ENGL& 101.

***Students going into BAS-AM take Science Distribution course.

Business Office Technology

Emphasis: Administrative Assistant
Medical Administrative Assistant

Degree: Associate in Technical Arts

PURPOSE: These degree programs prepare students with a broad business background, as well as provide specialized training in office skills. While students are accepted into the program each quarter, those who start in September find it easier to schedule their courses in the suggested sequences. Prerequisites include: demonstrated proficiency in math, reading, English, and basic keyboarding skills. After completeing the selected program, students will be prepared for entry level employment as office assistants and receptionists, in general offices, or medical offices.

FIRST YEAR

Suggested Order of Classes

Fall Quarter, First Year			Credits
BTEC	102	Skillbuilding I	3
BTEC	110	Business English	5
BTEC	220	Ten Key Calculator	1
BTEC	233	Files Management	3
H R	110	Human Relations-Workplace	5
			17

Winter Quarter, First Year			Credits
BUS&	201	Business Law	5
BTEC	210	Word I	5
BTEC	221	Business Communications	5
HLTH	145	Safety & Fitness	3
			18

Spring Quarter, First Year			Credits
BTEC	120	Business Math	3
BTEC	219	Word II	4
ENGL&	101	English Composition I	5
SPEE	101	Public Speaking	3
			15

Emphasis: Medical Administrative Assistant

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Demonstrate the ability to keyboard with speed and accuracy.
- File correctly using alphabetic, numeric, geographic, and subject filing systems.
- Apply rules of grammar, punctuation, and spelling in written and oral communications.
- Prepare documents using advanced features in word processing software.
- Format basic business letters, memos, reports, tables, and newsletters to office standards.
- Solve basic business math problems.
- Organize data using business math and practical accounting.
- Analyze and calculate data using spreadsheet software.
- Enter and organize data using database software.
- Obtain a first aid and CPR certificate.
- Operate a 10-key electronic calculator by touch.
- Demonstrate the ability to relate effectively with others in the classroom.
- Demonstrate human relations skills and professional behavior necessary for successful job performance.
- Demonstrate the ability to apply acquired skills in the workplace.
- Use medical terms correctly.
- Compose business letters, memos, resumes, and letters of application.
- Demonstrate an understanding of human biology.
- Transcribe medical documents from recorded dictation.
- Enter patient record information using electronic software.
- Demonstrate an understanding of the Health Insurance Portability and Accounting Act.
- Possess a basic understanding of medical office procedures using medical charts and records, electronic medical records, receiving visitors, scheduling appointments, and confidentially in a medical office.

Suggested Order of Classes

Fall Quarter, Second Year			Credits
ACCT	110	Practical Accounting I	3
BTEC	107	Medical Records	3
BTEC	160	HIPPA	1
BTEC	214	Excel I	5
MA	260	Medical Terminology	4
			16

Winter Quarter, Second Year			Credits
ACCT	120	Practical Accounting II	3
BIOL&	170	Human Biology	5
BTEC	191	Work Experience Seminar	1
BTEC	255	Insurance and Billing	5
			14

Spring Quarter, Second Year			Credits
BTEC	190	Cooperative Work Experience	5
BTEC	261	Medical Office Procedures	5
BTEC	263	Medical Transcription	4
			14

Emphasis: Administrative Assistant

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Demonstrate the ability to keyboard with speed and accuracy.
- File correctly using alphabetic, numeric, geographic, and subject filing systems.
- Apply rules of grammar, punctuation, and spelling in written and oral communications.
- Prepare documents using advanced features in word processing software.
- Format basic business letters, memos, reports, tables, and newsletters to office standards.
- Compose business letters, memos, resumes, and letters of application.
- Organize data using business math and practical accounting.
- Analyze and calculate data using spreadsheet software.
- Enter and organize data using database software.
- Obtain a first aid and CPR certificate.
- Operate a 10-key electronic calculator by touch.
- Demonstrate the ability to relate effectively with others in the classroom.
- Demonstrate human relations skills and professional behavior necessary for successful job performance.
- Demonstrate the ability to apply acquired skills in the workplace.
- Transcribe from recorded dictation.
- Enter accounting transactions and generate reports using Quick Books.
- Analyze data and report information using database software.
- Possess a basic understanding of receiving office visitors, using the telephone, scheduling appointments, customer service, and confidentiality skills in an office.
- Develop effective presentations using presentation software.
- Develop effective communications skills using electronic software.

Suggested Order of Classes

Fall Quarter, Second Year			Credits
ACCT	110	Practical Accounting I	3
BTEC	115	Machine Transcription	4
BTEC	214	Excel I	5
CNT	117	Windows Workstation	2
			14

Winter Quarter, Second Year			Credits
ACCT	120	Practical Accounting II	3
BTEC	191	Work Experience Seminar	1
BTEC	203	Skillbuilding II	3
BTEC	212	Access I	3
BTEC	225	Excel II	3
			13

Spring Quarter, Second Year			Credits
ACCT	130	Quick Books	3
BTEC	190	Cooperative Work Experience	3
BTEC	205	Outlook	1
BTEC	216	Access II	4
BTEC	222	Power Point Module	1
BTEC	224	Office Procedures	5
			17

ONE-YEAR PROGRAMS

Emphasis: Medical Office Assistant

Degree: Certificate of Proficiency

PURPOSE: The Medical Office Assistant Certificate program combines general office skills with studies in medical terminology, human biology, medical office procedures, and medical machine transcription.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Demonstrate the ability to keyboard with speed and accuracy.
- File correctly using alphabetic, numeric, geographic, and subject filing systems.
- Apply rules of grammar, punctuation, and spelling in written and oral communications.
- Prepare documents using word processing software.
- Format business letters, memos, reports, tables, and newsletters to office standards.
- Solve basic business math problems.
- Operate 10-key electronic calculator by touch.
- Analyze and calculate data using spreadsheet software.
- Demonstrate the ability to relate effectively with others in the classroom.
- Demonstrate human relations skills and professional behavior necessary for successful job performance.
- Use medical terms correctly.

- Obtain a first aid and CPR certificate.
- Demonstrate an understanding of human biology.
- Write simple business letters and memos.
- Prepare a resume and letter of application.
- Transcribe medical documents from recorded dictation.
- Possess a basic understanding of medical office procedures using medical charts and records, electronic records, receiving visitors, scheduling appointments, and confidentiality in a medical office.
- Enter patient record information using electronic record software.

Suggested Order of Classes

Fall Quarter			Credits
BTEC	107	Medical Records	3
BTEC	160	HIPPA	1
H R	110	Human Relations-Workplace	5
BTEC	102	Skillbuilding I	3
MA	260	Medical Terminology	4
			16

Winter Quarter			Credits
BTEC	110	Business English	5
BTEC	210	Word I	5
BTEC	214	Excel I	5
BTEC	233	Files Management	3
HLTH	145	Safety & Fitness	3
			21

Spring Quarter			Credits
BIOL&	170	Human Biology	5
BTEC	120	Applied Business Math	3
BTEC	261	Medical Office Procedures	5
BTEC	266	Medical Law & Ethics	3
			18

Emphasis: Office Assistant

Degree: Certificate of Proficiency

PURPOSE: The Office Assistant certificate program prepares students for entry-level employment as office assistants. Prerequisites include: demonstrated proficiency in math, reading, English, and basic keyboarding skills.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Demonstrate the ability to keyboard with speed and accuracy.
- File correctly using alphabetic, numeric, geographic, and subject filing systems.
- Apply rules of grammar, punctuation, and spelling in written and oral communications.
- Prepare documents using advanced features in word processing software.
- Format basic business letters, memos, reports, tables, and newsletters to office standards.
- Solve basic business math problems.
- Operate a 10-key electronic calculator by touch.
- Analyze and calculate data using spreadsheet software.
- Demonstrate the ability to relate effectively with others in the classroom.
- Demonstrate human relations skills and professional behavior necessary for successful job performance.
- Develop effective presentations using presentation software.
- Organize data using business math and practical accounting.
- Possess a basic understanding of receiving office visitors, using the telephone, scheduling appointments, customer service, and confidentiality skills in an office.
- Develop effective communications skills using electronic software.

Suggested Order of Classes

Fall Quarter			Credits
ACCT	110	Practical Accounting I	3
BTEC	102	Skillbuilding I	3
BTEC	110	Business English	5
BTEC	210	Word I	5
			16

Winter Quarter			Credits
ACCT	120	Practical Accounting II	3
BTEC	205	Outlook	1
BTEC	214	Excel I	5
BTEC	233	Filing	3
HLTH	145	Safety & Fitness	3
			15

Spring Quarter			Credits
BTEC	120	Applied Business Math	5
BTEC	220	Ten-Key Calculator	1
BTEC	222	Power Point Module	1
BTEC	224	Office Procedures	5
HR	110	Human Relations-Workplace	5
			17

Chemistry

Emphasis: Chemistry

Degree: Associate in Science

PURPOSE: The Associate in Science with an emphasis in Chemistry is for students interested in transferring to a four-year college or university to complete a bachelor's degree. Students who complete this educational plan are reasonably assured of junior level standing at most four-year colleges and universities in Washington State.

You are urged to consult with your advisor to coordinate your program with the requirements at the institution to which you intend to transfer.

If you have successfully completed algebra, geometry, trigonometry, pre-calculus, chemistry and physics in high school you are prepared to enter Precalculus Refresher (MATH& 135) and General College Chemistry (CHEM& 161) and completion of your program in four years is possible.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	Composition I	5
CHEM&	161	General Chem w/lab I	6
MATH	118	Linear Algebra	5
			16

Winter Quarter, First Year			Credits
CHEM&	162	General Chem w/lab II	6
MATH&	151	Calculus I	5
SPEE	110	Prin of Speech Communication	5
Health & Fitness Distribution			1
			17

Spring Quarter, First Year			Credits
CHEM&	163	General Chem w/lab III	6
MATH&	152	Calculus II	5
Health & Fitness Distribution			1
Social Science Distribution			5
			17

Fall Quarter, Second Year			Credits
CHEM&	261	Organic Chemistry w/lab I	6
PHYS&	221	Engineering Physics I	5
Humanities Distribution			
		OR	
Social Science Distribution			5
			16

Winter Quarter, Second Year			Credits
CHEM&	262	Organic Chemistry w/lab II	6
MATH&	163	Calculus III	5
PHYS&	222	Engineering Physics II	5
Health & Fitness Distribution			1
			17

Spring Quarter, Second Year			Credits
CHEM&	263	Organic Chemistry w/lab III	6
MATH	212	Differential Equations	5
PHYS&	223	Engineering Physics III	5
			16

Chiropractic

See Pre-Chiropractic, Pre-Physical Therapy

Civil Engineering

Emphasis: Land Survey Technician

Degree: Certificate of Proficiency

PURPOSE: The Land Survey Technician Certificate of Proficiency is designed for students who only want a Land Surveying credential. Courses in this certificate may be part of the first year of a Civil Engineering ATA degree.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Demonstrate proven field safety actions, including: appropriate clothing and protective equipment, use of protective devices provided, lift, carry and safely in field conditions, avoid actual and potential hazards, recognize and alert coworkers to all observed risks.
- Exhibit fully reliable work habits, consistent with established employment norms for presence, punctuality, and timely task completion with acceptable quality.

- Demonstrate proper care and handling of sensitive measuring equipment.
- Participate in trigonometric leveling operations correct to within one tenth of a foot.
- Perform necessary field calculations to stakeout a horizontal curve.
- Diagram section subdivisions in relation to the section, township, range, standard parallel, guide meridian, base line and principle meridian.

Suggested Order of Classes

Fall Quarter			Credits
CAD	112	Computer-Aided Drafting I	5
CET	120	Survey I	5
H R	110	Human Relations	5
TMATH	100	Technical Math	5
			20

Winter Quarter			Credits
CAD	113	Computer-Aided Drafting II	5
CET	121	Survey II	5
TMATH	110	Technical Math II	3
WRT	105	Writing in the Workplace	5
			18

Spring Quarter			Credits
CET	101	Flagging Certification	1
CAD	114	Computer-Aided Drafting III	5
CET	122	Survey III	4
CET	132	Survey Computations	3
			13

Students must complete each CET class with a 2.0 or higher to qualify for the next CET class and a program GPA of 2.0 or better to receive the certificate.

Computer-Aided Drafting

Emphasis: ***Computer-Aided Drafting***
Degree: ***Certificate of Completion***

PURPOSE: The Certificate of Completion in CAD is specifically designed for individuals who are currently in a technical profession and desire to upgrade skills in computer-aided drafting technology. Upon successful completion, the individual will have developed solid technical skill with CAD in their current profession.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Import and edit survey points.
- Create a surface.
- Utilize paper space, model space and multiple viewports.
- Create and label contours.
- Calculate cut and fill items.

Suggested Order of Classes

Fall Quarter			Credits
CAD	112	Computer Aided Drafting I	5

Winter Quarter			Credits
CAD	113	Computer Aided Drafting II	5

Spring Quarter			Credits
CAD	114	Computer Aided Drafting III	5

Students will benefit from completing coursework in Computer Applications and Applied Mathematics.

Students must earn a 2.0 or better in each CAD class to progress in the program.

Computer Science Technology

Emphasis: ***Computer Science***
Degree: ***Associate in Arts***

PURPOSE: The AA degree with Computer Science emphasis is for students interested in transferring to a four-year college or university to complete a bachelor's degree in computer science.

If you are not well prepared in high school math at least through a second year algebra course (following geometry), you should plan, with your advisor, a three-year program to prepare you for transfer to a four-year college or university. The emphasis in the first year should be on strengthening your math, basic science, communication, and reading skills.

The given sequence begins with MATH& 141, Precalculus I. If possible, start with MATH& 151, Calculus I.

Except for the sequences of mathematics, physics, and English Composition, the order in which courses are taken is not important.

It is extremely important that you, the student, identify the institution you intend to transfer to as soon as possible as some computer science programs have specific general education requirements and prerequisites.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Script static web pages.
- Code dynamic web pages.
- Install & operate simple web servers.
- Install and configure routers in small-scale networks using RIP, OSPF and/or IGRP.
- Install & configure security programs.
- Install and configure TCP/IP protocols.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
MATH&	141	Precalculus I	5
Health & Fitness Distribution			3
Humanities Distribution			5
			18

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
MATH&	142	Precalculus II	5
Social Science Distribution			5
			15

Spring Quarter, First Year			Credits
CS&	131	C++ Programming	
		OR	
CS&	141	Java: Object Oriented Prog. I	5
MATH&	151	Calculus I	5
Humanities Distribution			5
			15

Fall Quarter, Second Year			Credits
PHYS&	221	Engineering Physics I	5
Elective			5
Social Science Distribution			5
			15

Winter Quarter, Second Year			Credits
Elective			5
Humanities Distribution			5
Science Distribution			5
			15

Spring Quarter, Second Year			Credits
MATH	228	Discrete Mathematics	5
Science Distribution			5
Social Science Distribution			5
			15

Recommended Electives:

MATH	118	Linear Algebra
MATH&	152	Calculus II
PHYS&	222	Engineering Physics II
PHYS&	223	Engineering Physics III

Emphasis: ***Computer Science Technology***
Degree: ***Associate in Applied Science***

PURPOSE: Provides students with training in the core IT and workplace competencies necessary to complete for entry-level employment in the Information Technology industries.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ablilty to:

- Function effectively as a memeber of a team to accomplish common goals.
- Read and interpret technical information, as well as listen effectively to and communicate orally with a wide range of audiences.
- Demonstrate the attitudes, knowledge and abilities associated with quality customer service.
- Research IT problems, develop and carry out appropriate stategies for resolving them.
- Design and implememnt a hardware and/or software solution responsive to an identified scenario.
- Use a variety of practices for securing data and end-user systems.
- Demonstrate core IT competency in their area of specialization.

Suggested Order of Classes

Fall Quarter, First Year			Credits
CST	101	Introduction to Programming	4
CNT	123	Desktop OS 1	4
WRT	105	Writing in the Workplace	5
		OR	
ENGL	101	English Composition I	5
			13

Winter Quarter, First Year			Credits
CST	119	Web Scripting 1	4
CNT	201	Network Technology 1	4
TMATH	100	Technical Math	5
		OR	
MATH	141	Pre-Calculus I	5
CNT	124	Desktop OS 2	4
			17

OPTION 1:

DESKTOP & NETWORK SYSTEMS CONCENTRATION

Spring Quarter, First Year			Credits
CNT	125	Desktop OS 3	4
SPEE	101	Speech	3
HR	110	Human Relations - Workplace	5
CNT	140	CNT Internship	2
			14

Fall Quarter, Second Year			Credits
CNT	218	Server OS 1	4
CNT	141	Word for Technicians	4
CNT	240	Mobile Devices OS's	4
HLTH	145	Safety & Fitness	3
CNT	140	CNT Internship	2
			17

Winter Quarter, Second Year			Credits
CNT	219	Server OS 2	4
CNT	142	Excel for Technicians	4
CNT	202	Network Technology 2	4
CNT	140	CNT Internship	2
			14

Spring Quarter, Second Year			Credits
CNT	220	Server OS 3	4
CNT	203	Network Technology III	5
CNT	143	Access for Tehcnicians	5
CNT	140	CNT Internship	2
			16

OPTION 2:

PROGRAMMING & WEB DEVELOPMENT CONCENTRATION

Spring Quarter, First Year			Credits
CS&	131	C++	5
CST	121	Web Scripting 2	5
TMATH	110	Tech Math II	3
		OR	
MATH	142	Pre-Calculus II	5
CST	130	CST Internship	2
			15-17

Fall Quarter, Second Year			Credits
CS&	141	Java 1	5
CST	203	PHP/SQL	5
CST	122	Computer Graphics	3
CST	130	CST Internship	2
			15

Winter Quarter, Second Year			Credits
CST	228	Java 2	5
CST	204	XML	4
HR	110	Human Relations - Workplace	5
CST	130	CST Internship	2
			16

Spring Quarter, Second Year			Credits
CST	230	Java 3	5
CST	240	Developing for Mobile Devices	4
HLTH	145	Safety & Fitness	3
SPEE	101	Speech	3
CST	130	CST Internship	2
			17

Construction Management

Emphasis: Construction Management

Degree: Associate in Construction Management-DTR/MRP

PURPOSE: This degree is a Major Related Program designed for students planning to transfer and to prepare for American Council of Construction Education (ACCE) accredited majors in Construction Management at Central Washington University, Washington State University-Pullman, and University of Washington-Seattle; the degree also provides coursework for transfer into Eastern Washington University's Bachelor of Science in Technology-Construction Management.

This degree meets the requirements of the Statewide Construction Management DTA/MRP Agreement.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ACCT&	201	Principles of Accounting I	5
ENGL&	101	English Composition I	5
MATH&	146	Introduction to Stats	5
Health & Fitness Distribution			1
			16

Winter Quarter, First Year			Credits
ACCT&	202	Principles of Accounting II	5
ENGL&	235	Technical Writing*	OR
ENGL&	102	Composition II*	5
ENGR&	111	Engineering Graphics	2
MATH&	151	Calculus I	5
			17

Spring Quarter, First Year			Credits
ACCT&	203	Principles of Accounting III	5
BUS&	201	Business Law	5
MATH&	152	Calculus II	5
Humanities Distribution			5
			20

Fall Quarter, Second Year			Credits
ENGR&	214	Statics*	5
PHYS&	221	Engineering Physics I	5
CHEM&	161	General Chem w/lab I*	6
			16

Winter Quarter, Second Year			Credits
ECON&	201	Microeconomics	5
GEOL&	101	Intro to Physical Geology	5
PHYS&	222	Engineering Physics II	5
Health & Fitness Distribution			1
			16

Spring Quarter, Second Year			Credits
ECON&	202	Macroeconomics*	OR
Social Science Distribution			5
SPEE	110	Prin of Speech Communication	OR
SPEE	220	Theory & Practice of Public Speaking	5
Humanities Distribution			5
Health & Fitness Distribution			1
			16

*Select course as appropriate for intended transfer institution.

Criminal Justice

Emphasis: Criminal Justice

Degree: Associate in Technical Arts

PURPOSE: Designed to meet the education needs of both working professionals and those seeking new employment in a variety of law enforcement and correctional agencies. Cooperative education components will be designed with local or state law enforcement agencies, correctional institutions, or social service support agencies. Courses offered in a variety of formats to accommodate the schedules of traditional and non-traditional students.

Cooperative education components offered in partnership with regional law enforcement agencies, adult and juvenile correctional institutions.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Discuss and demonstrate basic procedures related to the fields of law enforcement and corrections.
- Utilize knowledge about state and federal laws that impact law enforcement and corrections in decision making.
- Understand and discuss the difference in relationships between law enforcement, the community and other legal entities.
- Understand and describe the relationships that exist between the various law enforcement, corrections, and the courts systems and at the local, state and federal levels of government.
- Discuss ethics as related to law enforcement and corrections.

Suggested Order of Classes

Fall Quarter, Every Year			Credits
CJ&	101	Intro to Criminal Justice	5
CJ	103	Constitutional Case Law	5
Criminal Justice Elective			5
WRT	105	Writing in the Workplace	5
			20

Winter Quarter, Every Year			Credits
CJ	104	Intro to Law Enforcement	5
CJ	107	Criminal Procedures	5
Criminal Justice Elective			5
BTEC	120	Applied Business Math	
		OR	
MATH	096	Pre-Algebra (Pre-req. for BTEC 120)	5
			20

Spring Quarter			Credits
CJ	109	Community Policing	5
CJ&	110	Criminal Law	5
CJ	111	Criminal Justice Ethics	5
BTEC	120	Applied Business Math	
		OR	
Criminal Justice Elective			5
			20

Summer Quarter			Credits
CJ&	106	Juvenile Justice	5
CJ	114	Critical & Current Issues	5
CJ&	112	Criminology	5
Criminal Justice Elective			5
			20

Fall Quarter			Credits
H R	110	Human Relations -Workplace	5
P E	229	Physical Fitness Concepts	3
Criminal Justice Elective			6
General Education Elective			3-5
			16-18

RECOMMENDED GENERAL EDUCATION ELECTIVES

SPAN&	121	Spanish I	5
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5
BTEC	101	Keyboarding for Business	3
BTEC	221	Business Communications	5

Students interested in fulfilling BAS-AM program requirements should take a Quantitative Skills course.

Students interested in fulfilling BAS-AM program admission requirements should take ENGL& 101.

Emphasis: Criminal Justice

Degree: Associate in Arts

PURPOSE: This degree prepares students to transfer to a baccalaureate institution and major in criminal justice. A B.A. degree prepares students to work in criminal justice and government agencies (federal, state, or local) or the private sector. Graduates may enter careers in state and local law enforcement, community corrections, federal law enforcement, or in the private sector.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Discuss and demonstrate basic procedures related to the fields of law enforcement and corrections.
- Utilize knowledge about state and federal laws that impact law enforcement and corrections in decision making.
- Understand and discuss the difference in relationships between law enforcement in the community and other legal entities.
- Understand and describe the relationships that exist between the various law enforcement, corrections, and the courts systems and at the local, state, and federal levels of government.
- Discuss ethics as related to law enforcement and corrections.

Suggested Order of Classes

Fall Quarter, First year			Credits
CJ&	101	Intro Criminal Justice	5
CJ	105	Intro to Corrections	5
ENGL&	101	English Composition I	5
			15

Winter Quarter, First year			Credits
CJ	104	Intro to Law Enforcement	5
ENGL&	102	English Composition II	5
MATH&	107	Math in Society	OR
MATH&	146	Introduction to Stats	5
			15

Spring Quarter, First year			Credits
CJ&	110	Criminal Law	5
Humanities Distribution			5
Science Distribution			5
			15

Summer or Spring Quarter			Credits
CJ&	106	Juvenile Justice	5
CJ&	112	Criminology	5
Science Distribution			5
			15

Fall Quarter, Second year			Credits
Social Science Distribution			5
Humanities Distribution			5
POLS&	202	American Government	5
			15

Winter Quarter, Second year			Credits
PHIL	103	Intro to Ethics	5
Science Distribution			5
Social Science Distribution			5
Health & Fitness Distribution			3
			18

The Criminal Justice emphasis can be tailored to meet both the career path objectives of the individual and coordinate planning to a four year school. An advisor can provide additional information on this.

Emphasis: Crime Scene Investigation

Degree: Certificate of Proficiency

PURPOSE: To provide individuals with information and techniques used in forensic investigations.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Understand basic concepts of criminal and forensic investigation and the functions of a forensic specialist.
- Identify crime scene considerations of investigators for a variety of different crime scenes.
- Employ proper and appropriate evidence collection, preservation, documentation and transport techniques of all evidence identified at the crime scene.

Suggested Order of Classes

Fall Quarter			Credits
CJ&	240	Intro to Forensic Science	5
BTEC	120	Applied Business Math	5
			10

Winter Quarter			Credits
CJ	129	Intro to Victimology	5
CJ	224	Criminal Interviews & Interrogations	5
WRT	105	Writing in the Workplace	5
			15

Spring Quarter			Credits
CJ	126	Homicide Investigation	5
CJ	225	Crime Scene Technology	5
HR	110	Human Relations-Workplace	5
			15

Summer Quarter			Credits
CJ	130	Domestic Violence & Abuse	5
CJ	223	Felony Investigations	5
CJ	228	Crime Scene Photography	5
			15

Dental Hygiene

See Pre-Dental Hygiene

Dentistry

See Pre-Medicine, Pre-Dentistry

Diesel Equipment Technology

Emphasis: Diesel Technology

Degree: Associate in Applied Science

PURPOSE: This Diesel Equipment Technology program is designed to prepare students for immediate employment as a technician in the maintenance, repair, or overhaul of heavy equipment (i.e., logging, construction, mining), agricultural equipment, or trucking. Centralia College has a transfer agreement partnership with Montana State University Northern, which enables a Centralia College graduate to attend the Bachelor of Science degree program in Diesel Technology at MSU Northern. Students can also enter the Bachelor of Applied Science Diesel Technology at Centralia College.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Perform repair procedures using proper tools while abiding by safety and environmental regulations.
- Identify, diagnose and repair electrical and hydraulic circuits.
- Maintain proper workplace documentation in a professional manner.
- Conduct behavior that is consistent with the professionalism standards of the industry.

Suggested Order of Classes

Fall Quarter, First Year			Credits
CNT	117	Windows OS	2
DET	100	Shop Skills	2
DET	101	Shop Skills lab	5
DET	125	Power Transmissions	2
DET	126	Power Transmissions lab	5
MATH	095	Basic Math*	5
			16-21

Winter Quarter, First Year			Credits
DET	110	Electrical Systems I Theory	2
DET	111	Electrical Systems I lab	5
DET	130	Mobile Hydraulics Theory	2
DET	131	Mobile Hydraulics lab	5
TMATH	116	Industrial Mathematics	5
			19

Spring Quarter, First Year			Credits
WRT	105	Writing in the Workplace	5
DET	120	Engine I Theory	2
DET	121	Engine I lab	5
WELD	151	Welding Theory for Mechanics	2
WELD	152	Welding Procedures-Mechanics	5
			19

Fall Quarter, Second Year			Credits
DET	200	Electrical Systems II Theory	2
DET	201	Electrical Systems II lab	5
DET	220	Engine II Theory	2
DET	221	Engine II lab	5
HLTH	145	Safety & Fitness	3
			17

Winter Quarter, Second Year			Credits
BTEC	191	Work Experience Seminar**	1
DET	210	Power Transmissions II Theory	2
DET	211	Power Transmissions II lab	5
DET	225	Heavy Duty Chassis Theory	2
DET	226	Heavy Duty Chassis lab	5
H R	110	Human Relations-Workplace	5
			20

Spring Quarter, Second Year			Credits
DET	230	Practical Applications Theory	2
		AND	
DET	231	Practical Applications lab	5
		OR	
DET	190	Cooperative Work Experience***	7
DET	235	Mobile HVAC Theory	2
DET	236	Mobile HVAC lab	5
			14-16

*If compass scoring is below college level, student will be required to take MATH 095 prior to TMATH 116.

**BTEC 191 can be taken any quarter prior to or in the same quarter as DET 190.

***Students must take either DET 230 and DET 231 OR DET 190.

STUDENTS WILL NEED TO PURCHASE TOOLS FOR CLASS. PLEASE SEE A DIESEL INSTRUCTOR FOR TOOL LIST.

Dramatic Arts

Emphasis: Dramatic Arts

Degree: Associate in Arts

PURPOSE: The Associate of Arts degree with an emphasis in Dramatic Arts meets the needs of students interested in acting or technical theater work who intend either to complete a two-year program or to transfer to a four-year institution.

This course work can provide an important supplement to the work of those who plan to major in the humanities and social sciences. Dramatic experience brings insight into the complex motivation for human behavior.

For students who plan to become educators, particularly those interested in elementary and secondary school teaching, courses in drama can provide insight into methods of teaching and learning through "language arts."

If you intend to transfer to a four-year program at a college or university in Washington State, you should see the drama advisor for information on special requirements, if any, of that school. This information may have a bearing on courses you choose to satisfy distribution requirements.

A maximum of 15 credits in DRMA 100 may be credited toward an Associate in Arts Degree. Up to 5 credits in DRAMA may be used as Humanities distribution credits.

Suggested Order of Classes

Fall Quarter, First Year			Credits
DRMA	107	Beginning Acting	5
ENGL&	101	English Composition I	5
Social Science Distribution			5
			15

Winter Quarter, First Year			Credits
DRMA&	101	Introduction to Theatre	5
ENGL&	102	Composition II	5
ENGL	204	Intro to Shakespeare	5
Health & Fitness Distribution			1
			16

Spring Quarter, First Year			Credits
DRMA	108	Intermediate Acting	5
DRMA	110	Stage Makeup	3
Elective			3-5
Science Distribution			5
			16-18

Fall Quarter, Second Year	Credits
Health & Fitness Distribution	1
Quantitative Skills Distribution	5
Science Distribution	5
Social Science Distribution	5
	16

Winter Quarter, Second Year			Credits
ENGL&	114	Intro to Dramatic Lit	5
Elective*			3-5
Health & Fitness Distribution			1
Social Science Distribution			5
			14-16

Spring Quarter, Second Year			Credits
DRMA	201	Advanced Acting	5
Humanities Distribution			3-5
Science Distribution			5
			13-15

*Recommended offerings include DRMA 115 and DRMA 120.

Early Childhood Education

Emphasis: Early Childhood Education

Degree: Associate in Arts

PURPOSE: The Early Childhood Education AA degree transfers to a four-year school to complete work for a bachelor's degree. Coursework can apply to the Early Childhood endorsement for Washington State teaching certification. These courses acquaint the student with terms, vocabulary, and activities pertinent to a quality experience within the early childhood education field.

Course expectations include tasks to provide a foundation and proficiency for work toward a four-year degree program in early childhood education.

Suggested Order of Classes

Fall Quarter First Year			Credits
ECED&	105	Intro to Early Child Education	5
EDUC&	130	Guiding Behavior	3
EDUC&	150	Child/Family/Community	3
ENGL&	101	English Composition	5
			16

Winter Quarter, First Year			Credits
EDUC&	115	Child Development	5
ENGL&	102	Composition II	5
Health & Fitness Distribution			1
Science Distribution			5
			16

Spring Quarter, First Year			Credits
ECED&	160	Curriculum Development	5
SOC&	101	Intro to Sociology	5
Health & Fitness Distribution			1
Humanities Distribution			5
			16

Fall Quarter, Second Year			Credits
PSYC&	100	General Psychology	5
Science Distribution			5
Quantitative Skills Distribution			5
			15

Winter Quarter, Second Year			Credits
ECED&	190	Observation/Assessment	3
SPEE	110	Principles of Speech	5
Health & Fitness Distribution			1
Science Distribution			5
			14

Spring Quarter, Second Year			Credits
ECED	181	Language and Literacy	5
Humanities Distribution			5
Social Science Distribution			5
			15

Emphasis: Early Childhood Education

Degree: Associate in Applied Science

PURPOSE: The Early Childhood Education-Associate in Applied Science degree program provides students with the critical Early Childhood and Child Development content necessary to compete for employment in early childhood education or in a school system as a teacher's aide.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ECED&	105	Intro to Early Child Ed	5
ECED&	120	Practicum-Nurturing Rel.	2
EDUC&	130	Guiding Behavior	3
EDUC&	150	Child/Family/Community	3
Health & Fitness Distribution			3
			16

Winter Quarter, First Year			Credits
ENGL&	101	English Composition I	
		OR	
WRT	105	Writing in the Workplace	5
ECED&	170	Environments-Young Child	3
ECED&	190	Observation/Assessment	3
EDUC&	115	Child Development	5
			16

Spring Quarter, First Year			Credits
ECED&	160	Curriculum Development	5
ECED	181	Language and Literacy	5
TMATH	101	Foundational Math Concepts	
		OR	
BTEC	120	Applied Business Math	3-5
			13-15

Fall Quarter, Second Year			Credits
ECED&	107	Health/Safety/Nutrition	5
PSYC&	100	General Psychology	5
Humanities Distribution			5
			15

Winter Quarter, Second Year			Credits
EDUC&	136	School Age Care	3
ECED&	139	Admin Early Learning Program	3
HR	110	Human Relations-Workplace	5
SOC&	101	Intro to Sociology	5
			16

Spring Quarter, Second Year			Credits
ECED&	132	Infants/Toddlers Care	3
ECED	233	ECE Practicum II	5
EDUC&	134	Family Child Care	3
Science Distribution			5
			16

Emphasis: Early Childhood Education
Degree: Associate in Applied Science-Transfer

PURPOSE: The Early Childhood AAS-T degree provides both the necessary critical content to compete for immediate employability in early care and education and the general education coursework necessary for transfer to a bachelor's degree program. Some four-year institutions accept this AAS-T. Students are responsible for knowing the transfer and admission requirements of the receiving institution. Students should check with their advisor at Centralia College and a representative from the college they plan to attend. With four additional classes, this degree will transfer to any four-year institution.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Demonstrate an understanding of how children differ in their development and approaches to learning and to use this knowledge to provide opportunities that support the physical, social, emotional, and cognitive development of all young children from birth through age eight.
- Demonstrate the ability to use theory, research and foundations of education when planning and implementing Early Child Education programs.
- Plan and implement developmentally appropriate curriculum and teaching practices based on knowledge of individual children, the community and the curriculum goals and content.
- Use individual and group guidance and problem-solving techniques to develop positive and supportive relationships with children and develop personal self -control, self-motivation and positive self-esteem.
- Establish and maintain positive, collaborative relationships with families.
- Articulate a philosophy and rationale for decisions while continually assessing and evaluating the effects of their choices and actions on others.
- Serve as an advocate on behalf of young children and their families, programs for young children and the working environment for early childhood educators.
- Demonstrate an understanding of the early childhood profession and a commitment to professionalism.
- Demonstrate competence in managing human, fiscal, and spatial resources while meeting the health and safety needs of children and adults.
- Model global awareness and respect for the cultural diversity of children.
- Examine, discuss, evaluate and critique various issues and trends in Early Childhood Education.
- Identify and explain the major historic events and theoretical perspectives of Early Childhood Education.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ECED&	105	Intro Early Child Ed	5
ECED&	120	Practicum-Nurturing Rel	2
EDUC&	130	Guiding Behavior	3
ENGL&	101	English Composition I	5
			15

Winter Quarter, First Year			Credits
EDUC&	115	Child Development	5
ENGL&	102	Composition II	5
Science Distribution			5
			15

Spring Quarter, First Year			Credits
ECED	181	Language and Literacy	5
SOC&	101	Intro to Sociology	5
SPEE	110	Prin of Speech Communication	5
			15

Fall Quarter, Second Year			Credits
EDUC&	150	Child/Family/Community	3
H R	110	Human Relations-Workplace	5
Health & Fitness Distribution			3
Quantitative Skills Distribution			5
			16

Winter Quarter, Second Year			Credits
ECED&	107	Health/Safety/Nutrition	5
ECED&	170	Environments	3
ECED&	190	Observation/Assessment	3
Humanities Distribution			5
			16

Spring Quarter, Second Year			Credits
ECED&	160	Curriculum Development	5
ECED	233	ECE Practicum II	5
PSYC&	100	General Psychology	5
			15

Emphasis: Early Childhood Education
Degree: State Initial Early Childhood Education Certificate

PURPOSE: The Early Childhood Education Initial Certificate Program prepares students for employment in the child care field. The Initial certificate also increases the knowledge and skills of people who currently work with children.

The Initial Certificate is the first of 3 "stackable" certificates that provide a foundation for the state early childhood education credential and associate degree. Students may enter any quarter and participate on a part-time schedule. Students may complete the certificate program, a degree program or take a single course of special interest.

PROGRAM OUTCOMES: Students who successfully complete this program should be able to:

- Demonstrate an understanding of how children differ in their development and approaches to learning and to use this knowledge to provide opportunities that support the physical, social, emotional, and cognitive development of all young children from birth through age eight.
- Demonstrate the ability to use theory, research and foundations of education when planning and implementing Early Child Education programs.
- Plan and implement developmentally appropriate curriculum and teaching practices based on knowledge of individual children, the community and the curriculum goals and content.
- Use individual and group guidance and problem-solving techniques to develop positive and supportive relationships with children and develop personal self -control, self-motivation and positive self-esteem.
- Establish and maintain positive, collaborative relationships with families.

Courses			Credits
ECED&	105	Intro Early Child Education	5
ECED&	107	Health/Safety/Nutrition	5
EDED&	120	ECE Practicum I	2
			12

Emphasis: Early Childhood Education
Degree: State Short Early Childhood Education Certificate of Specialization

PURPOSE: The ECE short certificate builds on the Initial Certificate as the second "stackable certificate". At this point developing professionals have 5 choices for areas of specialization: CE Genera., Infant/Toddler Care, School-Age Child Care, Family Child Care and ECE Administration. All short certificates provide a foundation for the State ECE Credential and Associate degree.

PROGRAM OUTCOMES are based upon the Washington State Early Childhood Education Core Competencies- students who successfully complete this program should be able to:

- Demonstrate an understanding of how children differ in their development and approaches to learning and to use this knowledge to provide opportunities that support the physical, social, emotional, and cognitive development of all young children from birth through age eight.
- Demonstrate the ability to use theory, research and foundations of education when planning and implementing Early Child Education programs.
- Plan and implement developmentally appropriate curriculum and teaching practices based on knowledge of individual children, the community and the curriculum goals and content.
- Use individual and group guidance and problem-solving techniques to develop positive and supportive relationships with children and develop personal self -control, self-motivation and positive self-esteem.
- Establish and maintain positive, collaborative relationships with families.
- Articulate a philosophy and rationale for decisions while continually assessing and evaluating the effects of their choices and actions on others.

Courses			Credits
ECED&	105	Intro Early Child Education	5
ECED&	107	Health/Safety/Nutrition	5
ECED&	120	Practicum-Nurturing Rel	2
		AND	
Early Childhood Education (General)			
EDUC&	115	Child Development	5
EDUC&	130	Guiding Behavior	3
		OR	
Infant and Toddler Care			
EDUC&	115	Child Development	5
EDUC&	132	Infants/Toddlers Care	3
		OR	
School-Age Care			
EDUC&	115	Child Development	5
EDUC&	136	School Age Care	3
		OR	
Family Child Care			
EDUC&	115	Child Development	5
ECED&	134	Family Child Care	3
		OR	
Administration			
EDUC&	115	Child Development	5
ECED&	139	Admin of Early Lrng Prog	3
			20

Emphasis: Early Child Education
Degree: State Early Childhood Education Certificate

PURPOSE: The Early Childhood Education Certificate Program prepares students to compete for entry level employment in the child care field. This certificate also increases the knowledge and skills of people who currently work with children.

The Children's Lab School provides an environment for observation and practice. Students acquire in-depth knowledge of child development from birth through age eight.

PROGRAM OUTCOMES: Students who successfully complete this program should be able to:

- Demonstrate an understanding of how children differ in their development and approaches to learning and to use this knowledge to provide opportunities that support the physical, social, emotional, and cognitive development of all young children from birth through age eight.
- Demonstrate the ability to use theory, research and foundations of education when planning and implementing Early Child Education programs.
- Plan and implement developmentally appropriate curriculum and teaching practices based on knowledge of individual children, the community and the curriculum goals and content.
- Use individual and group guidance and problem-solving techniques to develop positive and supportive relationships with children and develop personal self -control, self-motivation and positive self-esteem.
- Establish and maintain positive, collaborative relationships with families.
- Articulate a philosophy and rationale for decisions while continually assessing and evaluating the effects of their choices and actions on others.
- Serve as an advocate on behalf of young children and their families, programs for young children and the working environment for early childhood educators.
- Demonstrate an understanding of the early childhood profession and a commitment to professionalism.
- Demonstrate competence in managing human, fiscal, and spatial resources while meeting the health and safety needs of children and adults.
- Model global awareness and respect for the cultural diversity of children.
- Examine, discuss, evaluate and critique various issues and trends in Early Childhood Education.
- Identify and explain the major historic events and theoretical perspectives of Early Childhood Education.

Recommended course schedule

Fall Quarter			Credits
ECED&	105	Intro Early Child Ed	5
ECED&	107	Health/Safety/Nutrition	5
ECED&	120	Practicum-Nurturing Rel	2
EDUC&	130	Guiding Behavior	
		OR	
ECED&	132	Infants/Toddlers Care	
		OR	
ECED&	134	Family Child Care	
		OR	
ECED&	139	Admin of Early Lrng Prog	
		OR	
EDUC&	136	School Age Care	3
			15

Winter Quarter			Credits
ECED&	190	Observation/Assessment	3
EDUC&	115	Child Development	5
EDUC&	150	Child/Family/Community	3
ECED&	170	Environments-Young Child	3
			14

Spring Quarter			Credits
TMATH	101	Foundational Math Concepts *	5
		OR	
BTEC	120	Applied Business Math	3
ECED&	160	Curriculum Development	5
ECED	181	Language and Literacy	5
			13-15

Summer or Fall Quarter			Credits
ENGL&	101	English Composition I **	5
HR	110	Human Relations-Workplace	5
			8-10

*ECE State Credential requires 5 credits of MATH above 100 level.

**ECE State Credential requires ENGL& 101.

Earth Sciences

Emphasis: Geology, Geography, Oceanography, Astronomy, Meteorology
Degree: Associate in Science

PURPOSE: The degree program in Earth Sciences transfers to four-year colleges and universities. Completion of the program qualifies a student for junior standing at most four-year colleges and universities in Washington except in astronomy at the University of Washington, and reasonably assures qualification outside of the state. The program will not qualify students for junior standing in astronomy at the University of Washington because only one year of physics with calculus is offered at Centralia College.

Students not prepared to enter MATH& 131 and CHEM& 121 should plan on more than four years to complete a bachelor's degree in one of the earth sciences. For those students, a three-year program of study at Centralia College, carefully planned with an advisor, is recommended.

Suggested Order of Classes

Fall Quarter, First Year			Credits
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
GEOL&	101	Intro to Physical Geology	5
			16

Winter Quarter, First Year			Credits
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I	5
SPEE	110	Speech Communication	5
			16

Spring Quarter, First Year			Credits
CHEM&	163	General Chemistry w/lab III	6
MATH&	152	Calculus II	5
Health & Fitness Distribution			3
			14

Fall Quarter, Second Year			Credits
Biology (for science majors) sequence			
OR			
Physics (calculus or non-calculus based) sequence*			5
OCEA&	101	Intro to Oceanography	5
Humanities Distribution			
Social Science Distribution			5
			15

Winter Quarter, Second Year			Credits
Biology (for science majors) sequence			
	OR		
Physics (calculus or non-calculus based) sequence*			5
GEOG	201	Physical Geography	5
MATH&	163	Calculus III	5
			15

Spring Quarter, Second Year			Credits
Biology (for science majors) sequence			
	OR		
Physics (calculus or non-calculus based) sequence*			5
SCIE	115	Weather and Climate	
	OR		
GEOL	108	Natural Hazards & Catastrophes	5
Social Science Distribution			5
			15

*Some baccalaureate institutions require physics with calculus.

Education

Emphasis: ***Education***

Degree: ***Associate in Arts***

PURPOSE: The Assopciate in Arts degree with an emphasis on Education transfers to a four-year college or university for students planning a teaching career. Requirements of four-year colleges vary greatly, and individual programs need to be coordinated with the institution to which the prospective teacher plans to transfer. Future elementary teachers should also seriously consider involvement in music, art, or drama activities. See your advisor for additional information.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
PSYC&	100	General Psychology	5
Science Distribution			5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
Content Elective			5
Health & Fitness Distribution			1
Humanities Distribution			5
			16

Spring Quarter, First Year			Credits
SPEE	110	Prin of Speech Communication	5
Health & Fitness Distribution			1
Science Distribution			5
Social Science Distribution			5
			16

Fall Quarter, Second Year			Credits
EDUC&	201	Intro to Education	3
EDUC	202	Classroom Observation	2
Health & Fitness Distribution			1
Quantitative Skills Distribution			5
Science Distribution			5
			16

Winter Quarter, Second Year			Credits
PSYC&	200	Lifespan Psychology	5
Content Elective			5
Humanities Distribution			5
			15

Spring Quarter, Second Year			Credits
EDUC	190	Cooperative Work Experience	
	OR		
Elective			2
Academic Elective			5
Social Science Distribution			5
			12

Electronics, Robotics & Automation

Emphasis: ***Electronics, Robotics & Automation***

Degree: ***Associate in Applied Science***

PURPOSE: The goal of this program is to provide a graduate with the skills needed to find a job at a company that uses high-end automation equipment.

This equipment ranges from devices controlled by programmable logic controllers (industrial computers) to robotic devices. A successful student will have learned core electronics skills, characteristics and operation of various types of electric motors, pneumatics and embedded controllers.

In modern production facilities the plant is often under the control of machinery connected with Ethernet, DeviceNet or ControlNet.

Thus, this program has a strong component which includes computers and computer networking.

PROGRAM OUTCOMES: Upon successful completion students will have demonstrated:

- Safe equipment operation and ability to evaluate situations for safety issues.
- Ability to work as members of a team in an office or industrial setting.
- Ability to determine quantitative solutions to AC/DC electronic circuits.
- Ability to apply common theorems and instrumentation to safely troubleshoot complex circuits.
- Ability to design, implement and maintain automated systems using Programmable Logic Controllers and industrial sensors.
- Ability to integrate modern microcontrollers into robotic systems to retrieve data and produce specified results.
- Ability to obtain, process and articulate visualizations of sets of data from industrial equipment, and use that data to propose logical system improvements.
- Ability to think independently to obtain solutions, and to recognize the need to pursue results which exceed the minimum standards whenever possible.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ERA	101	Electronics Assembly	4
ERA	105	Computer Operation	3
HR	110	Human Relations - Workplace	5
MATH	098	Algebra I(pre-college)	5
			17

Winter Quarter, First Year			Credits
ERA	115	DC Electronics	5
CAD	110	CAD for Electronics	3
ERA	151	Mechanical Systems	3
TMATH	121	Electronics Math 1	5
			16

Spring Quarter, First Year			Credits
ERA	121	AC Electronics	5
ERA	212	Digital Electronics	4
TMATH	122	Electronics Math 2	4
ERA	170	Solid State Electronics	4
			17

Fall Quarter, Second Year			Credits
ERA	220	Sensors and Instuments	4
ERA	230	Robotic Controllers	4
ERA	240	Amplifiers	5
HLTH	145	Safety & Fitness	3
			16

Winter Quarter, Second Year			Credits
ERA	235	Communication Systems	5
ERA	250	Industrial Electronics	2
ERA	251	Automation II	3
ERA	270	Robotics III	4
CNT	201	Network Technology 1	4
			18

Spring Quarter, Second Year			Credits
ERA	252	Data Processing	3
ERA	275	Job Search	3
ERA	290	Robotics Capstone	3
CAD	210	Advanced CAD Electrical	1
WRT	105	Writing in the Workplace	5
			15

Automation Maintenance Technician

Emphasis: ***Automation Maintenance Technician***

Degree: ***Certificate of Proficiency***

PURPOSE: The Automation Maintenance Technician Certificate of Proficiency program is designed to prepare students for occupations installing and replacing electric motors, replacing and repairing electronic sensors, working with pneumatic devices, doing simple programming of Programmable Logic Controllers and servicing production lines centered around conveyor systems.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ERA	113	Cabling and Soldering	5
ERA	115	DC Electronics	5
TMATH	100	Technical Math I	5
			15

Winter Quarter, First Year			Credits
WRT	105	Writing in the Workplace	5
ERA	121	AC Electronics	5
ERA	120	Sensor Technology	3
ERA	151	Mechanical Systems	3
			16

Spring Quarter, First Year			Credits
ELT	201	Solid State Devices	5
ERA	250	Automation I	4
H R	110	Human Relations-Workplace	5
			14

Summer Quarter, First Year			Credits
ERA	212	Computer Electronics I	5
ERA	150	Robotics I	3
ERA	251	Automation II	4
			12

Energy Technology

Emphasis: ***Energy Technology Power Operations***

Degree: ***Associate in Applied Science***

PURPOSE: The Power Operations AAS Degree program prepares students to compete for employment in the Power Generation Industry.

Centralia College is designated as Washington State's Center of Excellence for Energy Technology and is supported by statewide energy industry and labor leaders. The Energy Technology degree offers coursework in traditional sources of power generation as well as renewable energy and energy efficiency. The program prepares students for entry level positions such as power plant assistant control operator, technician, and other high voltage apprenticeships.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Understand and operate electrical systems.
- Understand the components used in the transmission of electricity.
- Specialize in power generating, power transmission, metering, substation operations, plant mechanics, or boiler operations.

Suggested Order of Classes

Fall Quarter, First Year			Credits
PPO	150	Energy Efficiency	3
PPO	151	Energy Efficiency Lab	2
PPO	100	Introduction to Energy Industry	5
MATH	098	Algebra I*	5
			15

Winter Quarter, First Year			Credits
MATH	099	Algebra II*	3
PPO	102	Power Generation	5
PPO	120	Print Reading	4
			15

Spring Quarter, First Year			Credits
MATH&	107	Math in Society	5
BTEC	214	Excel I	5
PPO	103	Electric Utility Distribution	5
PPO	130	Industrial Safety	5
			20

Summer Quarter, Optional			Credits
PPO	191	Power Plant Job Prep	4
ENGL&	101	English Composition I	5
			9

Fall Quarter, Second Year			Credits
H R	110	Human Relations-Workplace	5
PPO	201	Plant Systems & Equipment	5
ENGL&	102	English Composition II	5
			15

Winter Quarter, Second Year			Credits
ENVS&	100	Survey of Env Science	5
PPO	202	Plant Maintenance	5
BTEC	210	Word I	5
			15

Spring Quarter Second Year			Credits
HLTH	145	Safety & Fitness	3
PPO	203	Refrigeration & HVAC	5
Elective Credits			5
			13

Recommended Elective Courses:

CAD	112	Computer Aided Drafting	3
ERA	115	DC Electronics	5
ERA	121	AC Electronics	5
PHYS&	100	Physics: Non-Science Majors	5
Computer Courses			
Basic Welding			

*Credits not included in graduation totals.

Engineering

Emphasis: ***Bioengineering and Chemical Engineering***

Degree: ***Associate in Science-MRP***

PURPOSE: The Bio/Chemical Engineering Associate in Science degree is a pre-engineering Major Related Program designed for students transferring to a four-year college or university to complete a degree in the sub-discipline of bioengineering or chemical engineering. Elective credits should be planned with the help of an engineering advisor and based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend. This two-year program requires students to be ready for calculus by the second quarter of the first year.

If you are not well prepared in high school mathematics and science, you should plan a three-year program at Centralia College in preparation for transfer to a four-year school with the main emphasis in the first year on strengthening your mathematics, basic sciences, communication, and reading skills.

Suggested Order of Classes

Fall Quarter, First Year**			Credits
CHEM&	161	General Chem w/lab I	6
ENGL&	101	English Composition I	5
ENGR	100	Intro to Engineering	2
Elective,^		OR	
Humanities		OR	
Social Science Distribution			5
			18

Winter Quarter, First Year			Credits
CHEM&	162	General Chem w/lab II	6
MATH&	151	Calculus I	5
Elective,^		OR	
Humanities		OR	
Social Science Distribution			5
			16

Spring Quarter, First Year			Credits
CHEM&	163	General Chem w/lab III	6
MATH&	152	Calculus II	5
Elective,^		OR	
Humanities		OR	
Social Science Distribution			5
			16

Fall Quarter, Second Year			Credits
CHEM&	261	Organic Chemistry I	6
MATH	118	Linear Algebra	5
PHYS&	221	Engineering Physics I	5
			16

Winter Quarter, Second Year			Credits
BIOL&	222	Majors Cell/Molecular(lab)	
		OR	
CHEM&	262	Organic Chemistry w/lab	5-6
MATH&	163	Calculus III	5
PHYS&	222	Engineering Physics II	5
			15-16

Spring Quarter, Second Year			Credits
MATH	212	Differential Equations	5
PHYS&	223	Engineering Physics III	5
ENGR&	214	Statics	5
Health & Fitness Distribution			3
			18

An Economics class is recommended.

**If you need review prior to MATH& 151 Calculus I, you may take Pre-Calculus.Check for specific prerequisites for transfer institutions, particularly natural science and foreign language requirements.

^Choose one elective from CS& 131, CS& 141, MATH 264

Emphasis: ***Computer and Electrical Engineering***

Degree: ***Associate in Science-MRP***

PURPOSE This pre-engineering degree is a Major Related Program designed for students transferring to a four-year college or university to complete a bachelor's degree in computer engineering or electrical engineering.

Elective credits should be planned with the help of an engineering advisor and based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend. This two-year program requires students to be ready for calculus by the second quarter of the first year.

If you are not well prepared in high school mathematics and science, you should plan a three-year program at Centralia College in preparation for transfer to a four-year school with the main emphasis in the first year should be on strengthening your mathematics, basic sciences, communication, and reading skills.

Suggested Order of Classes

Fall Quarter, First Year**			**Credits**
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
ENGR	100	Intro to Engineering	2
Humanities OR Social Science Distribution			5
			18

Winter Quarter, First Year			**Credits**
ENGL&	235	Technical Writing	5
MATH&	151	Calculus I	5
Health & Fitness Distribution			3
Humanities OR Social Science Distribution*			5
			18

Spring Quarter, First Year			**Credits**
CS&	131	Computer Science I C++	
		OR	
CS&	141	Computer Science I Java	5
MATH&	152	Calculus II	5
ENGR&	214	Statics	5
			15

Fall Quarter, Second Year			**Credits**
MATH	118	Linear Algebra	5
PHYS&	221	Engineering Physics I	5
Humanities OR Social Science Distribution			5
			15

Winter Quarter, Second Year			**Credits**
ENGR	203	Applied Numerical Methods	5
ENGR&	215	Dynamics	5
MATH&	163	Calculus III	5
PHYS&	222	Engineering Physics II	5
			20

Spring Quarter, Second Year			**Credits**
ENGR&	204	Electrical Circuits	5
MATH	212	Differential Equations	5
MATH	264	Calculus IV	3
PHYS&	223	Engineering Physics III	5
			18

*An Economics class is recommended.

**If you need review prior to MATH& 151 Calculus I, you should take Precalculus.

Emphasis: ***Mechanical & Civil Engineering***

Degree: ***Associate in Science-MRP***

PURPOSE: This pre-engineering degree is a Major Related Program designed for students transferring to a four-year college or university to complete a degree in the sub-disciplines of mechanical, civil, aeronautical, industrial, and materials science engineering.

Elective credits should be planned with the help of an engineering advisor and based on the requirements of the specific discipline at the baccalaureate institution the student plans to attend.

This two-year program requires students to be calculus ready second quarter of the first year. If you are not well prepared in high school mathematics and science, you should plan a three-year program at Centralia College in preparation for transfer to a four-year school. The main emphasis in the first year should be on strengthening your mathematics, basic sciences, communication, and reading skills.

Suggested Order of Classes

Fall Quarter, First Year			**Credits**
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
ENGR	100	Intro to Engineering	2
Social Science Distribution**			5
			18

Winter Quarter, First Year			**Credits**
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I *	5
Humanities Distribution			5
			16

Spring Quarter, First Year			**Credits**
ENGR&	214	Statics	5
MATH&	152	Calculus II	5
Health & Fitness Distribution			3
Humanities Distribution			
		OR	
Social Science Distribution**			5
			18

Fall Quarter, Second Year			**Credits**
ENGR&	225	Mechanic of Materials	5
MATH	118	Linear Algebra	5
PHYS&	221	Engineering Physics I	5
			15

Winter Quarter, Second Year			**Credits**
ENGR&	215	Dynamics	5
MATH&	163	Calculus III	5
PHYS&	222	Engineering Physics II	5
ENGR	203	Applied Numerical Methods	5
			20

Spring Quarter, Second Year			**Credits**
ENGR&	204	Electrical Circuits	5
MATH	212	Elementary Differential Equations	5
MATH	264	Calculus IV	3
PHYS&	223	Engineering Physics III	5
			18

Electives must include a minimum of 2 or more courses chosen from Calculus IV, Technical Writing, and Electrical Circuits.

*If you need review prior to (MATH& 151) Calculus I, you should take Precalculus .

**A course in economics is recommended, either ECON& 201 or ECON& 202.

English

Emphasis: ***English***

Degree: ***Associate in Arts***

PURPOSE: The Associate in Arts degree with an emphasis in English provides introductory-level and survey courses within the parameters of an English major as that English major is defined at the baccalaureate degree-granting institution to which the student transfers. Most English departments at the baccalaureate level will accept 10-15 credits of lower-level English courses as meeting minimum requirements toward a major in English. English credits taken at Centralia College beyond the 10-15 acceptable credits at the baccalaureate institution will be considered elective credits and may or may not fulfill English major requirements at the baccalaureate transfer institution.

Suggested Order of Classes

Fall Quarter, First Year			**Credits**
ENGL&	101	English Composition I	5
Humanities Distribution			5
Social Science Distribution*			5
			15

Winter Quarter, First Year			**Credits**
ENGL&	102	Composition II	5
Elective (Literature or Creative Writing)			5
Humanities Distribution			5
			15

Spring Quarter, First Year			**Credits**
Elective (Literature Class)			5
Health & Fitness Distribution			3
Quantitative Skills Distribution			5
Social Science Distribution			5
			18

Fall Quarter, Second Year			**Credits**
Elective (Literature Class)			5
Humanities Distribution			5
Science Distribution			5
			15

Winter Quarter, Second Year			**Credits**
Elective (Literature or Creative Writing)			5
Science Distribution			5
Social Science Distribution			5
			15

Spring Quarter, Second Year **			**Credits**
Elective (Literature Class)			5
Humanities Distribution			5
Science Distribution			5
			15

To satisfy the 3-5 credit diversity requirement, students may wish to take:

-Non-Western Literature-winter

-Women in Literature-spring

Other "D" courses listed in current college catalog.

*It is recommended students take one History class to satisfy a Social Science distribution requirement.

**Creative writing electives available.

Environmental Science

Emphasis: ***Environmental Science***

Degree: ***Associate in Arts***

PURPOSE: The AA degree with an emphasis in Environmental Studies is intended for students who plan a career in an environmental field in areas such as environmental policy and law, urban planning, environmental ethics, and environmental advocacy.

Fall Quarter, First Year			Credits
BIOL&	100	Survey of Biology	5
ENGL&	101	English Composition I	5
Humanities Distribution			5
			15

Winter Quarter, First Year			Credits
ENVS&	100	Survey of Enviro Science	5
Social Science Distribution			5
Elective			5
			15

Spring Quarter, First Year			Credits
ENGL&	102	Composition II	5
CHEM&	121	Intro to Chemistry	5
Humanities Distribution			5
			15

Fall Quarter, Second Year			Credits
GEOL&	101	Intro to Physical Geology	5
MATH&	146	Introduction to Stats	5
Social Science Distribution			5
			15

Winter Quarter, Second Year			Credits
HLTH	130	Health and Wellness	3
Social Science Distribution			5
Electives			7
			15

Spring Quarter, Second Year	Credits
Humanities Distribution	5
Electives	10
	15

Recommend choosing one from the following:

Select three Social Science distribution classes, one class from each of the following disciplines:

ANTH& 100, 206, 225, OR GEOG& 200

ECON& 202 or ECON& 201

POLS& 101 OR POLS& 202

Select Humanities distribution classes from the following:

SPEE 110 Prin of Speech Communication,

PHIL& 101 Introduction to Philosophy

Plus five (5) credits of foreign language or other Humanities distribution

Additional Science classes are recommended for electives: BIOL& 221, 222, 223; BOTA 113, 150; GEOG 201, and GEOL 108, 208

Emphasis: ***Environmental Science***

Degree: ***Associate in Science***

PURPOSE: The AS degree with an emphasis in Environmental Science is intended for students who plan a career as a scientist or technician in an environmental field such as conservation biology, environmental chemistry, environmental geology, energy resources, environmental planning, agroecology or atmospheric sciences.

Fall Quarter, First Year			Credits
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
ENVS&	100	Survey of Env Science	5
			16

Winter Quarter, First Year			Credits
CHEM&	162	General Chemistry w/lab II	6
GEOL&	101	Intro to Physical Geology	5
MATH&	142	Precalculus II	5
			16

Spring Quarter, First Year			Credits
CHEM&	163	General Chemistry w/lab III	6
ECON&	201	Microeconomics	5
MATH&	151	Calculus I	5
			16

Fall Quarter, Second Year			Credits
BIOL&	221	Majors Ecology/Evolution	5
MATH&	152	Calculus II	5
PHYS&	221	Engineering Physics I	5
			15

Winter Quarter, Second Year			Credits
BIOL&	222	Majors Cell/Molecular	5
MATH&	146	Introduction to Stats	
		OR	
MATH&	163	Calculus III	5
SPEE	110	Prin of Speech Communication	5
			15

Spring Quarter, Second Year			Credits
BIOL&	223	Majors Organismal Phys	5
HLTH	130	Health & Wellness	3
Humanities OR Social Science Distribution			5
			13

Check for specific prerequisite for transfer institutions, particularly natural science and foreign language requirements.

Exercise Science

See Physical Education, Health and Recreation

Fine Arts

Emphasis: ***Fine Arts***

Degree: ***Associate in Arts***

PURPOSE: The AA degree with a Fine Arts emphasis is for students interested in transferring to a four-year college or university to complete a bachelor's degree with a major in art.

As well as providing a basic liberal arts foundation, this program provides a solid base in studio art and art history which is essential for those interested in entering a variety of art professions.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ART&	100	Art Appreciation	5
ART	110	Design	4
Humanities Distribution			5
			14

Winter Quarter, First Year			Credits
ART	111	Sculpture	5
ENGL&	101	English Composition I	5
Social Science Distribution			5
			15

Spring Quarter, First Year			Credits
ART	102	Drawing I	5
ENGL&	102	Composition II	5
Science Distribution			5
			15

Fall Quarter, Second Year			Credits
ART	200	Art History: Ancient	5
Science Distribution			5
Quantitative Skills Distribution			5
			15

Winter Quarter, Second Year			Credits
ART	201	Art History: 15th-17th Century	5
Health & Fitness Distribution			3
Science Distribution			5
Social Science Distribution			3
			16

Spring Quarter, Second Year			Credits
ART	202	Art History: 18th-20th Century	5
Humanities Distribution			5
Social Science Distribution			5
			15

Foreign Languages

Emphasis: ***Chinese***
French
Spanish

Degree: ***Associate in Arts or***
Associate in Liberal Arts

PURPOSE: The degree plan is designed for transfer but is also appropriate for anyone who wishes a solid foundation in Chinese, French, or Spanish. It will benefit students with personal reasons for speaking a foreign language as well as travelers and those planning a career in international business, teaching, social work, interpreting, translating, and the Foreign Service, to name just a few possibilities.

Fall Quarter, First Year			Credits
CHIN&, FRCH&, or SPAN&	121		5
ENGL&	101	English Composition I	5
Quantitative Skill Distribution			5
			15

Winter Quarter, First Year			Credits
CHIN&, FRCH&, or SPAN&	122		5
ENGL&	102	Composition II	5
ANTH&	206	Cultural Anthropology	5
Health & Fitness Distribution			1
			16

Spring Quarter, First Year			Credits
CHIN&, FRCH&, or SPAN&	123		5
SPEE	250	Intercultural Communications	5
Science Distribution			5
			15

Fall Quarter, Second Year			Credits
SPAN&	221	Spanish IV	
		OR	
Elective (for Chinese and French majors)			5
Humanities Distribution			5
Social Science Distribution			5
Health & Fitness Distribution			1
			16

Winter Quarter, Second Year			Credits
SPAN&	222	Spanish VI (for Spanish majors)	
		OR	
Elective (for Chinese and French majors)			5
Social Science Distribution			5
Science Distribution			5
Health & Fitness Distribution			1
			16

Spring Quarter, Second Year			
SPAN&	223	Spanish VI (for Spanish majors)	
		OR	
Elective (for Chinese and French majors)			5
Elective			5
Science Distribution			5
			15

To qualify for this degree students must complete a minimum of 90 credits in courses numbered 100 or above.

Students are advised to consult their advisor for the selection of distribution and elective credits. Foreign language majors are encouraged to include courses in Anthropology, Political Science, Business, Education, Criminal Justice or Medical and Legal Terminology, depending on focus.

Geography

See Earth Sciences

Geology

See Earth Sciences

General Engineering

See Engineering

Graphic Design

Emphasis: ***Graphic Design***

Degree: ***Associate in Arts***

PURPOSE: Graphic design is art that interests, informs, persuades, or sells. It has taken the traditional form of printed material and now includes computer imaging. The AA degree with emphasis in graphic design is for students who want to complete a two-year program or transfer to a four-year college or university. This educational plan gives students a solid base in studio art.

A portfolio of artwork is required to demonstrate studio abilities upon completion of the program.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ART	110	Design	4
ENGL&	101	English Composition	5
Health & Fitness Distribution			1
Humanities Distribution			5
			15

Winter Quarter, First Year			Credits
ART	201	Art History: 15th-17th Century	5
JOUR	160	Intro to Mass Media	5
Health & Fitness Distribution			1
Quantitative Skills Distribution			5
			16

Spring Quarter, First Year			Credits
ART	102	Drawing I	5
ART	202	Art History: 18th-20th Century	5
ENGL&	102	Composition II	5
Health & Fitness Distribution			1
			16

Fall Quarter, Second Year			Credits
ART	130	Computer Graphics	5
Science Distribution			5
Social Science Distribution			5
			15

Winter Quarter, Second Year			Credits
ART	135	Graphic Design	5
Science Distribution			5
Social Science Distribution			5
			15

Spring Quarter, Second Year			Credits
ART	174	Digital Photography	5
Science Distribution			5
Social Science Distribution			5
			15

Recommended distribution for Graphic Design majors:

SPEE	110	Prin of Speech Communication	5

History

Emphasis: ***History***

Degree: ***Associate in Arts***

PURPOSE: The Associate in Arts with an emphasis in History is designed to prepare students to major in history when they transfer to a four-year college or university.

Through the study of history students systematically examine the past and gain an opportunity to explore human nature and contemporary concerns. Historians work from the written records (cultural, economic, political, and scientific) of past generations to discover the kinds of lives led and problems faced.

The study of the trials and accomplishments, deeds, and aspirations of past generations is an excellent way to obtain the kind of broad education needed in our constantly changing world.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
HIST&	116	Western Civilization I	5
HUM	110	Cultural Ethics	5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
HIST&	117	Western Civilization II	5
Health & Fitness Distribution			1
Science Distribution			5
			16

Spring Quarter, First Year			Credits
ECON&	202	Macroeconomics	5
HIST&	118	Western Civilization III	5
Health & Fitness Distribution			1
Quantitative Skills Distribution			5
			16

Fall Quarter, Second Year			Credits
ANTH&	100	Survey of Anthropology	5
HIST&	146	U.S. History I	5
Science Distribution			5
			15

Winter Quarter, Second Year			Credits
ENGL	260	Non-Western World Literature	5
HIST&	147	U.S. History II	5
Health & Fitness Distribution			1
Science Distribution			5
			16

Spring Quarter, Second Year			Credits
HIST&	148	U.S. History III	5
POLS&	202	American Government	5
Humanities Distribution			5
			15

These Humanities courses would be particularly valuable:

Speech, Art History, and Music of the World.

Humanities

Emphasis: ***Humanities***

Degree: ***Associate in Arts***

PURPOSE: The Associate in Arts degree with emphasis in Humanities is designed for those planning to major in English, History, Political Science, or related academic areas after transferring to a four-year college or university.

The study of a foreign language is highly recommended.

Students are urged to consult with their advisor before selecting electives. This will allow coordination of electives with desired career goal.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
HUM&	116	Humanities I	5
Quantitative Skills Distribution			5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
HUM&	117	Humanities II	5
Science Distribution			5
			15

Spring Quarter, First Year			Credits
HIST&	118	Western Civilization III	5
HUM&	118	Humanities III	5
PSYC&	100	General Psychology	5
Health & Fitness Distribution			3
			18

Fall Quarter, Second Year			Credits
ENGL&	244	American Literature	5
HUM	110	Ethics & Cultural Values	5
SPEE	110	Prin of Speech Communication	5
			15

Winter Quarter, Second Year			Credits
HUM	270	Survey of Film	5
SOC&	101	Intro to Sociology	5
Science Distribution			5
			15

Spring Quarter, Second Year			Credits
MUSC	140	History of American Music	5
Science Distribution			5
Elective			2
			12

Mathematics

Emphasis: ***Mathematics***

Degree: ***Associate in Arts***

PURPOSE: The Associate in Arts degree with an emphasis in Mathematics is for students interested in transferring to a four-year college or university to complete a bachelor's degree in mathematics.

If you are not well prepared in high school math, you should plan, with your advisor, a three-year program to prepare for transfer to a four-year college or university. The emphasis in the first year should be on strengthening your math, basic science, communication, and reading skills.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition	5
MATH&	135	Precalculus Refresher OR	
MATH&	146	Introcuction to Stats	5
Humanities Distribution			5
			15

Winter Quarter, First Year			Credits
ENGL&	102	English Composition II	5
MATH&	151	Calculus I	5
SPEE	110	Speech Communication	5
			15

Spring Quarter, First Year			Credits
ENGL&	102	Composition II	5
MATH&	152	Calculus II	5
Health & Fitness Distribution			1
Social Science Distribution			5
			16

Fall Quarter, Second Year			Credits
MATH	118	Linear Algebra	5
Humanities Distribution			5
Science Distribution			5
			15

Winter Quarter, Second Year			Credits
MATH&	163	Calculus III	5
Humanities Distribution			5
Science Distribution			5
			15

Spring Quarter, Second Year			Credits
MATH	212	Differential Equations	5
MATH	264	Calculus IV	3
Health & Fitness Distribution			1
Science Distribution			5
			14

Recommended Courses

BIOL&	221, 222, 223		5
MATH	&146, 228		5
PHYS&	104, 105, 106, 221, 222, 223		5
BIOL&	241, 242		5

Mathematics Education

Emphasis: ***Mathematics Education***

Degree: ***Associate in Math Education-MRP***

PURPOSE: The Associate in Math Education is intended to prepare students who aspire to be secondary math teachers. Students who complete this degree will have completed lower division general education requirements as well as the prerequisites for a major in math.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
MATH	135	Precalculus Refresher OR	
MATH&	146	Introduction to Stats	5
Humanities Distribution			5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
MATH&	151	Calculus I	5
SPEE	110	Prin of Speech Communication	5
			15

Spring Quarter, First Year			Credits
PSYC&	100	General Psychology	5
MATH&	152	Calculus II	5
Humanities Distribution			5
			15

Fall Quarter, Second Year			Credits
MATH	118	Linear Algebra	5
Science Distribution*			5
Social Science Distribution			5
			15

Winter Quarter, Second Year			Credits
EDUC&	201	Intro to Education	3
MATH&	163	Calculus III	5
Health & Fitness Distribution			3
Social Science Distribution			5
			16

Spring Quarter, Second Year			Credits
EDUC	202	Classroom Observation	2
MATH	264	Calculus IV	3
Humanities Distribution			5
Science Distribution*			5
			15

* Physics, Chemistry, Geology or Biology; at least one lab science required.

Media Studies

Emphasis: ***Radio Broadcasting***
Television Production

Degree: ***Associate in Arts***

PURPOSE: The Media Studies program is designed for students interested in transferring to a four-year college or university to complete a bachelor's degree in Electronic Media which includes: Radio, Television, Video Production, Film Broadcast Journalism and Sports Announcing. In some cases this program is equally suited for students interested in a two-year terminal degree prior to entry in the media field.

The Electronic Media facilities at Centralia College are unique among Washington State community colleges. Students learn on professional audio and video equipment and are provided experience in numerous areas of production. KCED-FM , a fully equipped radio station authorized by the Federal Communications Commission, is operated by students in the Media Studies programs. Those students desiring an emphasis in radio broadcasting have ample opportunity for live "on-the-air" experience in broadcasting as well as studio production experience. The Centralia College television studio and production facilities are well equipped and provide experience in taping, directing, editing and producing. Students who transfer to a four year college should consult their advisors for choice of distribution credit and elective courses.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
M ST	230	Radio Broadcasting*	5
M ST	260	Intro to TV & Video Production	5
Social Science Distribution			5
			20

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
M ST	231	Adv Radio Broadcasting*	5
M ST	261	Adv TV & Video Production	5
Humanities Distribution			5
			20

Spring Quarter, First Year			Credits
JOUR	160	Intro to Mass Media	5
M ST	220	Broadcast News and Prod	4
M ST	262	Adv. TV & Video Production	5
Health & Fitness Distribution			1
			15

Fall Quarter, Second Year			Credits
M ST	271	Radio Broadcasting Intern**	
		OR	
M ST	281	Television Internship	1
Humanities Distribution			5
Social Science Distribution			5
Science Distribution			5
			16

Winter Quarter, Second Year			Credits
M ST	272	Radio Broadcasting Intern**	2
		OR	
M ST	281	Television Internship	1
Health & Fitness Distribution			1
Social Science Distribution			5
Science Distribution			5
			12-13

Spring Quarter, Second Year			Credits
M ST	273	Radio Broadcasting Intern**	3
		OR	
M ST	281	Television Internship	1
Science Distribution			5
Health & Fitness Distribution			1
Quantitative Skills Distribution			5
			12-14

* Radio Majors

**In cooperation with a professional radio or TV company, a student may enroll in M ST 190, Cooperative Work Experience. A student may receive up to 12 credits for learning that occurs on the job. Attendance at a Work Experience Seminar is required. You must take the Work Experience Seminar before or in the same quarter as the Co-op course.

Media Studies–Film

Emphasis: ***Media Studies-Film***

Degree: ***Associate in Arts***

PURPOSE: The Media Studies program is designed for students interested in transferring to a four-year college or university to complete a bachelor's degree in Electronic Media. In some cases this program is equally suited for students interested in a two-year terminal degree prior to entry in the media field. The Electronic Media facilities at Centralia College are unique among Washington State community colleges. Students learn on professional audio and video equipment and are provided experience in numerous areas of production.

For students interested primarily in Television and Film the Centralia College television studio and production facilities are well equipped and provide experience in taping, directing, editing and producing. Classes will help students attain skills in camera work, studio and field production. Lighting, running an audio board, writing, directing, producing and editing short video projects are also covered. The Media Studies program in conjunction with the Drama department also offers students the opportunity to learn some set design and building crafts as well as lighting techniques and skills.

Students in the Television and Film classes will have the opportunity to participate in live productions including broadcast of College Basketball games, community forums as well as help in recording the College Musical. Students who transfer to a four-year college should consult their advisors for choice of distribution credit and elective courses.

Suggested Order of Classes

Fall Quarter, First Year			Credits
DRMA	106	Intro to Stage Craft	3
ENGL&	101	English Composition I	5
M ST	260	Intro to Television and Video Production	5
Social Science Distribution			5
			18

Winter Quarter, First Year			Credits
DRMA	111	Stage Lighting	3
ENGL&	102	Composition II	5
HUM	270	Survey of Film Studies	5
M ST	261	Adv. Television and Video Production	5
			18

Spring Quarter, First Year			Credits
DRMA	103	Set Design	3
DRMA	120	Intro to Playwriting	5
M ST	262	Television Production	3
Health & Fitness Distribution			3
			14

Fall Quarter, Second Year			Credits
DRMA	107	Beginning Acting	5
M ST	281	Television Internship	1
Quantitative Skills Distribution			5
Science Distribution			5
			16

Winter Quarter, Second Year			Credits
JOUR	160	Into to Mass Media	5
Science Distribution			5
Social Science Distribution			5
			15

Spring Quarter, Second Year	Credits
Academic Elective	5
Science Distribution	5
Social Science Distribution	5
	15

Media Studies–Sports Announcing and Production

Emphasis: ***Sports Announcing/ Production***

Degree: ***Associate in Arts***

PURPOSE: The Media Studies program is designed for students interested in transferring to a four-year college or university to complete a bachelor's degree in Electronic Media. In some cases this program is equally suited for students interested in a two-year terminal degree prior to entry in the media field. The Electronic media facilities at Centralia College are unique among Washington State community colleges.

Students learn on professional audio and video equipment and are provided experience in numerous areas of production. Students primarily interested in Sports Announcing have the opportunity to perfect their skills on campus radio station KCED-FM, on live broadcasts over the local cable access channel and in the college's television studio and production rooms. Classes and practical application will help students develop skills sports announcers use to broadcast and report on sporting events.

Students also have the opportunity to host their own sports discussion show on KCED as well as calling the play by play action of college basketball, baseball and local high school football games.

Instruction on vocal techniques, production, conducting and recording interviews, writing and research as well as specific duties of each member of a broadcast booth will be covered. Students who transfer to a four-year college should consult their advisors for choice of distribution credit and elective courses.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
M ST	125	Intro to Sport Broadcast	1
M ST	126	Sports Announcing for Football	1
M ST	230	Radio Broadcasting	5
Social Science Distribution			5
			17

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
M ST	127	Sports Announcing for Basketball	1
M ST	231	Adv Radio Broadcast	5
Health & Fitness Distribution			1
Social Science Distribution			5
			17

Spring Quarter, First Year			Credits
JOUR	160	Intro to Mass Media	5
M ST	128	Sports Announcing for Baseball	1
M ST	220	Intro to Broadcast News & Production	4
Health & Fitness Distribution			1
Science Distribution			5
			16

Fall Quarter, Second Year			Credits
JOUR	106	Intro to News Writing	5
M ST	260	Television Broadcasting and Production	5
SPEE	110	Prin of Speech Communication	5
Quantitative Skills Distribution			5
			20

Winter Quarter, Second Year			Credits
DRMA	107	Beginning Acting	5
JOUR	107	Intro to News Writing II	3
M ST	261	Adv. Television and Video Production	3
Science Distribution			5
			16

Spring Quarter, Second Year			Credits
M ST	262	Television Production	3
Health & Fitness Distribution			1
Science Distribution			5
Social Science Distribution			5
			14

Recommended Classes:

JOUR 111, 112, 113 - Newspaper Staff I-III (3-5)

Medicine

See Pre-Medicine, Pre-Dentistry

Meteorology

See Earth Science

Nursing-Registered

Major: Nursing (RN)
Degree: Associate in Applied Science-Transfer

PURPOSE: The RN nursing program at Centralia College is designed to prepare men and women to give nursing care in a variety of health care settings. Students who complete the RN program are eligible to take the National Council Licensure Examination for Registered Nursing (NCLEX-RN). In addition to preparing a student to compete for employment in the nursing profession, the AAS-T degree provides science and general education courses appropriate for students planning a future transfer directly into selected Bachelor of Science in Nursing (BSN) programs.

A maximum of 24 students are selected each year for the RN program. RN students must apply for admission to the program. Students wishing to enter the RN program must meet all of the prerequisite courses, grade point average requirements, and have Nurse Aide Certification in Washington State. Complete RN admission application materials are available through the Centralia College Office of Admissions & Records. Applications are due in April; course completed through Spring quarter will be considered. (Subject to change.)

If you are admitted to the RN program, you must then provide consent forms and immunization records to the Nursing Director and attend a mandatory orientation session. Before beginning clinicals, Nationwide and Washington State specific background checks will be obtained. This includes a criminal records check required by clinical facilities in order to be at those clinical sites. You also must show proof of current Basic Life Support (BLS) for Health Care Providers (HCP).

PROGRAM OUTCOMES: Students who successfully complete this program should be able to meet the Program Objectives associated with the following nursing roles:

- Caregiver-Provides nursing care interventions that demonstrate safety and a personal sense of accountability and commitment.
- Decision Maker-Uses decision making as a purposeful, self-regulated process that incorporates critical thinking in the consideration of evidence, contexts, conceptualizations, methods and criteria.
- Communicator-Demonstrates interactive communication processes (verbal, nonverbal, written, or through technology) that express advocacy, caring, compassion and cultural awareness.
- Teacher-Transmits health information, evaluates responses to teaching, and modifies teaching based on identified responses to promote and facilitate informed decision making, achieve positive outcomes and support self-care activities.
- Manager/Leader-Uses human, physical, financial and technological resources efficiently and effectively to meet client needs and support organizational outcomes. Possesses the ability to guide, teach, motivate, direct, and influence others to attain goals through cooperation and open professional communication in shared planning, decision making, problem solving and goal setting.
- Professional-Respects individual rights and professional standards, adheres to the nurse practice act and demonstrates honesty and integrity in behaviors characterized by commitment to others, appreciation for the values of the nursing profession, and participation in professional development activities.
- Researcher-Applies the scientific method to gain new knowledge, discover solutions to problems, advance the profession of nursing, and improve the delivery of nursing and health care.

Prerequisites			Credits
CHEM&	121	Intro to Chemistry	5
ENGL&	101	English Composition I	5
MATH&	146	Introduction to Stats	5
PSYC&	200	Lifespan Psychology	5
BIOL&	241	Human A & P 1	5
BIOL&	242	Human A & P 2	5
NAC Certification			

Core Requirements			Credits
Courses which are recommended to be taken prior to admission into the Nursing Program.			
BIOL&	260	Microbiology	5
SPEE	110	Prin of Speech Communication	5
ANTH&	206	Cultural Anthropology OR	
SOC&	101	Intro to Sociology	5
Health & Fitness Distribution			3

Nursing Courses			Credits
First Year, Fall Quarter			
NURS	101	Basic Nursing Care Concepts	12
First Year, Winter Quarter			
NURS	102	Common Alterations I	12
First Year, Spring Quarter			
NURS	103	Common Alterations II	12
Second Year, Fall Quarter			
NURS	201	Mental Health and Lifespan	10
NURS	220	Management & Leadership	2
			12

Second Year, Winter Quarter			Credits
NURS	202	Complex Alterations	12

Second Year, Spring Quarter			Credits
NURS	203	Complex Management	8
NURS	222	Transition to Practice	4
			12

Medical Assistant

Emphasis: Medical Assistant
Degree: Associate in Applied Science

PURPOSE: Medical Assistants are multi-skilled practitioners who perform in a wide range of skills in physicians' offices and other health care settings. Program graduates assist physicians and other health care practitioners on many aspects of medical practice, including patient care management, administrative, and clinical procedures. Clinical procedures include: assisting with physical examinations, phlebotomy (blood draw), administering injections, performing electrocardiograms (EKGs) and instrument sterilization.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Perform administrative tasks using computer software to research and organize data for medical information systems.
- Demonstrate efficiency in maintaining accurate and well-organized patient medical records.
- Effectively use oral and written communication skills as they relate to a medical office environment.
- Perform within legal and ethical boundaries, including issues of patient confidentiality.
- Recognize the impact of cultural differences in care of patients.
- Use problem-solving/critical thinking to identify proper medical office procedures/processes, including infection control guidelines (Standard Precautions) as determined by the Center for Disease

Control and the Occupational Safety and Health Administration.

- Prepare and maintain examination and treatment areas.
- Demonstrate the ability to prepare a patient for and assist with routine and speciality examinations and procedures, including obtaining/documenting vital signs and body measurements.
- Demonstrate knowledge of basic pharmacology and medication administration.
- Demonstrate knowledge of laboratory procedures performed in the medical office laboratory, including venipuncture and capillary puncture.
- Recognize and be able to respond to medical office emergencies within the scope of training.
- Demonstrate ability to maintain medical office equipment and supplies.

Suggested Order of Classes

Fall Quarter, First Year			Credits
HLSV	121	Indroduction to Healthcare	2
ENGL&	101	English Composition	5
BTEC	102	Skillbuilding I	3
MA	139	MA Medical Terminology	5
			15

Winter Quarter, First Year			Credits
BIOL&	170	Human Biology	5
MA	140	Medical Assisting Intro	5
HR	110	Human Relations-Workplace	5
			15

Spring Quarter, First Year			Credits
PSYC&	100	Psychology	5
MA	130	Medical Math	5
BIOL	172	Human Biology Lab	1
BTEC	266	Medical Law & Ethics	3
Health & Fitness Distribution			3
			17

Prerequisites for 2nd year: MA139, MA 130, BIOL& 170; 2.5 in each prerequisite course; cumulative 2.5GPA.

Apply for Medical Assistant Year 2

Fall Quarter, Second Year			Credits
MA	241	MA Clinical Procedures I	10
MA	249	MA Admin Procedures	8
			18

Winter Quarter, Second Year			Credits
MA	242	Medication Administration	6
MA	246	MA Laboratory Procedures	5
HLSV	110	Basic Life Support for Healthcare	1
			12

Spring Quarter, Second Year			Credits
MA	243	MA Clinical Procedures II	6
MA	244	MA Externship Seminar	1
MA	245	MA Clinical Externship	6
MA	208	ECG	2
			15

Pre-Nursing DTA

Emphasis: Pre-Nursing

Degree: Associate in Pre-Nursing-MRP

PURPOSE: The Associate in Arts degree with Pre-Nursing emphasis is designed for students who intend to pursue a Bachelor of Science in Nursing (BSN) degree from a baccalaureate institution. The educational plan provides courses identified by both public and private colleges and universities to prepare students for further study in the field of nursing. Admission to all nursing programs in Washington State is highly competitive. Completing this program of study will prepare students to transfer with junior standing to most four-year colleges and universities in Washington State but does NOT guarantee admission to the Nursing program(s).

Students are urged to consult an advisor and refer to the admissions requirements for individual baccalaureate institutions for specific requirement and admission criteria.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
MATH&	146	Introduction to Stats	5
Health & Fitness Distribution			1
Humanities Distribution			5
			16

Winter Quarter, First Year			Credits
BIOL&	100	Survey of Biology OR	
BIOL&	170	Human Biology	5
CHEM&	121	Intro to Chemistry	5
PSYC&	100	General Psychology	5
			15

Spring Quarter, First Year			Credits
CHEM&	131	Intro to Organic/Biochemistry	5
ENGL&	102	Composition II	5
PSYC&	200	Lifespan Psychology	5
Health & Fitness Distribution			1
			16

Fall Quarter, Second Year			Credits
HUM	110	Ethics & Cultural Values	5
NUTR&	101	Nutrition	5
BIOL&	241	Human A & P 1	5
			15

Winter Quarter, Second Year			Credits
SOC&	101	Intro to Sociology	5
SPEE	110	Prin of Speech Communication	5
BIOL&	242	Human A & P 2	5
Health & Fitness Distribution			1
			16

Spring Quarter, Second Year			Credits
BIOL&	260	Microbiology	5
BIOL	243	Adv Topics Human A & P	5
Elective			5
			15

It is strongly recommended that students confer with an advisor at their potential transfer baccalaureate institution to determine the courses that best support or may be prerequisites for their BSN program.

BIOL 243, although not required, is strongly recommended.

Pharmacy

See Pre-Pharmacy

Physical Education

Emphasis: Teacher Education

Degree: Associate in Arts

PURPOSE: The Teacher Education plan is designed for students wanting to transfer to a four-year college or university to complete a bachelor's degree. The plan is well suited for students preparing for a career in education.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
MATH&	107	Math in Society	5
PSYC&	100	General Psychology	5
PE	229	Fitness Concepts	3
			18

Winter Quarter, First Year			Credits
CHEM&	121	Intro to Chemistry	5
ENGL&	102	Composition II	5
NUTR&	101	Nutrition	5
PE	150/152/153		1
			16

Spring Quarter, First Year			Credits
BIOL&	170	Human Biology	5
PE	125/140/142		1
SPEE	110	Prin of Speech Communication	5
Humanities Distribution			5
			16

Fall Quarter, Second Year			Credits
BIOL&	241	Human A & P 1	5
HLTH	140	Exercise & Nutrition	3
SOC&	101	Intro to Sociology	5
			13

Winter Quarter, Second Year			Credits
BIOL&	242	Human A & P 2	5
EDUC&	201	Intro to Education	3
EDUC	202	Classroom Observation	2
HLTH	130	Health & Wellness	3
			13

Spring Quarter, Second Year			Credits
HLTH	154	First Aid/CPR	1
PSYC&	200	Lifespan Psychology	5
Humanities Distribution			5
Social Science Distribution			5
			16

Emphasis: Exercise Science

Degree: Associate in Arts

PURPOSE: The Associate in Arts degree with an emphasis in Exercise Science is designed for students wanting to transfer to a four-year college or university to complete a bachelor's degree. This educational plan is well suited for students preparing for a career in exercise science.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
MATH&	146	Introduction to Stats	5
PSYC&	100	Intro to Psychology	5
PE	229	Physical Fitness Concepts	
		OR	
HLTH	145	Safety & Fitness	3
			18

Winter Quarter, First Year			Credits
CHEM&	121	Intro to Chemistry	5
ENGL&	102	Composition II	5
NUTR&	101	Nutrition	5
PE	150/152/153		1
			16

Spring Quarter, First Year			Credits
BIOL&	170	Human Biology	5
SPEE	110	Prin of Speech Communication	5
PE	125/140/142		1
Humanities Distribution			5
			16

Fall Quarter, Second Year			Credits
BIOL&	241	Human A & P 1	5
HLTH	140	Exercise & Nutrition	3
SOC&	101	Intro to Sociology	5
			13

Winter Quarter, Second Year			Credits
BIOL&	242	Human A & P 2	5
HLTH	130	Health & Wellness	3
Humanities Distribution			5
			13

Spring Quarter, Second Year			Credits
CHEM&	131	Intro to Organic/Biochemistry	5
HLTH	154	First Aid/CPR	1
PSYC&	200	Lifespan Psychology	5
Social Science Distribution			5
			16

Physics

Emphasis: ***Physics***

Degree: ***Associate in Science***

PURPOSE: The Associate in Science, Track 2, with an emphasis in physics is designed for students transferring to a four-year college or university to complete a degree in physics.

If you are not well prepared in high school mathematics and science, you should plan, with your advisor, a three-year program at Centralia College in preparation for transfer to a four-year college or university.

The emphasis in the first year at Centralia should be on strengthening your mathematics, basic sciences, communications, and reading skills.

Suggested Order of Classes

Fall Quarter, First Year			Credits
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition	5
Health & Fitness Distribution			3
			14

Winter Quarter, First Year			Credits
CHEM&	162	General Chemistry w/lab II	6
ENGL&	235	Technical Writing	5
MATH&	151	Calculus I	5
			16

Spring Quarter, First Year			Credits
CHEM&	163	General Chemistry w/lab III	6
MATH&	152	Calculus II	5
Humanities or Social Science Distribution			5
			16

Fall Quarter, Second Year			Credits
MATH	118	Linear Algebra	5
PHYS&	221	Engineering Physics I	5
Humanities or Social Science Distribution			5
			15

Winter Quarter, Second Year			Credits
ENGR	203	Applied Numerical Methods	5
MATH&	163	Calculus III	5
PHYS&	222	Engineering Physics II	5
			15

Spring Quarter, Second Year			Credits
MATH	212	Differential Equations	5
MATH	264	Calculus IV	3
PHYS&	223	Engineering Physics III	5
Humanities or Social Science Distribution			5
			18

A minimum of 15 credits in Humanities and Social Science are required. See Associate in Science Degree description.

Pre-Chiropractic
Pre-Physical Therapy

Emphasis: ***Pre-Chiropractic***
Pre-Physical Therapy

Degree: ***Associate in Science***

PURPOSE: The Pre-Chiropractic, Pre-Physical Therapy program is intended for persons who plan to pursue a professional career in chiropractic or physical therapy.

The plan of study presents a challenging blend of natural and physical sciences and can be tailored to meet individual needs. If you complete the courses recommended, you are reasonably assured of being able to transfer with junior standing to most colleges and universities in Washington State. Students interested in physical therapy should be aware that a master's degree is required for entry into professional practice. You are urged to consult with your advisor as you plan your curriculum and select electives. This will allow your advisor to coordinate your program with the requirements of the institution to which you expect to transfer.

Suggested Order of Classes

Fall Quarter, First Year			Credits
BIOL&	221	Majors Ecology/Evolution	5
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
			16

Winter Quarter, First Year			Credits
BIOL&	222	Majors Cell/Molecular	5
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I	5
			16

Spring Quarter, First Year			Credits
BIOL&	223	Majors Organismal Phys	5
CHEM&	163	General Chemistry w/lab III	6
MATH&	152	Calculus I	5
			16

Fall Quarter, Second Year			Credits
BIOL&	241	Human A & P 1	
		OR	
PHYS&	221	Engineering Physics I	5
Health & Fitness Distribution			3
Social Science Distribution*			5
			13

Winter Quarter, Second Year			Credits
BIOL&	242	Human A & P 2	
		OR	
PHYS&	222	Engineering Physics II	5
MATH&	146	Introduction to Stats	5
Humanities Distribution			5
			15

Spring Quarter, Second Year			Credits
BIOL&	243	Adv Topics Human A & P	
		OR	
PHYS&	223	Engineering Physics III	5
Social Science or Humanities Distribution			5
Elective			5
			15

Science electives:
BIOL& 221, 222, 223 Majors;
BIOL& 241, 242, 243 Human A & P w/lab I-III
CHEM& 261, 262, 263 Organic Chem w/lab i-III
PHYS& 221, 222, 223 Engineering Physics I-III

Pre-Dental Hygiene

Degree: ***Associate in Arts***

PURPOSE: The Pre-Dental Hygiene program provides appropriate science and general education courses for persons transferring to either a two- or four-year dental hygiene program. You may prepare for the one-year program below by completing high school chemistry, biology, and algebra or BIOL& 100 and MATH 098. Since there may be differences in prerequisites or curricula for dental hygiene programs at various colleges, you need to contact your advisor or the institution to which you will apply for specific details.

You may also be required to complete the Dental Hygiene Aptitude Test. Your advisor will help you set an educational plan to complete this program of study.

Suggested Order of Classes

Fall Quarter, First Year			Credits
CHEM&	121	Intro to Chemistry	5
ENGL&	101	English Composition I	5
MATH&	107	Math in Society	
		OR	
MATH&	146	Introduction to Stats	5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
SOC&	101	Intro to Sociology	5
Humanities Distribution			5
			15

Spring Quarter, First Year			Credits
BIOL&	170	Human Biology	5
CHEM&	131	Intro to Organic/Biochemistry	5
PSYC&	100	General Psychology	5
			15

Fall Quarter, Second Year			Credits
BIOL&	241	Human A & P 1	5
NUTR&	101	Nutrition	5
Humanities Distribution			5
			15

Winter Quarter, Second Year			Credits
BIOL&	242	Human A & P 2	5
SPEE	110	Prin of Speech Communication	5
Social Science Distribution			5
			15

Spring Quarter, Second Year			Credits
BIOL&	260	Microbiology	5
HLTH	145	Safety & Fitness	3
Diversity Elective			5
Elective			3-5
			16-18

Consult with an advisor for specific prerequisites for transfer institutions to determine the courses that best support their Dental Hygiene program.

BIOL 243, although not required, is strongly recommended.

Pre-Pharmacy

Emphasis: ***Pre-Pharmacy***

Degree: ***Associate in Science***

PURPOSE: The Pre-Pharmacy program is intended for persons who plan to pursue a professional career in pharmacy. The plan of study presents a challenging blend of natural and physical sciences and can be tailored to meet individual needs.

If you complete the program outlined, you are reasonably assured of being able to transfer with junior standing to most colleges and universities in Washington State. You are urged to consult with your advisor as you plan your curriculum and select electives. This will allow your advisor to coordinate your program with the requirements of the institution to which you expect to transfer.

Suggested Order of Classes

Fall Quarter, First Year			Credits
BIOL&	221	Majors Ecology/Evolution	5
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
			16

Winter Quarter, First Year			Credits
BIOL&	222	Majors Cell/Molecular	5
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I	5
			16

Spring Quarter, First Year			Credits
BIOL&	223	Majors Organismal Phys	5
CHEM&	163	General Chemistry w/lab III	6
MATH&	152	Calculus II	5
			16

Fall Quarter, Second Year			Credits
Biology/Chemistry sequence***			5-6
Social Science Distribution *			5
Health & Fitness Distribution			3
			13-14

Winter Quarter, Second Year			Credits
Biology/Chemistry sequence***			5-6
MATH&	146	Introduction to Stats	5
Humanities Distribution*			5
			15-16

Spring Quarter, Second Year			Credits
Biology/Chemistry sequence***			5-6
Social Science or Humanities Distribution*			5
Elective			5
			15-16

Science electives:

BIOL& 241, 242, 243 Human A & P w/lab I-III;
CHEM& 261, 262, 263 Organic Chem w/lab I-III;
PHYS& 221, 222, 223 Engineering Physics I-III

***Biology majors should select Organic Chemistry or Anatomy & Physiology (BIOL& 241, 242) and Microbiology (BIOL& 260) for second year sequence.

Pre-Medicine, Pre-Dentistry

Emphasis: ***Pre-Medicine***
Pre-Dentistry

Degree: ***Associate in Science***

PURPOSE: The Pre-Medicine, Pre-Dentistry program is intended for persons who wish to prepare for a career in a medical profession. Medical schools do not give higher priority to a given major field of study when selecting candidates.

You are therefore encouraged to formulate a program of study which is scholastically challenging and which can be the basis for a future career or for graduate study in the event you are not admitted to a medical school. The program outlined below provides a solid foundation in the natural and physical sciences. If you complete this program of study, you are reasonably assured of being able to transfer with junior standing to most four-year colleges and universities in Washington State.

Consult with an advisor as you plan your curriculum and select electives. This will allow you to coordinate your program with the requirements of your intended major at the institution to which you expect to transfer.

Suggested Order of Classes

Fall Quarter, First Year			Credits
BIOL&	221	Majors Ecology/Evolution	
		OR	
PHYS&	221	Engineering Physics I	5
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
			16

Winter Quarter, First Year			Credits
BIOL&	222	Majors Cell/Molecular	
		OR	
PHYS&	222	Engineering Physics II	5
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I	5
			16

Spring Quarter, First Year			Credits
BIOL&	223	Majors Organismal Phys	
		OR	
PHYS&	223	Engineering Physics III	5
CHEM&	163	General Chemistry w/lab III	6
MATH&	152	Calculus II	5
			16

Fall Quarter, Second Year			Credits
Biology/Chemistry/Physics sequence***			5-6
PSYC&	100	General Psychology*	5
HUM	110	Ethics and Cultural Values	5
			15-16

Winter Quarter, Second Year			Credits
Biology/Chemistry/Physics sequence***			5-6
MATH&	146	Introduction to Stats	
		OR	
MATH&	163	Calculus III	5
SPEE	110	Prin of Speech Communication	5
			15-16

Spring Quarter, Second Year			Credits
Biology/Chemistry/Physics sequence***			5-6
SOC&	101	Intro to Sociology	5
Health & Fitness Distribution			3
			13-14

Science electives:

BIOL& 221, 222, 223 Majors;
BIOL& 241, 242, 243 Human A & P w/lab I-III;
BIOL& 260 Microbiology
CHEM& 261, 262, 263 Organic Chemistry w/lab I-III;
PHYS& 221, 222, 223 Engineering Physics I-III

*Some baccalaureate institutions require physics with calculus. Biology majors should select Organic Chemistry or Physics for second year sequence.

Pre-Veterinary Medicine

Emphasis: ***Pre-Veterinary Medicine***

Degree: ***Associate in Science***

PURPOSE: The Pre-Veterinary program is intended for persons who plan to pursue a professional career. The plan of study presents a challenging blend of natural and physical sciences and can be used to meet the requirements for an animal science major at Washington State University. If you complete the program outlined below, you are reasonably assured of being able to transfer with junior standing to most colleges and universities in Washington State. You are urged to consult with your advisor as you plan your curriculum and select electives.

This will allow your advisor to coordinate your program with the requirements of the institution to which you expect to transfer.

Suggested Order of Classes

Fall Quarter, First Year			Credits
BIOL&	221	Majors Ecology/Evolution	5
CHEM&	161	General Chemistry w/lab I	6
ENGL&	101	English Composition I	5
			16

Winter Quarter, First Year			Credits
BIOL&	222	Majors Cell/Molecular	5
CHEM&	162	General Chemistry w/lab II	6
MATH&	151	Calculus I	5
			16

Spring Quarter, First Year			Credits
BIOL&	223	Majors Organismal Phys	5
CHEM&	163	General Chem w/lab III	6
MATH&	152	Calculus II	5
			16

Fall Quarter, Second Year			Credits
CHEM&	261	Organic Chemistry w/lab I	6
Social Science Distribution*			5
Health & Fitness Distribution			3
			14

Winter Quarter, Second Year			Credits
CHEM&	262	Organic Chemistry w/lab II	6
MATH&	146	Introduction to Stats	
		OR	
MATH&	163	Calculus III	5
SPEE	110	Prin of Speech Communication	5
			16

Spring Quarter, Second Year			Credits
Science Elective			
		OR	
CHEM&	263	Organic Chemistry w/lab III	6
Social Science or Humanities Distribution*			5
Elective			5
			16

Psychology

Emphasis: ***Psychology***

Degree: ***Associate in Arts***

PURPOSE: The Associate in Arts with an emphasis in Psychology is for students interested in transferring to a four-year institution. This educational plan addresses issues of human behavior and thought, provides the opportunity to gain fuller understanding of one's self and others, and develops skills in human relations, communication, research, and analysis.

Emphasis in psychology provides preparation for a variety of careers, and will benefit students majoring in education, nursing, physical and occupational therapy, business, law, medicine, or other disciplines which deal with people. Consult with psychology faculty for additional information.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
PSYC&	100	General Psychology	5
Humanities Distribution			5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
PSYC&	200	Lifespan Psychology	5
Science Distribution			5
			15

Spring Quarter, First Year			Credits
MATH&	146	Introduction to Stats	5
PSYC	210	Personality Theories	
		OR	
PSYC	250	Social Psychology	5
Humanities Distribution			5
Health & Fitness Distribution			1
			16

Fall Quarter, Second Year	Credits
Health & Fitness Distribution	1
Humanities Distribution	5
Science Distribution	5
Social Science Distribution	5
	16

Winter Quarter, Second Year	Credits
Elective	5
Elective	5
Social Science Distribution	5
	15

Spring Quarter, Second Year	Credits
Elective	7
Health & Fitness Distribution	1
Science Distribution	5
	13

Recommended Courses

BIOL&	170	Human Biology,	5
CHEM&	121	Intro to Chemistry	
		OR	
CHEM&	161	General Chemistry w/lab I,	5
PSYC&	220	Abnormal Psychology,	5
SOC&	101	Intro to Sociology	5

Psychology majors are encouraged to develop a broad base in the social sciences.

Sociology

Emphasis: ***Sociology***

Degree: ***Associate in Arts***

PURPOSE: The Sociology program provides a better understanding of what makes people behave the way they do. The focus is on the kinds of groups that people create and on specific interactions that take place as part of the basic social processes. How group activities influence individual members are also analyzed.

The sociology program provides an adequate foundation for students to transfer to a four-year college or university. See the sociology faculty advisor for details.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
SOC&	101	Intro to Sociology	5
Humanities Distribution*			5
			15

Winter Quarter, First Year			Credits
ENGL&	102	Composition II	5
MATH&	146	Introduction to Stats	5
Social Science Distribution			5
			15

Spring Quarter, First Year			Credits
ANTH/SOC	225	Cultural & Ethnic Pluralism	5
SOC&	201	Social Problems	5
Humanities Distribution			5
			15

Fall Quarter, Second Year			Credits
ANTH&	206	Cultural Anthropology	5
Humanities Distribution			5
Science Distribution**			5
			15

Winter Quarter, Second Year			Credits
ANTH&	210	Indians of North America	5
Elective			2
Health & Fitness Distribution			3
Science Distribution			5
			15

Spring Quarter, Second Year	Credits
Social Science Distribution	5
Elective	5
Elective	5
	15

* Recommend a language

** Recommend ENVS& 100

Sociology majors are encouraged to develop a broad base in the social sciences to include:

PSYC& 100 General Psychology
PSYC& 200 Lifespan Psychology

Technology

Degree: Associate in Technology-MRP

PURPOSE This degree is a Major Related Program designed for students transferring to Eastern, Central, or Western Washington Universities to complete one of the bachelors of science in technology degrees, such as Industrial Technology, Mechanical Technology, Applied Technology, technology education, or technology with various options (manufacturing, electronics, design, or construction).

This degree meets the requirements of the Statewide Technology DTA and Engineering Technology AS-T Track 2 (MRP) Agreement.

Elective credits should be planned with the help of an engineering advisor and be based on requirements of the specific program at the baccalaureate institution that the student plans to attend. This two-year program requires students to be calculus ready by third quarter of the first year. Students not well prepared in high school mathematics and science should plan a three-year program at Centralia College in preparation for transfer to a four-year school. The main emphasis in the first year should be to strengthen mathematics, basic sciences, communication, and reading skills.

Suggested Order of Classes

Fall Quarter, First Year			Credits
ENGL&	101	English Composition I	5
ENGR	100	Intro to Engineering	2
MATH&	141	Precalculus*	5
Health & Fitness Distribution			3
			15

Winter Quarter, First Year			Credits
ENGR&	111	Engineering Graphics**	2
ENGL&	235	Technical Writing	5
MATH&	142	Precalculus II*	5
Social Science Distribution			5
			17

Spring Quarter, First Year			Credits
CS&	131	C# Programming	
		OR	
CS&	141	Java: Object Oriented Prog.	5
ENGR&	112	Engineering Graphics II**	3
MATH&	151	Calculus I	5
Humanities Distribution			5
			18

Fall Quarter, Second Year			Credits
CHEM&	161	General Chemistry w/lab I	6
PHYS&	221	Engineering Physics I	5
Humanities Distribution			5
			16

Winter Quarter, Second Year			Credits
ENGR	203	Applied Numerical Methods	5
PHYS&	222	Engineering Physics II	5
Social Science Distribution			5
			15

Spring Quarter, Second Year			Credits
SPEE	110	Speech Communication	
		OR	
SPEE	220	Theory & Practice	5
PHYS&	223	Engineering Physics III	5
Social Science Distribution			5
			15

*Students could take MATH 135 in place of MATH& 141 and 142.

**Students may petition for an Independent study or transfer equivalent credits from another college for the following: ENGR& 111 and ENGR& 112.

Television

See Media Studies

Theater

See Dramatic Arts

Welding

Emphasis: Welding Technology

Degree: Associate in Technical Arts

PURPOSE: The Welding Technology program prepares students to compete for employment as an entry-level welder in building trades, ship building, structural fabrication, automatic and semiautomatic welding, and in maintenance welding.

The Welding Technology ATA program prepares students for advanced welding skills in FCAW (Flux Cored Arc), GTAW (TIG), GMAW (MIG), and SMAW (stick) welding. Students will have the opportunity to gain WABO Welding Certification.

PROGRAM OUTCOMES: Students who successfully complete this program will have demonstrated the ability to:

- Follow industry safety practices and recognize the effects of welding on health.
- Set-up and adjust SMAW, GMAW, FCAW, GTAW, and oxy-fuel equipment and accessories.
- Apply principles and welding design practices to welding fabrication and inspection.
- Identify and make repairs to finished welds.
- Interpret information on welding blueprints.
- Apply principles of Metallurgy to welding fabrication and inspection.
- Create workable drawings to scale for reproduction.
- Perform 3-G and 4-G AWS - WABO welding code qualification tests.

Suggested Order of Classes

Fall Quarter, First Year			Credits
WELD	159	Oxyfuel & GTAW Theory	4
WELD	160	Oxyfuel & GTAW Theory lab	9
WELD	167	Metallurgy for Welders	4
			17

Winter Quarter, First Year			Credits
MATH	095	Basic Math (if needed)	1-5
WELD	161	Arc Welding Theory	4
WELD	162	Arc Welding lab	9
			13-18

Spring Quarter, First Year			Credits
TMATH	116	Industrial Math	5
WELD	126	Industrial Drafting	2
		OR	
CAD	115	CAD for Industry	2
WELD	164	MIG Welding Theory	4
WELD	165	MIG Welding lab	6
WELD	166	Shop Skills for Welders	3
			20

Fall Quarter, Second Year			Credits
H R	110	Human Relations-Workplace	5
WELD	265	Advanced Arc Welding	4
WELD	266	Advanced Arc Weld lab	9
WELD	271	Blueprint Reading for Welders	4
			22

Winter Quarter, Second Year			Credits
WRT	105	Writing in the Workplace*	5
WELD	267	Advanced Gas Shielded Arc Weld Theory	4
WELD	268	Advanced Gas Shielded Arc Weld lab	9
			18

Spring Quarter, Second Year			Credits
HLTH	145	Safety & Fitness	3
WELD	269	Advanced Fab. & Weld Theory	4
WELD	270	Advanced Fab. & Weld lab	6
			13

*Students interest in the BASM program should take ENGL& 101.

Emphasis: Welding Technology (4-quarter program)

Degree: Certificate of Proficiency

PURPOSE: The Welding Proficiency Program prepares students for advanced welding skills in FCAW (Flux Cored Arc), GTAW (TIG), GMAW (MIG) and SMAW (stick) welding. Students will have the opportunity to gain WABO Welding Certification.

PROGRAM OUTCOMES: Students who successfully complete this program should be able to:

- Follow industry safety practices and recognize the effects of welding on health.
- Set-up and adjust SMAW, GMAW, FCAW, GTAW, and oxy-fuel equipment and accessories.
- Identify and make repairs on finished welds.
- Interpret information on welding blueprints.
- Apply principles of Metallurgy to welding fabrication and inspection.
- Create workable drawings to scale for reproduction.

Suggested Order of Classes

Fall Quarter, First Year			Credits
MATH	095	Basic Math (if needed)	1-5
WELD	159	Oxyfuel & GTAW Theory	4
WELD	160	Oxyfuel & GTAW lab	9
WELD	167	Metallurgy for Welders	4
			18-22

Winter Quarter, First Year			Credits
WRT	105	Writing in the Workplace	5
MATH	116	Industrial Math	5
WELD	161	Arc Welding Theory	4
WELD	162	Arc Welding lab	9
			23

Spring Quarter, First Year			Credits
DET	166	Shop Skills for Welders	3
WELD	126	Industrial Drafting	2
		OR	
CAD	115	CAD for Industry	2
WELD	164	MIG Welding Theory	4
WELD	165	MIG Welding lab	6
			15

Fall Quarter, Second Year			Credits
WELD	265	Adv. Arc Welding Theory	4
WELD	266	Adv. Arc Welding lab	9
WELD	271	Blueprint Reading for Welders	4
			17

Completion of HR 110 Human Relations-Workplace (5 credits) is required and may be completed any quarter.

Emphasis: Welding (Evening)

Degree: Certificate of Completion

PURPOSE: Students who complete the following 20 credits will be awarded a certificate of completion in Welding Fundamentals (this certificate can be completed entirely in the evening). These courses will be offered in the evening every fall, winter, and spring quarters.

PROGRAM OUTCOMES: Students who successfully complete this program should be able to:

- Follow industry safety practices and recognize the effects of welding on health.
- Set-up and adjust SMAW, GMAW, FCAW, GTAW, and oxy-fuel equipment and accessories.
- Identify and make repairs to finished welds.
- Perform 3-G and 4-G AWS- WABO welding code qualification tests.

Suggested Order of Classes

Fall Quarter			
WELD	180	Oxyacetylene and GTAW	5
WELD	181	Shielded Metal Arc Welding	5
WELD	182	Gas Metal Arc Welding	5
WELD	285	Arc Welding Certification	5

Winter Quarter			
WELD	180	Oxyacetylene and GTAW	5
WELD	181	Shielded Metal Arc Welding	5
WELD	182	Gas Metal Arc Welding	5
WELD	285	Arc Welding Certification	5

Spring Quarter			
WELD	180	Oxyacetylene and GTAW	5
WELD	181	Shielded Metal Arc Welding	5
WELD	182	Gas Metal Arc Welding	5
WELD	285	Arc Welding Certification	5

SummerQuarter			
WELD	180	Oxyacetylene and GTAW	5
WELD	181	Shielded Metal Arc Welding	5
WELD	182	Gas Metal Arc Welding	5
WELD	285	Arc Welding Certification	5

When students complete WELD 180, 181, 182, 285 for a total of 20 credits, they will receive a certificate of completion.

Course Descriptions

Distribution Requirements:

Courses meeting distribution requirements are designated after the course titles in the following manner.

C = Communication Skills

D = Diversity

H = Humanities

M = Math/Quantitative Skills

S = Natural Science

SS = Social Science

HF = Health and Fitness

Courses which are part of a professional/technical program and which might not be considered for transfer by four-year colleges are designated after the course title in the following manner:

PT = Professional/Technical

ACCOUNTING

ACCT 110

Practical Accounting I (3) (PT)

Emphasizes fundamental principles of double-entry accounting as applied to bookkeeping systems. The course focuses on the development of the accounting cycle for small businesses and professional organizations.

ACCT 120

Practical Accounting II (3) (PT)

Accounting theory as applied to bookkeeping systems of small businesses and professional organizations. Focuses on accounting for payroll, merchandise, sales and purchases, cash receipts and payments, preparation of the worksheet and annual financial statements. Prerequisite: ACCT 110.

ACCT 130

Basic Computer Accounting (3) (PT)

Accounting experience on a personal computer, using QuickBooks Pro software. Reinforces procedures learned in ACCT 110 and 120 or ACCT& 201. Students use QuickBooks Pro software to record transactions, prepare financial statements, and payroll. Prerequisite: ACCT& 201 or ACCT 110 and 120.

ACCT& 201

Principles of Accounting I (5)

This course emphasizes fundamental principles of double-entry accounting and the preparation of financial statements for sole proprietorships. Prerequisite: MATH 098 or equivalent or consent of instructor.

ACCT& 202

Principles of Accounting II (5)

This course emphasizes accounting for partnerships and corporations. Topics include, but are not limited to, accounting for fixed and intangible asset, payroll, stock, bonds, the statement of cash flows, and financial statement analysis. Prerequisite: ACCT& 201.

ACCT& 203

Principles of Accounting III (5)

This course emphasizes accounting for departments and branches, cost accounting in a manufacturing environment cost-volume-profit analysis, budget preparation and analysis, standard costs, segment reporting, differential costs and revenues, and capital budgeting decisions. Prerequisites: ACCT& 201 and 202.

ACCT 210

Introduction to Audit (5)

An introduction to the audit environment as it applies to the professional spectrum of financial accounting and reporting. Prerequisite: ACCT& 203.

ACCT 240

Business Entity Tax (5)

This course focuses on the determination and disposition of taxation as it applies to business entities, as well as introducing elements of tax planning and research. Prerequisite: ACCT& 203.

ACCT 260

Individual Income Taxes (5)

Introductory course in taxation emphasizing the preparation of individual federal income tax returns. Course focuses on history, economics, social aspects, equity, and structure of the federal income tax laws of the United States. Prerequisite: ACCT& 201.

ACCT 270

Payroll Accounting (3)

ACCT 270 is an introductory course covering aspects of the Fair Labor Standards Act, the Social Security Act, Federal Income Tax withholding laws, and other laws affecting payroll operations and employment practices. Prerequisite: ACCT& 201.

ACCT 285

Bookkeeper Certification Course (5)

This is the capstone course for accounting students participating in the Associate of Technical Arts (ATA) program and culminating in the student candidacy of either the Certified Bookkeeper (CB), Registered Tax Return Preparer (RTRP), or both. Prerequisite: ACCT& 203, ACCT 240.

ADULT BASIC EDUCATION

ABE 011-014 and 16

English as a Second Language I-V (1-10)

Students demonstrate knowledge of sound-letter relationships by listening, speaking, reading, and writing the English alphabet. They become familiar with US currency and recognize common forms of print found in the home and environment. Prerequisite: CASA/ESL appraisal test.

ABE 015

English as a Second Language Lab (1-6)

Students will improve listening, speaking, and reading skills while participating in computer assisted learning activities, conversation, and focused listening activities and use of multimedia that will aid them in becoming independent learners. Corequisite: recommended in conjunction with ABE 011, 012, 013, 014, and 016.

ABE 018

ABE Integrated Level I (1-15)

Designed for students to learn and/or review beginning grammar, punctuation, spelling, sentence structure, paragraph development, reading comprehension and math skills in preparation for passing of the GED exam. Prerequisite: CASAS appraisal score 200 and below.

ABE 020

Adult Basic Education Orientation (1)

Includes individual goal setting. An introduction to educational programs offered at CC, placement testing, advising, and educational planning. Prerequisite for all new students to the ABE/ESL programs.

ABE 021, 22, 23

Adult Basic Education Level II Reading, Writing, and Math (1-5)

Students will complete Level 2A reading competencies mandated by the Washington State Basic Skills Competency Indicators and CASAS assessment in lab, lecture/lab setting. Prerequisite: CASAS score of 200-210.

ABE 028

ABE Integrated Level II (1-15)

Designed for students to learn and/or review beginning grammar, punctuation, spelling, sentence structure, paragraph development, reading, comprehension and math skills in preparation for passing of the GED exam. Prerequisite: CASAS appraisal score 201 to 210.

ABE 030

Life and Work Strategies (1-5)

A life and work skills overview for ABE students. Emphasis is placed on developing skills in learning to learn, communication, thinking, personal management, group effectiveness and leadership. Prerequisite: 2.0 or above on TABE Reading test.

ABE 031, 032, 033

Adult Basic Education Level III Reading, Writing, and Math (1-5)

Students will study Level 3 reading competencies mandated by the Washington State Basic Skills Competency Indicators and CASAS assessment in lab, lecture, or lecture/lab setting. Prerequisite: CASAS score of 211-220.

ABE 036

ABE II Level II Writing (1)

This course is designed to meet the needs of adults whose English skills are between the fourth and seventh grade level. Assessment will determine each student's starting level. This course is not designed to be completed within one quarter's time span. Students will work only in those areas where they need assistance. Washington State Core Competencies including practical living applications will be emphasized. Prerequisite: successful completion of ABE 022 or placement score between 4.0 and 6.9 on TABE.

ABE 038

ABE Integrated Level III (1-15)

Designed for students to learn and/or review intermediate grammar, punctuation, spelling, sentence structure, paragraph development, reading comprehension and math skills in preparation for passing of the GED exam. Prerequisite: CASAS appraisal score 211 to 220.

ABE 039

Job Readiness (1-3)

Students compare aptitudes, interests and skills against current job market. Emphasis is placed on resume development, job applications and the interview process. Prerequisite: 2.0 or above on the TABE reading test.

ABE 041, 042, 043

Adult Basic Education Level IV Reading, Writing, and Math (1-5)

Students will study Level 4 reading competencies mandated by the Washington State Basic Skills Competency Indicators and CASAS assessment in lab, lecture, or lecture/lab setting. Prerequisite: CASAS score of 221-235.

ABE 046

Written and Oral Communication (1-5)

Class participants enhance written and oral communication skills through the introduction of computer skill development and introductory communication skills for the workplace. Prerequisite: CASAS testing with a minimum score of 210.

ABE 048

ABE Integrated Level IV (1-15)

Designed for students to learn and/or review advanced grammar, punctuation, spelling, sentence structure, paragraph development, reading comprehension and math skills in preparation for the GED exam. Prerequisite: CASAS appraisal score 221 to 235.

ABE 051, 052, 053

Adult Basic Education Level V Reading, Writing, and Math (1-5)

Students will study Level 5 reading competencies mandated by the Washington State Basic Skills Competency Indicators and CASAS assessment in lab, lecture, or lecture/lab setting. Prerequisite: CASAS score of 236-245.

ABE 058

Integrated Level V (1-15)

Designed for students to learn and/or review advanced grammar, punctuation, spelling, sentence structure, paragraph development, reading comprehension and math skills in preparation for the GED exam. Prerequisite: CASAS appraisal score 236 to 245.

ABE 060

Key Skills for Success (1-10)

This course will provide students with targeted skills in areas that will ease their transition into academic and vocational courses or into employment and training. Targeted skills include coursework that addresses personal management, interpersonal communication, career information, college resources, computer basics and help for success within vocational content areas. The instruction in these areas is pre-academic or pre-vocational with the purpose of creating a bridge for student to traditional college courses and services. Prerequisite: CASAS testing.

ABE 061, 062, 063

Adult Basic Education Level VI Reading, Writing, and Math (1-5)

Students will study Level 6 reading competencies mandated by the Washington State Basic Skills Competency Indicators and CASAS assessment in lab, lecture, or lecture/lab setting. Prerequisite: CASAS score of 246+.

ABE 068

ABE Integrated Level VI (1-15)

Designed for students to learn and/or review advanced grammar, punctuation, spelling, sentence structure, paragraph development, reading comprehension and math skills in preparation for the GED exam. Prerequisite: ABE 058, completion of 3 GED tests or CASAS 246-255.

ABE 085

Contemporary World Problems (1-5)

Designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking within the context of contemporary world problems.

ABE 086

Pacific NW History (1-5)

Designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking within the context of the U.S and Northwest history.

ABE 087

US Government & Civics (1-5)

Designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking within the context of U.S. Civics.

ABE 088

US History (1-5)

Designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking within the context of U.S. and Northwest history.

ABE 089

Health and Nutrition (1-5)

A review of nutrition and a healthy diet to enhance one's overall health.

ABE 090

Health and Exercise (1-5)

A review of nutrition and exercise to enhance one's overall health.

ABE 092

Critical Reading/Writing (1-5)

Course is designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking.

ABE 093

Fine Arts (1-5)

Course is designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking through exploration of the arts.

ABE 094

Science Literacy (1-5)

Course is designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking through exploration of the general fields in science.

ABE 095

Occupational Education (1-5)

Course is designed to improve analysis, synthesis, evaluation, and application of text in reading, writing, and thinking through exploration and implementation of career choices.

AMERICAN SIGN LANGUAGE

ASL& 121

American Sign Language I (5)

An introductory course in American Sign Language (ASL). Topics covered include visual awareness, vocabulary, basic grammatical principles, comprehension skills, and the historical overview of the deaf community and its language.

ASL& 122

American Sign Language II (5)

Enables students to better use and comprehend ASL by building vocabulary, improving skills of signing, reading of signs, and understanding of the deaf community. Prerequisite: ASL& 121 or instructor permission.

ASL& 123

American Sign Language III (5)

An in-depth study of American Sign Language applications including conversation regulators, classifiers and locatives, directional verbs and cultural information. Prerequisite: ASL& 122.

ASL& 221

American Sign Language IV (5)

Express yourself using not only hands, but the whole body. Emphasizes the beauty of the language of signs; increasing flexibility, reducing inhibitions, and accuracy or expression of the concept as distinct from the words. Prerequisite: ASL& 123 or permission of instructor.

ANTHROPOLOGY

ANTH& 100

Survey of Anthropology (SS) (D) (5)

Participate in a four-field approach to the study of the diversity of humans and human cultures. Explore subfields of anthropology: social/cultural anthropology, physical/biological anthropology, archaeology, and anthropological linguistics.

ANTH& 206

Cultural Anthropology (SS) (D) (5)

Explore the whole of the human social and cultural world by means of investigating other people's beliefs and behaviors. Through a cross-cultural perspective we attempt to understand others in order to better learn about ourselves.

ANTH& 210

Indians of North America (SS) (D) (5)

Investigate cultural systems of beliefs, behaviors and technology practiced by native North American peoples. Learn about subsistence patterns, exchange and trading relationships, marriage and the family, political organization, the life cycle, religion, belief and knowledge.

ANTH 225

Cultural & Ethnic Pluralism in Contemporary Society (SS)(D) (5)

Examine ethnicity, ethnic identity, and cultural characteristics of ethnic and social groups in North America and around the world. Understand the relationship between social organization and forms of social, economic, and political domination and subordination.

ANTH 235

Myth, Ritual, and Magic (SS) (D) (5)

Experience the supernatural and religious beliefs of peoples and cultures. Examine different modes of constructing "reality" and "belief" as well as their methods of ritual application in societies worldwide.

ART

ART& 100

Art Appreciation (H) (5)

Introduction to the visual arts. Painting, drawing, sculpture and architecture will be examined as art forms and for their role in human history. Students will be introduced to a variety of art media and techniques.

ART 102

Drawing (H) (5)

Study the fundamentals of drawing: composition, technique and manipulation of materials, exploration of subject matter. Lectures on contemporary and historical artists support drawing labs.

ART 103

Drawing (5)

Intermediate level study of the fundamentals of drawing: composition, technique and manipulation of materials, exploration of subject matter. Lectures on contemporary and historical artists support drawing labs. Prerequisite: ART 102 or instructor permission.

ART 104

Drawing (5)

Advanced level of study of the fundamentals of drawing: composition, technique and manipulation of materials, exploration of subject matter. Lectures on contemporary and historical artists support drawing labs. Prerequisite: ART 102, 103 or instructor permission.

ART 110

Design (4)

This course is an introduction to two-dimensional design. Assignments include a variety of subject matter and materials. No prerequisites.

ART 111

Sculpture (4)

An introduction to the fundamentals of three-dimensional design. Assignments include a variety of subject matter and materials. All are welcome.

ART 130

Computer Graphics (5)

An overview of computer programs used to create images for print and screen, still and moving. Gain basic skills in design and programs by creating digital art work in a series of assignments.

ART 135

Graphic Design I (5)

Problem solving in basic type and graphic design. Sequences of studio projects demonstrate students' ability to create, design and prepare art for reproduction. Lectures explore graphic design as an art form and as a business.

ART 151

Typography (5)

This course covers the history of type, designing with type, reproduction of type. Type is the foundation for graphic design. Students will apply knowledge gained in a series of studio projects. Prerequisite: ART 110 or instructor permission.

ART 160

Introduction to Fibers (H) (5)

An introduction to fiber art history and techniques with an emphasis on traditional, hand-manipulated processes such as basketry, felting, dyeing and simple loom work.

ART 170

Black & White Photography (H) (5)

Fundamentals of photography and camera handling with emphasis on understanding and using photography as an expressive art form. The course will cover basic camera operations, black and white darkroom processes familiarity with materials and equipment.

ART 174

Digital Photography (H) (5)

An introduction to digital photography as an expressive art form. Students will explore the creative and technical requirements of digital imaging, as well as examine the contributions of contemporary fine artists working in this medium. Prerequisite: basic computer experience required.

ART 190

Cooperative Work Experience (1-12) (PT)

See description under COOP 190 for additional information.

ART 200

Art History: Ancient (D) (H) (5)

A survey of the development of art in Europe, the Near East and Asia from prehistoric times through the 14th century CE. The course will explore developments in architecture, painting, sculpture and other art forms.

ART 201

Art History: 15th-17th Century (D) (H) (5)

A survey of the development of art in Pre-Columbian America, Africa and 15th-17th century Europe. The course will explore developments in architecture, sculpture, painting and other art forms.

ART 202

Art History: 18th-20th Century (D) (H) (5)

A survey of the history of art in 15th-20th century Asia and 18th-20th century Europe. Historical developments in architecture, sculpture, painting and other art forms will be examined.

ART 220

Computer 3-D Modeling (3)

This is an advanced computer-based course for students interested in learning surface and solid modeling techniques for future use in applications such as mechanical design, game development, and animation. Instructor permission is required.

ART 269

Portfolio (3)

Development and presentation of an individual portfolio which meets professional standards of excellence for job potential. Open to art and photography students. Prerequisite: instructor permission.

ASTRONOMY

ASTR 125

The Solar System (S) (3)

Brief overview of the history and scope of astronomy, followed by a study of our own solar system including its sun, planets, moons, asteroids, and comets, and its origin. Some writing and computation is expected. Prerequisite: completion of MATH 098 with a 2.0 or above.

ASTR 126

Stars and Galaxies (S) (3)

Introduction to the astronomy of stars and galaxies including nuclear processes, spectroscopy, stellar evolution, black holes, quasars, and an introduction to cosmology. Some writing and computation are expected.

ASTR 127

The Solar System & the Universe (S) (5)

Brief overview of the history and scope of astronomy, followed by a systematic study of the solar system, stars, galaxies, and the universe Prerequisite: one year high school algebra or MATH 098.

ASTR 128

Observational Astronomy (S) (2)

Introduces the night sky as seen with the naked eye and a telescope. Lectures, labs, and observations provide astronomical concepts and hands on applications of these concepts. Transportation to Onalaska's Observatory is the student's responsibility.

BIOLOGY

BIOL& 100

Survey of Biology w/lab (S) (5)

Surveys the structures and functions of cells and organisms. Explores basic genetic and evolutionary processes, and outlines the characteristics of life, its history, and biodiversity.

BIOL& 170

Human Biology (S) (5)

Presents the structure, organization, and life functions of the human cells, tissues, and organ systems; development from embryo to adult; aging and disease; human evolution and ecology.

BIOL 172

Human Biology Lab (1)

Investigate the structure and function of the integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovascular, immune respiratory, digestive, urinary, and reproductive systems. Prerequisite: BIOL& 170.

BIOL 180

Regional Biodiversity (5)

Explore the biological diversity of a region. Identify the dominant organisms, describe their interactions with their physical, chemical, and biological environments. Focus on field trips. Prerequisite: instructor permission.

BIOL 190

Cooperative Work Experience (1-5) (PT)

See description under COOP 190 for additional information.

BIOL& 221

Majors Ecology/Evolution w/lab (S) (5)

Ecology, evolution, taxonomy and phylogeny, diversity of life forms. First course in a three-quarter series (BIOL& 221, 222, 223). Prerequisite: high school biology or BIOL& 100 and MATH 098 or equivalent.

BIOL& 222

Majors Cell/Molecular w/lab (S) (5)

Metabolism and energetics, structure and function of biomolecules, Mendelian and molecular genetics, biotechnology, cell structure and function. Second course in a three-quarter series (BIOL& 221, 222, and 223) Prerequisites: HS biology or BIOL& 100; CHEM& 121 or CHEM& 161 recommended.

BIOL& 223

Majors Organismal Physiology w/lab (S) (5)

Plant and animal comparative anatomy and physiology. Final course in a three-quarter series (BIOL& 221, 222, and 223). Prerequisite: BIOL& 221 or 222 or permission of instructor.

BIOL& 241(formerly ZOOL 251)

Human A & P 1 w/lab (S) (5)

Investigate interactions between structures (anatomy) and function (physiology) essential for human health. Investigate organization and function of macromolecules, membranes and the cell, tissues, integument, skeleton and articulations, skeletal muscles, nervous system and the brain. Prerequisite: HS biology and chemistry or BIOL& 100 or BIOL& 170 and CHEM& 121.

BIOL& 242

Human A & P 2 w/lab (S) (5)

Investigate the interactions between structure (anatomy) function (physiology) essential for human health. Investigate organization and function of the sensory, endocrine, cardiovascular, immune, respiratory, digestive, urinary, and reproductive systems. Prerequisite: BIOL& 241 or instructor permission.

BIOL 243

Adv. Topics Human A & P w/lab (S) (5)

Investigate the inheritance of human characteristics and the regulation of gene expression. Trace the development of major organ systems in utero and fetal development. Trace the physiological and anatomical transformations in older individuals. Prerequisite: BIOL& 242 or instructor permission.

BIOL 250

Introduction to Marine Biology w/lab (S) (5)

Introduction to physical and chemical factors affecting marine organisms: the various marine habitats, the animals and plants which inhabit them, and human exploitation of marine resources.

BIOL& 260

Microbiology w/lab (S) (5)

Understand the morphology, physiology, metabolism, genetics, and evolution of microbes. Explore the interactions of pathogenic microbes and human health. Review processes that inhibit microbial disease. Develop skills of culturing, identifying, and manipulating microbes. Prerequisite: one college chemistry course.

BIOL 270

Research in Biology (1-12)

Design a research project, set up experiments, collect data in the lab or in the field, and/or analyze data. Each credit hour requires 33 hours of activity per quarter. Prerequisite: instructor permission.

BOTANY

BOTA 110

Survey of Botany w/lab (S) (5)

Basic concepts in plant biology for non-majors, with emphasis on plant diversity and how plants grow and reproduce. Modern issues concerning agriculture and conservation will be discussed.

BOTA 113

Plant Identification & Classification w/lab (S) (5)

The identification and classification of flowering plants of the Northwest with emphasis on plant families of western Washington. Includes field trips during lab sessions with walking on and off trails.

BOTA 150

Dendrology-Trees in Our Environment w/lab (S) (5)

Introduction to biology through trees, from cells and evolution through tree ecology and urban trees. Identification of trees will be featured, including both Pacific Northwest natives and common street trees. Includes field trips during lab sessions with walking on and off trails.

BUSINESS ADMINISTRATION

BUS& 101

Intro to Business (5)

Introduction to the world of business. Emphasis will include functions of business, management, types of business ownership, human resources, production, marketing, ethics, and the role of accounting.

BUS 121

Business Math (5) (PT)

Surveys the commercial application of mathematics designed to assess and analyze business activities and their effect on cost, profitability and overall performance. Prerequisite: MATH 096 or equivalent test score.

B A 190

Cooperative Work Experience (1-12) (PT)

See description under COOP 190 for additional information.

BUS& 201

Business Law (5)

Introduction to state and federal constitution, laws and procedures including international trade, crimes, torts, contracts, sales, property, bankruptcy, securities, consumer protection, employment, and debtor creditor relationships. The relationship between ethics and law will be discussed.

BUS 215

Principles of Finance (5)

An introduction to the sources and uses of funds in a business. Focuses on ratio analysis, cost-volume-profit analysis, business valuation, and the relationship between risk and rate of return. Emphasizes the managerial implications of financial risk. Prerequisite: ACCT& 201, 202.

BUS 220

Marketing (5)

A broad overview of the market structure and marketing philosophies currently being used in business. Includes a description, analysis, and evaluation of the marketing system. Each student will conduct a marketing research project.

BUS 232 (formerly BA 132)

Entrepreneurship (5)

Experience the challenge and reward of planning a new business. Topics include: development of a business plan, failure factors in small businesses, capital, accounting, financial statements, marketing, human resource management, legal/regulatory issues and management principles. Prerequisite: BUS& 101; ACCT& 201, BUS 220.

BUS 240

Negotiation (5)

Focuses on the bottom line, people, habits and tools that drive results fro any business. Students will learn practical skills to create mutually beneficial and profitable long-term relationships with customers, vendors, and peers.

BUS 275

Principles of Management (5)

Management styles and effective management of personnel from the manager's side of business. The course is built around the five traditional functions of management and exploring management problems and practices. Real-life case problems used.

BUSINESS OFFICE TECHNOLOGY

BTEC 100

Keyboarding For Computing (2) (PT)

Operation of the standard alphabetic keyboard and the 10-key pad. Upon completion of this class, students should be able to keyboard at 20wpm and operate by touch a 10-key pad at 80dpm.

BTEC 101

Keyboarding for Business (3) (PT)

For beginning students. Learn to keyboard to 25 wpm by touch. Develop speed, accuracy and apply basic word processing techniques to letters, reports and tables.

BTEC 102

Keyboard Skillbuilding I (3) (PT)

Individualized skill-building program for increasing keyboarding speed and improving accuracy. Upon completion of this course, students should be able to type at a minimum of 35wpm with no more than one error per minute. Prerequisite: BTEC 101 and typing at 35wpm or instructor permission.

BTEC 107

Electronic Medical Records (3) (PT)

Provides an overview of medical records as legal documents. Topics include the make-up of an electronic medical record, charting methods, and retention and storage of records. Course includes computerized medical record work. Prerequisite: keyboarding skill, medical terminology.

BTEC 110

Business English (5) (PT)

Editing skills including grammar, punctuation, proofreading, and spelling for office correspondence. A basis for machine transcription, business communication, and office procedures.

BTEC 115

Machine Transcription I (4) (PT)

Introduction to machine transcription: operation of transcribing machines and integration of language and keyboarding skills in the preparation of mail able transcripts. Prerequisite: 2.0 or above in BTEC 110 and typing speed of 40wpm.

BTEC 120

Applied Business Math (3) (PT)

A brief review of arithmetic fundamentals including decimals, fractions, percent's and their applications to a wide range of business problems. Prerequisite: MATH 096 or equivalent test score.

BTEC 160

Records Confidentiality - HIPAA (1) (PT)

Overview of general confidentiality, considerations, and specific rules of the 1966 HIPAA law for he a l t h - care/mental health professions. Explains and illustrates the law, with extensive review of security/privacy of patient information and records.

BTEC 190

Cooperative Work Experience (1-12) (PT)

See description under COOP 190 for additional information.

BTEC 191

Work Experience Seminar (1) (PT)

Topics include professional image, business etiquette, sexual harassment, resolving conflict, and diversity in the workplace. Must be taken prior to or concurrently with Cooperative Work Experience.

BTEC 203

Keyboard Skillbuilding II (3)

Using a computer for individualized, advanced skill-building for students who have already had BTEC 102 or equivalent and who need or want to increase keyboarding speed and improve accuracy. Prerequisite: BTEC 102 or equivalent. Typing speed of 50wpm.

BTEC 205

Microsoft Outlook (1)

Course uses Microsoft Outlook for e-mail, scheduling meetings, maintaining appointment calendars, managing contacts, and tasks. Prerequisite: Windows experience and keyboarding skills.

BTEC 210

Word I (5)

Class covers Word in depth: document preparation, formatting, graphics, WordArt, columns, sorts, charts, mail merge, and styles. Students will format business documents to business standards. Prerequisite: keyboard skill of 35wpm or instructor permission.

BTEC 212

Access I (3)

An introduction to Microsoft Access. Students will learn basic concepts of database software and be able to integrate Access with Word and Excel. Prerequisite: keyboard speed of 30wpm, Word I and Excel or instructor permission.

BTEC 214

Excel (5)

A hands-on approach for beginning through intermediate level applications of Excel spreadsheet using a variety of business applications. Prerequisite: word processing, windows, keyboard skills.

BTEC 215

Excel Module (1)

Introduction to spreadsheet. Upon completion of this course, students should have basic knowledge of a spreadsheet program. Prerequisite: keyboarding speed of 30wpm and Windows class or instructor permission.

BTEC 218

Desktop Publishing (4)

Course covers desktop publishing terminology and concepts to plan, create, and design professional-looking businesses and personal documents. Prerequisite: Word1, keyboard speed of 35 wpm.

BTEC 219

Word II (4)

Course covers footnotes, endnotes, citations, bibliographies, table of contents, indexes, linked textboxes, multilevel lists, building blocks, fill-in forms, macros, outlines, Quick Parts, templates formal reports. Prerequisite: Word 1, keyboard speed of 35 wpm.

BTEC 220

Ten-Key Calculator (1)

Touch control of 10-key pad with emphasis on speed and accuracy. Addition, subtraction, multiplication, and division techniques used in solving business problems. Basic or Business Math recommended first.

BTEC 221

Business Communications (5)

Applying principles of effective communication in written and oral business communication: letters, memos, reports, and presentations. Upon completion students should be able to produce effective positive, negative, and routine letters, memos, and reports and graphs. Prerequisite: BTEC 110 or ENGL& 101 or COMM 101, or instructor permission.

BTEC 222

Microsoft Office-PowerPoint Module (1)

An introduction to Microsoft PowerPoint. Upon completion of this course students should have beginning knowledge of a presentation program. Prerequisite: keyboard speed of 35wpm, Windows Workstations OS or instructor permission.

BTEC 224

Office Procedures (5)

Topics include: professional image and dress, employer expectations, human relations, receptionist techniques, telephone procedures, processing mail, business ethics, job safety, office supplies and equipment, travel and meeting arrangements, reprographics, financial activities, PC cleaning/care, internet and email. Prerequisite: A grade of 2.0 in BTEC 110 and BTEC 103 or instructor permission.

BTEC 225

Excel II (3)

Hands on approach to intermediate through advanced level of Microsoft Excel spreadsheet. A variety of business applications are used during the course. Prerequisite: Excel I or instructor permission.

BTEC 233

Filing (3)

Basic principles and procedures of records storage and management. Practice indexing, coding, and filing for alphabetic, numeric, subject, geographic filing systems, and introduction to forms design.

BTEC 240

Legal Terminology (3)

Development of a legal vocabulary with emphasis on definitions and spelling. Upon completion of this course students should be able to recognize and use basic terminology used in the legal field.

BTEC 241

Legal Office Procedures (5)

Topics include calendars, billing, document production, court structure, research, family law, wills and probate, criminal law, professional image, and receptionist techniques. Upon completion students should be prepared for work in an entry level position. Prerequisite: BTEC 110, BTEC 240, BTEC 101.

BTEC 260

Medical Terminology (4)

Development of a medical vocabulary with emphasis on definition and spelling. Upon completion of this course students should be able to recognize spoken medical terms, analyze word parts for meaning, and understand basic medical terminology.

BTEC 261

Medical Office Procedures (5)

Topics include professional image, medical ethics and law, safety, patient records, appointments, billing and collections, mail processing, meetings and travel arrangements, office finance, patient education, telephone procedures, cultural differences, and health insurance. Prerequisite: 2.0 or above in BTEC 110, 260, and 101.

BTEC 263

Medical Transcription (4)

A review of medical terminology and the preparation of medical transcripts. Prerequisite: 2.0 or above in BTEC 102, 110, and 260 and typing speed of 40wpm.

BTEC 265

Medical Billing (5)

This course provides a basic understanding of the reimbursement process for those who wish to work as a medical insurance billing specialist in an outpatient setting or independent billing service. Prerequisites: BIOL& 170, BTEC 260. Corequisite: ZOOL 221.

BTEC 266

Medical Law and Ethics (3)

Overview of medical law/ethics for healthcare professionals in various settings: billing/coding, transcription, phlebotomy, etc. Designed to explain ethical/legal obligations to the patient, employer, and health worker and clarify confidentiality requirements regarding patient records and history.

CHEMISTRY

CHEM& 121

Introduction to Chemistry w/ lab (S) (5)

Survey of chemistry with applications in everyday life: atoms, bonds, reactions, and calculations. Prerequisite: one year HS algebra or MATH 098.

CHEM& 131

Intro to Organic/Biochemistry w/lab (S) (5)

A survey of organic chemistry and biochemistry. Prerequisite: CHEM& 121.

CHEM& 161

General Chemistry w/lab I (S) (6)

First quarter of a 1-year course of general chemistry for science and engineering majors: Atoms, molecules and ions; stoichiometry; aqueous solution reactions; gases; energy; electronic structure; periodic table. Prerequisite: CHEM& 121 or HS chemistry AND MATH 099.

CHEM& 162

General Chemistry w/lab II (S) (6)

The periodic table, chemical bonding, introduction to organic chemistry, intermolecular forces and liquids and solids, physical properties of solutions and kinetics. Prerequisite: CHEM& 161, MATH 099 or equivalent.

CHEM& 163

General Chemistry w/lab III (S) (6)

Chemical equilibrium, acids and bases, solubility equilibria, thermodynamics, redox reactions, coordination chemistry, nuclear chemistry and polymers. Prerequisite: CHEM& 162.

CHEM& 261

Organic Chemistry I w/lab (S) (6)

General physical and chemical properties of simple aliphatic and aromatic compounds. Prerequisite: CHEM& 161, 162, 163 or instructor permission.

CHEM& 262

Organic Chemistry w/lab II (6)

Complex organic reactions: alkenes; alkynes; aromatics, aldehydes, ketones. Spectroscopy. Prerequisite: CHEM& 261 or equivalent.

CHEM& 263

Organic Chemistry w/lab III (6)

Complex organic reactions: acids, amines; carbanions, heterocyclic; polyfunctional compounds. Prerequisite: CHEM& 262 or equivalent.

CHEM 270

Research in Chemistry (1-12)

Design a research project, set up experiments, collect data in the lab or in the field, and/or analyze data. Each credit hour requires 33 hours of activity per quarter. Prerequisite: instructor permission.

CHILD & FAMILY STUDIES

CFS 110

Learning and Playing (1-2) (PT)

Parents learn about child development and how to apply that knowledge in their parenting role. Children attend classes with parents and participate in learning activities.

CFS 120, 121, 122

Learning with Infants and Toddlers (2) (PT)

Parents learn about child development and how to apply that knowledge in their parenting role. Children attend classes with parents and participate in learning activities, music, discussion and art.

CFS 130, 131, 132

Positive Parenting I - III (1-4) (PT)

Students are introduced to parenting skills to use with children through classroom participation, lecture, and discussion.

CFS 135

Winning at Fatherhood (2) (PT)

Positive parenting techniques for fathers. Learn to build positive relationships with your children.

CFS 140, 141, 142

Positive Parenting IV- VI (1-4) (PT)

Students develop and practice parenting skills with children through classroom participation, lecture, and discussion.

CFS 145

Foster Parents Cope (3) (PT)

Provides an integrated training program for new and experienced foster parents. Areas of focus include key concepts of foster parenting, relationships, separation and visitation, child development, discipline, and self-esteem.

CFS 146

Parents and Adolescents (3) (PT)

Parents and teens strengthen their relationship through positive communications, self-awareness, feelings, problem solving, family rules and consequences, and age appropriate expectations and independence.

CFS 147

Family/Life Management (1-4) (PT)

Learn to effectively balance family and work.

CFS 150, 151, 152

Positive Parenting VII - IX (1-4) (PT)

Students demonstrate parenting skills from previous levels through classroom participation, lecture and discussion.

CFS 170

Nurturing Parents (1-4) (PT)

Increase parenting skills through direct instruction and feedback. The focus includes: attachment and bonding; normal child development; age appropriate expectations, guidance and discipline, and understanding and responding to children's individual needs.

CHINESE

CHIN& 121

Chinese I (D) (H) (5)

Learn the fundamental skills of listening comprehension, speaking, reading and writing the Mandarin Chinese language. Develop an understanding and appreciation of the Chinese people and culture.

CHIN& 122

Chinese II (H) (5)

Continued study of the fundamental skills of listening comprehension, speaking, reading and writing the Mandarin Chinese language. Develop an understanding and appreciation of the Chinese people and culture. Prerequisite: CHIN& 121 or permission of instructor.

CHIN& 123

Chinese III (H) (5)

Continued study of the fundamental skills of listening comprehension, speaking, reading and writing the Mandarin Chinese language. Develop an understanding and appreciation of the Chinese people and culture. Prerequisite: CHIN& 122 or instructor permission.

CHIN& 221

Chinese IV (H) (5)

Continued study of the fundamental skills of listening comprehension, speaking, reading and writing the Mandarin Chinese language. Develop an understanding and appreciation of the Chinese people and culture. Prerequisite: CHIN& 123 or permission of instructor.

CHIN& 222

Chinese V (H) (5)

Continued study of the fundamental skills of listening comprehension, speaking, reading and writing the Mandarin Chinese language. Develop an understanding and appreciation of the Chinese people and culture. Prerequisite: CHIN& 221 or instructor permission.

CHIN& 223

Chinese VI (H) (5)

Continued study of the fundamental skills of listening comprehension, speaking, reading and writing the Mandarin Chinese

language. Develop an understanding and appreciation of the Chinese people and culture.

CIVIL ENGINEERING

This program is inactive and no longer accepting new students. For detailed information, please contact the Workforce Education Department, ext 427.

CET 210
Civil Software Applications (2)

This course involves the use of spreadsheets and computer aided drafting software to solve engineering problems. Recommended corequisites are CET 251 and CET 261. Prerequisite: BTEC 214 or equivalent; minimum grade of 2.0 in CET 114 and CET 260.

CET 240
Engineering Mechanics (5)

A study of basic concepts in statics and engineering mechanics related to the analysis of internal and external forces acting on structural members and systems. Prerequisite: PHYS& 110 and MATH 110.

CET 250
Construction Materials (3)

Study of basic construction materials including steel, plastics, concrete and asphalt. Concrete mix design/test and evaluation of materials per WSDOT Standard Specifications.

CET 251
Soil Mechanics (5)

A study of basic engineering properties of soils, aggregates, and other subsurface materials, including sampling, testing, and evaluation for use as foundation or structural materials. Prerequisite: GEOL 100 and minimum 2.0 grade in CET 250.

CET 252
Highway Engineering (5)

Introduction to highway engineering principles. Study of highway components, geometrics, and traffic. Design of bases, flexible and rigid pavements with an overview of maintenance and rehabilitation techniques. Prerequisite: minimum grade of 2.0 in CET 251, CET 122 and CET 132.

CET 260
Hydraulics (5)

A study in the basic theory of hydrostatics and fluid mechanics with emphasis on the fundamentals of flow in pipes and open channels and the construction of water distribution systems. Prerequisite: minimum grade of 2.0 in CET 122, 132 and 152.

CET 261
Environmental Technology (5)

Introduction to environmental technology focusing on sanitary sewerage, septic systems, storm water quality and treatment, and the environmental impacts of land development. Prerequisite: minimum 2.0 grade in CET 260.

CET 262
Storm Water Management (5)

A study of hydrologic processes and storm water quantification for use in civil engineering site design and planning. Prerequisite: minimum 2.0 grade in CET 260.

CET 270
Elements of Design (5)

Study of civil engineering design and construction practices involved in land development. Students will use current software and tools to complete technical drawings and designs complying with local design standards. Prerequisite: minimum 2.0 grades in CET 114, CET 200, CET 210 CET 261, and CET 262.

CET 271
Land Planning & Permitting (2)

Study of the fundamentals of land use planning and urban design methods related to land development projects. Focus on project permitting processes at the city, county, and state levels in accordance with Washington State laws. Corequisite: CET 270.

COMMUNICATION

COMM 100
Dragon Naturally Speaking (2) (PT)

Designed to assist students in the development of computer and English composition skills while using Dragon NaturallySpeaking (voice recognition) and text to speech software.

COMPUTER AIDED DRAFTING

CAD 110
CAD for Electronics (3) (PT)

Introduces students to the art and science of reading and creating electrical schematics from a Computer Aided Drafting perspective in teh AutoCAD environment. Knowledge of component identification is required. Prerequisite: ERA 101

CAD 112
Computer Aided Drafting I (5) (PT)

AutoCAD drafting, drawing, editing, dimensioning, drawing aids, layer control and plotting.

CAD 113
Computer Aided Drafting II (5) (PT)

Advanced AutoCAD commands, blocks, symbols library, including assigning and extracting block attributes, creating attribute reports, incorporating and managing external references, isometric drawings, creating dimension styles, use of multiple viewports, and introduction to 3-D wireframe models and 3D solid. Prerequisite: minimum 2.0 grade in CAD 112 or instructor permission.

CAD 114
Computer Aided Drafting III (5) (PT)

Develop sound computer-aided drafting. Emphasis is placed o importing survey points, defining parcels, creating 3D terrain models, calculating cut and fill volumes, and creating contours with labels. Prerequisite: minimum 2.0 grade in CAD 113 or instructor permission.

COMPUTER NETWORK TECHNOLOGY

CNT 117
Windows Workstation OS (2) (PT)

An introduction to the Windows workstation operating system. Course will cover such things as the taskbar, Start menu, recycle bin, window views, Windows Explorer, storage devices, printing, saving, control panels, etc.

CNT 123
Desktop OS I (4) (PT)

This is the first course based on CompTIA A+ and Linux+ certification materials. Material covered includes Virtualization, Vocabulary, OS Installation, Configuration, Customization and Usage Basics of the current popular Desktop Operating Systems.

CNT 124 (Replaces CNT 118)
Desktop OS II (4) (PT)

This is a second course based on Comp TIA A+ and Linux+ certification materials. Material covered includes system hardware, advanced system configuration, and an introduction to the command line. Prerequisite: CNT 123.

CNT 125 (Replaces CNT 119)
Desktop OS III (4) (PT)

This is a third course based on Comp IA A+ and Linux+ certification materials. Material covered includes advanced trouble-shooting, more advanced systems configuration and cmd/shell scripting. Prerequisite: CNT 124.

CNT 140

CNT Internship (1-8) (PT)

This course is designed to provide students with an introduction to and experience in Help Desk operations. Students will learn the fundamentals of Tier 1 call taking and customer service. Prerequisite: CNT 124.

CNT 201

Network Technology I (4)

This course is based on CompTIA Network+ certification materials. Material covered includes Fundamental Concepts, Terminology, LANs, WANs, Internetworking, VLANs, Routing Basics and Wireless Networking. Pre/corequisite: MATH 098.

CNT 203

Network Technology III (5)

Course concentrates on materials commonly associated with Security+ certification. Coverage includes risk identification, intrusion detection, encrypted communication, firewalls and basic forensics. Prerequisite: CNT 201.

COMPUTER SCIENCE TECHNOLOGY

CST 101

Intro to Programming (4) (PT)

This course provides an introduction to programming using Microsoft Visual Studio. Course focus is on building basic Windows Forms graphical applications.

CST 119

Web Scripting I (4) (PT)

This course is designed for new web designers who want to develop, modify and design web sites and web graphics using Macromedia products.

CST 120

Introduction to Web Design (4) (PT)

Create well-designed and effective Web pages. Hands-on computer projects help develop the basic application and design skills to create professional, eye-catching Web sites.

CS& 131

Computer Science I - C++ (5) (PT)

Intended as an introduction to programming. Emphasis is on the features of the "C" programming language with an introduction to C++ object oriented programming and good programming style.

CS& 141

Computer Science I - Java I (5) (PT)

A study of rapid application development (RAD) JAVA. Development of GUIs using Swing Technology. Object Oriented Programming as it is implemented in JAVA. Introduction to graphics, animation, and multi-threading. Prerequisite: MATH 099 or equivalent.

CST 204

XML (3)

XML (Extensible markup language), XHTML, Cascading style sheets, Document Type Definitions, Schema, Document Object Model, XPath, XSL. Prerequisite: CST 119.

CST 228

JAVA II (5)

How to connect to and query a database-based on client requests. Answers will be processed using Java Servlets and Java Server Pages. Data will be presented to the client as a dynamic web page. Prerequisite: CST 224 or CS& 141.

CST 230

JAVA: Server Side Programming III (5)

A second course in how to build and program dynamic web applications. Topics include: creating custom tags, integrating email into web applications, specialized servlets, Hibernate, Java Server faces, Struts and deployment strategies. Prerequisite: CST 228.

COOPERATIVE WORK EXPERIENCE

COOP 190

Cooperative Work Experience (1-12) (PT)

Cooperative Work Experience allows students to apply classroom learning to on-the-job settings. Credit is earned for new and continued learning taking place in the work environment. Reaching set learning objectives and development of positive work habits are emphasized. The Cooperative Education Faculty Coordinator, the student employee, and the worksite supervisor identify the learning objectives. 30-360 hours on-the-job per quarter. Instructor's permission is required. Corequisite: Enrollment in a Work Experience Seminar is required of Coop students. You may take the Work Experience Seminar before or in the same quarter as the Coop course.

CRIMINAL JUSTICE

CJ& 101

Intro to Criminal Justice (5)

Examines local, state and Federal law enforcement agencies and the judicial and correctional systems. Career opportunities and qualifying requirements are studied.

CJ 103

Constitutional Case Law (5) (PT)

Examines the Constitution and Bill of Rights in relation to law enforcement, the judiciary, and corrections. Defines guilt-laden facts, reasonable suspicion, and probable cause.

CJ 104

Intro to Law Enforcement (5) (PT)

A broad survey of the theories, procedures and methods of police operations studied. Also examines police discretionary powers, career opportunities, and trends in law enforcement. Pre/corequisite: CJ& 101 or instructor permission.

CJ& 105

Intro to Corrections (5)

A broad survey of the history and evolution of adult and juvenile correctional models in America. All forms of incarceration and restrictive custody are studied. Pre/corequisite: CJ& 101 or instructor permission.

CJ& 106

Juvenile Justice (5)

Juvenile deviance and theories of criminality are studied. Economic, social, and psychological impact of juvenile delinquency trends examined. Pre/corequisite: CJ& 101 or instructor permission.

CJ 107

Criminal Procedures (5) (PT)

Examines state and federal laws of arrest, search and seizure, civil and criminal liability. The rules of evidence and courtroom proceedings are studied. Pre/corequisite: CJ& 101 or instructor permission.

CJ 109

Community Policing (5) (PT)

Focus on resolving community issues and concerns via Community Oriented Policing and Problem Solving (COPPS) skills and strategies. Pre/corequisite: CJ& 101 or instructor permission.

CJ& 110

Criminal Law (5)

A broad survey of the common criminal laws and statutes of Washington and the other 49 United States. Pre/corequisite: CJ& 101 or instructor permission.

CJ 111

Criminal Justice Ethics (5) (PT)

Presents an in-depth examination and analysis of the practical, theoretical, ethical and moral considerations found in the criminal justice system. Pre/corequisite: CJ& 101 or instructor permission.

CJ 114

Critical & Current Issues (5) (PT)

Examines current issues, topics and trends in the criminal justice system. Explores the issues of racism and bigotry as related to criminal justice practitioners. Pre/corequisite: CJ& 101 or instructor permission.

CJ 116

Community Corrections (5) (PT)

Community corrections, alternative sentencing, probation and diversion concepts studied. Explores technology innovations pertaining to community supervision. Pre/corequisite: CJ& 101 or instructor permission.

CJ 126

Homicide Investigation (5) (PT)

Tactics, procedures, and forensic techniques of homicide investigation are examined. Various tools and processes systematically employed to identify, arrest, and convict perpetrators are studied. Pre/corequisite: CJ& 101 or instructor permission.

CJ 129

Intro to Victimology (5) (PT)

Introductory course examines violent crime and victim ology in American society. Factors leading to acquaintance and stranger violence, proactive and reactive strategies to crime, legal issues and self-defense measures studied and discussed.

CJ 130

Domestic Violence & Abuse (5) (PT)

This course examines physical and sexual domestic violence in our society. This includes spouse/partner abuse and child abuse. Contemporary investigation and intervention strategies and techniques are studied including evidence discover, collection, and preservation.

CJ 190

Cooperative Work Experience (1-10) (PT)

See description under COOP 190 for additional information.

CJ 223

Felony Investigations (5)

Practical application of investigation techniques for felony crimes is studied and examined. Includes Part I offenses and drug crime, crime scene considerations, search warrants, report writing, evidentiary issues, surveillance, using informants, and assisting with prosecution.

CJ 224

Criminal Interviews & Interrogations (5)

Basic and intermediate skills required for criminal and forensic interviews and interrogations. Study, practice, role-play, and evaluate the techniques used to elicit factual information from victims, witnesses and suspects in the course of criminal investigations.

CJ 225

Crime Scene Technology (5)

Students learn techniques to collect and preserve common evidentiary items located at crime scenes for future laboratory analysis and judicial proceedings while ensuring proper chain of custody. Aspects of arson investigation are also studied.

CJ 228

Crime Scene Photography (5)

Practical application of basic crime scene photography methods and techniques for criminal investigations studied. Skills designed to capture the details of automobile accidents, misdemeanor, and felony crime scenes are discussed and practiced.

CJ& 240

Intro Forensic Science (5)

Introductory course in forensic science examines physical evidence and laboratory analysis in criminal investigations. Skills and procedures required for collection, preservation, and identification of physical evidence are studied. Diagramming of crime scenes is practiced.

DIESEL EQUIPMENT TECHNOLOGY

DET 100

Shop Skills (2) (PT)

Theory of basic heavy equipment shop skills pertaining to safety, tool and equipment use and working skills. This is a requisite course to continue in the Diesel Equipment Technology program. Corequisite: DET 101.

DET 101

Shop Skills Lab (4) (PT)

The application of safety practices, appropriate tool and equipment use, and other basic competencies in relation to working in an automotive/industrial shop. This is a requisite course for continuance in the Diesel Equipment Technology program. Corequisite: DET 100.

DET 102

Forklift Certification (1) (PT)

Comprehensive classroom training along with practical, hands-on instruction on forklift operation and safety. Course covers state and federal regulations and proper operator training. Students are awarded a certification card upon successful completion. Prerequisite DET 100.

DET 110

Mobile Electrical Systems I (3) (PT)

Explores the terminology and fundamental principles of electrical systems found on diesel equipment. Covers basic systems of batteries, starting circuits, charging circuits, and DC circuitry. Prerequisite: DET 100 and 125 or instructor permission; corequisite: DET 111.

DET 111

Mobile Electrical Systems I Lab (5) (PT)

The application of material covered in Mobile Electrical Systems covering batteries, starting circuits, charging circuits, DC circuitry. Prerequisite: DET 101 and 126 or instructor permission; corequisite: DET 110.

DET 120

Internal Combustion Engine I Theory (3) (PT)

The study of operating principles of the internal combustion engine. Corequisite: DET 121.

DET 121

Internal Combustion Engine I Lab (5) (PT)

The disassembly and re-assembly of a variety of diesel engines using service manuals to inspect analyze and perform tune-up procedures. Corequisite: DET 120.

DET 125

Power Transmission I Theory (3) (PT)

The transmissions of power from the power source to the end function of machinery. Emphasis on mechanical devices. Theory of operation and repair.

DET 126

Power Transmission I Lab (4) (PT)

The application of mechanical power transmission and components. Repair and overhaul of components is studied and practiced in the lab. Corequisite: DET 125.

DET 130

Mobile Hydraulics Theory (2) (PT)

The terminology, physical laws, and principles used in hydraulic systems of diesel equipment. Corequisite: DET 131.

DET 131

Mobile Hydraulics Lab (5) (PT)

Practical exercises to aid the student in understanding the basic principles of hydraulic systems of diesel equipment. Corequisite: DET 130.

DET 166

Shop Skills for Welders (3) (PT)

Develop practical work skills and work habits in the student. Includes safety procedures and practices, proper use and maintenance of common shop equipment and common processes and materials of metal products fabrication and manufacturing.

DET 190

Cooperative Work Experience (1-15) (PT)

See description under COOP 190 for additional information.

DET 200

Mobile Electrical Systems II (2)

Principles of operation of components of electrical/electronic systems. Covers electronic control module (ECM) systems and advanced electrical trouble shooting. Corequisite: DET 201

DET 201
Mobile Electrical Systems II Lab (4)

Practical experiences in analyzing, measuring, and trouble-shooting electrical/electronic circuitry. Computer related exercises are incorporated in analysis of these principles. Corequisite: DET 200.

DET 210
Power Transmission II (1)

The study of power shift and automatic transmissions as used in heavy duty equipment and on highway trucks.

DET 211
Power Transmission II Lab (2)

The application of power shift and automatic transmission as used in heavy duty equipment and on highway trucks. Corequisite with DET 210.

DET 220
Internal Combustion Engine II Theory (2)

Detailed study of engine analysis and testing theory that produce optimum engine performance. Corequisite: DET 221.

DET 221
Internal Combustion Engine II Lab (4)

Live engine testing, trouble shooting, and repairs using the dynamometer. Corequisite: DET 220.

DET 225
Heavy-Duty Chassis Systems (4)

The study of heavy duty chassis systems including steering, frames, braking, and suspension systems. Theory of operation, repair, overhaul and preventive maintenance is covered.

DET 226
Heavy-Duty Chassis Systems Lab (6)

The application of the operation, repair and overhaul of heavy duty chassis system components including steering, brakes and suspension systems. Preventive maintenance procedures are exercised and computer related projects are required. Corequisite with DET 225.

DET 230
Practical Applications Theory (3)

Review of common technical repair practices. Introduction to wage/salary systems, productivity, customer relations, job ticket writing, phone etiquette, employer requirements and policies. Coverage of related state and federal requirements.

DET 231
Practical Applications Lab (5)

Service and repair of industrial trucks and equipment as per customer instructor repair order. Work is done in an industry-like setting using current repair orders and standard repair time guides (SRT's). Emphasis on quality, efficiency and productivity. Prerequisite: DET 230.

DET 235
Mobile HVAC Systems Theory (2)

Basic principles of heating and air conditioning as used in mobile applications. Corequisite: DET 236.

DET 236
Mobile HVAC Systems Lab (4)

Industry accepted practices and procedures of air conditioning system diagnosis and repairs. Corequisite: DET 235.

DRAMA

DRMA 100
Applied Drama (3)

Provides credit for participation in either the artistic or technical aspects of the college's quarterly play productions. This course may be repeated for credit.

DRMA& 101
Introduction to Theater (H) (5)

Overview of theatre as an art form with emphasis on the play in production and the roles of various theatre artists. Students are expected to attend two plays during the quarter at their own expense.

DRMA 103
Set Design (3)

Introduction to the basics of scenic design for the theatre; drafting and model building. Students will work on the concurrent Centralia College Drama production. Prior enrollment in DRMA 106 is preferred.

DRMA 105
Theater History (H) (3)

Survey of the major periods in Western drama through study of major representative plays and development of the physical theater of those periods.

DRMA 106
Introduction to Stagecraft (3)

Introduction to basic tools, materials, equipment, techniques used in the design and implementation of sets, lighting and sound for the theatre. Students will participate in the design, construction and lighting of the concurrent drama production.

DRMA 107
Beginning Acting (H) (5)

Introduction with emphasis on concentration, imagination, movement, and characterization via vocal, physical, emotional exercises, improvisation, and scene work. Students will be expected to attend two plays during the quarter at their own expense.

DRMA 108
Intermediate Acting (H) (5)

Continuation of acting fundamentals with an emphasis on improvisational techniques and exercises, and advance monologue and scene work. Students will be expected to attend two plays during the quarter at their own expense.

DRMA 110
Stage Makeup (3)

Introduction to the types of theatrical makeup and the techniques of application.

DRMA 111
Stage Lighting (3)

Introduction to the basic principles of stage lighting as an integral part of theatrical productions. The course will deal with theories and equipment commonly used in theatre lighting. Students will participate in the drama production.

DRMA 115
Dramatic Performance (H) (5)

For students involved in the creative/performance aspects of a play production, from audition through research/preparation for their portrayal and evaluation of their performance. The student must successfully audition and be cast in a college production. Prerequisite: audition selection for quarterly play production.

DRMA 120
Introduction to Playwriting (H) (5)

Study the art and craft of writing for the stage. Students will be required to complete and oversee the production of a short play. Final performances of student works will be presented to the public.

DRMA 141
Theater Speech (3)

The training of the human voice to develop control. The emphasis is on voice projection, quality and accuracy of sound and articulation of the English language.

DRMA 148
Introduction to Dance (1)

Study the fundamentals of Ballet, Modern, and Jazz dance. Prior dance experience is not necessary. The student will be required to wear casual, comfortable clothing. Students may participate barefoot. Dance shoes are optional.

DRMA 149
Introduction to Movement for Theatre (1)

Introduction to dance for Musical Theatre. Prior dance experience is not necessary. The student will be required to wear casual, loose fitting clothing. Students may participate barefoot. Dance shoes are optional.

DRMA 150
Introduction to Modern Dance (1)

Study basic Modern Dance, Latin, and Swing movements. Prior dance experience is not necessary. The student will be required to wear comfortable, loose fitting clothing. Students may participate barefoot. Dance shoes are optional.

DRMA 201

Advanced Acting (H) (5)

Continued study of acting; character analysis, scene interpretation and classical styles. Students will be expected to attend two plays at their own expense and will be responsible for the presentation of a children's theatre production.

DRMA 205

Contemporary World Theatre (3)

Introduces contemporary world theatre using the theatrical productions of the Pacific NW regional theatres and the Broadway theatres of NY City. Travel to and study these productions. Visits to additional cultural events/locales will be included.

ECONOMICS

ECON& 201

Microeconomics (SS) (5)

Study of individual markets and how prices and quantities react within those markets to meet the unlimited wants of human beings.

ECON& 202

Macroeconomics (SS) (5)

Study how any system allocates limited resources to meet unlimited human wants. The major concerns of macroeconomic policy are: inflation, full employment, national income accounting, fiscal policy, the money supply and international trade.

EDUCATION

EDUC 190

Cooperative Work Experience (1-12) (PT)

See description under COOP 190 for additional information.

EDUC& 201

Introduction to Education (3)

Explore the role of education in our society and investigate teaching as a career. Both the historical perspective and current trends in education will be discussed.

EDUC 202

Classroom Observation (2)

Students review teaching as a career. Students observe classrooms in action and attend seminars to discuss their findings. Students may make arrangement with the instructor to start observations before quarter begins.

EDUCATION-EARLY CHILDHOOD

ECED& 100

Child Care Basics (3)

Designed to meet licensing requirements for early learning providers, STARS 30 hour basic course recognized in MERIT system. Topics: child development, cultural competency, community resources, guidance, health/safety/nutrition and professional practice.

ECED& 105

Introduction Early Child Education (5)

Explore the foundations of early childhood education. Examine theories defining the field, issues and trends, best practices, and program models. Observe children, professionals and programs in action.

ECED& 107

Health/Safety/Nutrition (5)

Develop knowledge and skills to ensure good health, nutrition, and safety of children in group care and education programs. Recognize the signs of abuse and neglect, responsibilities for mandated reporting, and available community resources.

EDUC& 115

Child Development (5)

An in-depth study of the physical, emotional, social and mental development of children from conception through age eight. An understanding of family structures, interaction and function will be integrated throughout the developmental process.

ECED& 120

Practicum-Nurturing Relationships (2)

Students gain experience engaging in nurturing relationships with children, keeping children safe and promoting children's growth and development.

EDUC& 130

Guiding Behavior (3)

Examine the principles and theories promoting social competence in young children and creating safe learning environments. Develop skills promoting effective interactions while providing positive individual guidance and enhancing group experiences.

ECED& 132

Infants/Toddlers Care (3)

Examine the unique developmental needs of infants and toddlers. Study the role of the caregiver, relationships with families, developmentally appropriate practices, nurturing environments for infants and toddlers, and culturally relevant care.

ECED& 134

Family Child Care (3)

Learn the basics of home/family child care program management. Topics include licensing requirements; business management, relationship building, health, safety, and nutrition, guiding behavior and promoting growth and development.

EDUC& 136

School Age Care (3)

Gain skills to provide developmentally appropriate and culturally relevant activities and care for school-age children. Focus is on preparing the environment, implementing curriculum, building relationships, guiding academic/social skill development, and community outreach.

ECED& 139

Admin Early Learning Program (3)

Establish administrative skills required to develop, open, operate, manage, and assess early childhood education and care programs. Explore techniques and resources available that meet Washington State licensing and NAEYC standards.

EDUC& 150

Child/Family/Community (3)

Investigate the family and community contexts in which children develop. Explore cultures and demographics of families in society, community resources, strategies for involving families in the education of their children and tools for effective communication.

ECED& 160

Curriculum Development (5)

Investigate learning theories and create curriculum that enhances the development of language, fine/gross motor, social-emotional, cognitive and creative skills in young children.

ECED& 170

Environments-Young Child (3)

Design and evaluate indoor and outdoor environments which ensure quality learning, nurturing experiences, and optimize the development of young children.

ECED 181

Language and Literacy (5)

Create teaching strategies for language acquisition and literacy skills at each developmental stage (birth-8) through the four interrelated areas of listening, speaking, writing, and reading.

ECED& 190

Observation/Assessment (3)

Collect data to assess children. Use this data to plan for group and individual needs.

EDUC& 203

Exceptional Child (3)

Explains the role of Special Education in education systems. Provides techniques to work with the exceptional child in the classroom. Topics include exceptionality in all areas of development, diagnosis, communication, and working with family structures.

ELECTRONICS/ROBOTICS

ERA 101

Electronics Assembly (4) (Formerly ELT 113) (PT)

Techniques of electronics assembly using though-hole and surface mount components. Schematics and computer aided design will be studied. Heavy emphasis placed on personal and component safety and Electrostatic Discharge (ESD). Pre/Corequisite: MATH 098, ENGL 099 or equivalents.

ERA 105

Industrial Computer Operation (3) (PT)

Best practices computer operations in an industrial environment. Topics include Windows operation system navigation, hardware maintenance and various industrial software interfaces. Pre/Corequisite: MATH 098, ENGL 099 or equivalents.

ERA 115

DC Electronics (5) (Formerly ELT 115) (PT)

Analysis and troubleshooting of DC circuits including Ohm's Law, Watt's Law, and Kirchoff's Laws; and Thevenin and Norton equivalents. Class will emphasize DC circuit principles. Prerequisite: ERA 101.

ERA 120

Sensor Technology (3) (PT)

How to use, repair and calibrate electronic sensors that measure heat, light, magnetism, pressure, flow and liquid level.

ERA 121

AC Electronics (5) (Formerly ELT 121) (PT)

Analysis and troubleshooting of AC circuits. The effects of devices such as capacitors, inductors and transformers in filter combinations are studied, along with the effects of alternating current and magnetism. Prerequisite: MATH 115, ERA 115.

ERA 150

Robotics I (3) (PT)

An introduction to the principles of robotics. Prerequisite: one quarter of prior programming.

ERA 151

Mechanical/Fluid Systems (3) (PT)

Mechanical forces, simple machines and the relationships between mass, force, and time, and those applications to mechanics. Hydraulic and pneumatic forces and component systems will also be studied and demonstrated. Prerequisite: ERA 101.

ERA 212

Digital Electronics (5) (Formerly ELT 212)

Digital logic systems and devices, boolean and hexadecimal numbering systems, combinational logic sequences and application of logic systems. Lab section emphasizes safety and electro-static discharge avoidance. Prerequisite: MATH 115, ERA 115.

ELT 213

Small Signal Amplifiers w/lab (5)

Small signal amplifiers using bipolar junction transistors and field effect transistors studied. Circuit gain, input and output impedance and bandwidth calculations are used to predict circuit operation. Troubleshooting techniques practiced. Op amp circuits are studied.

ERA 230

Robotics II (4)

Students learn the mechanical, electronic and software features of autonomous robots. Prerequisite: ERA 150, ELT 115, CST 224.

ERA 250

Automation I (4)

An introductory study of the principles of Automation. This includes: Thyristors, Electric Motors, Motor Controls, Ladder Logic and Closed Loop Systems. Prerequisites: ELT 121, ERA 120, ERA 151.

ERA 251

Automation II (4)

Topics covered include electric motors, motor controls work cell robotics, and a very heavy emphasis on programmable logic controllers. Prerequisite: ERA 250.

ERA 270

Robotic III (4)

A third course in Robotics. Topics covered are: infrared range sensing, navigation principles of autonomous robots, behavior based control, and characteristics of work cell robotics. Prerequisite: ERA 230.

ENERGY TECHNOLOGY

PPO 100

Introduction to the Energy Industry (5) (PT)

Provides a broad background in fields related to power generation.

PPO 101

Introduction to Power Generation and Process Controls (3) (PT)

Provides a broad background in fields related to power generation and process control technology.

PPO 102

Power Generation (5) (PT)

Focus will be on environmental issues surrounding power plants. Introduction to boilers including design and ancillary equipment. Prerequisite: PPO 100.

PPO 103

Electric Utility Distribution Systems (5) (PT)

Continuing coverage of power systems, boilers and prime movers. Prerequisite: PPO 102.

PPO 105

Inside Wireman Section A (7) (PT)

Provides introductory instruction in electrical theory, design, installation, and maintenance of electrical systems providing power, light heat, air conditioning, refrigeration, control, communication, monitoring, and automation to residential, commercial, and industrial markets.

PPO 110

Introduction to Power Production (2) (PT)

An introduction to the preliminary aspects of understanding power production such as overview of the physical system, applied math, safety concerns, steam properties, economics and de-regulation. Prerequisite: PPO 102.

PPO 120

Energy Technology - Blueprint Reading (4) (PT)

An in-depth study of construction blueprints for residential, commercial, and industrial facilities, emphasizing interpretation as it applies to the energy and HVAC industries.

PPO 130

Industrial Safety (5) (PT)

Industrial safety practices, procedures, and equipment as found in modern power plants. Also included will be basic first aid and CPR, and basic firefighting equipment and procedures. Basic Rigging will be taught stressing safety. Prerequisite: PPO 102.

PPO 150

Energy Efficiency (3) (PT)

A study of Energy Efficiency concepts related to the efficient and effective use of electricity in home and industry. Subjects covered will include electrical terms, green alternative energy sources, transportation, solar, wind, biomass, and insulation.

PPO 151

Energy Efficiency Lab (2) (PT)

Real world application of Energy Efficiency concepts. Students will do an energy audit of their homes measuring and calculating the overall energy efficiency of the home. Corequisite: PPO 150.

PPO 191

Power Plant Job Preparation (4) (PT)

Introduces students to local power generation facilities through touring potential job sites, performing market research and preparing for the POSS test which is required for entry level employment or apprenticeship.

PPO 201

Plant Systems (5)

Provides a background in power plant cycles, systems and equipment, including an introduction to instrumentation and control. Prerequisite: PPO 102.

PPO 202

Plant Maintenance (5)

Provides a background in refrigeration, heating, ventilation and air conditioning; and lighting. Prerequisite: PPO 201.

PPO 203

Plant Operations Refrigeration & HVAC (5)

Provides a background in power plant operations and controls. Prerequisite: PPO 202.

PPO 205

Power System Operator I (5)

First in a two-class series: provides background to operate the American electrical grid system under North American electrical Reliability Corporation (NERC) required standards and prepares for NERC exam. Prerequisite: minimum 2.5 grade in PPO 201 or instructor permission.

PPO 206

Power System Operator II (5)

This continuation of PPO 205 provides students with background in operating the American electrical grid system under North American Electrical Reliability Corporation (NERC) required standards and prepares for NERC exam. Prerequisite: minimum 2.5 grade in PPO 205 or instructor permission.

ENGINEERING

ENGR 100

Introduction to Engineering (2) (PT)

Introduction to the various fields and careers of engineering. Topics will include: educational planning and transfer issues; problem solving, engineering design, teamwork, and communication skills.

ENGR& 111

Engineering Graphics I (2)

Introduces the basic concepts of engineering graphics through freehand sketching and computer-aided drafting. Includes orthographic projection, section and auxiliary views, dimensioning and text.

ENGR& 112

Engineering Graphics II (3)

Continuation of ENGR& 111. Emphasizes basic concepts of engineering graphics in CAD-based descriptive geometry applications. The latter part of the course covers a variety of 3-D modeling techniques and solid mass properties extraction. AUTOCAD software is used as the primary CAD -tool. Prerequisites: ENGR& 111 or equivalent, MATH & 141, or instructor permission.

ENGR 203

Applied Numerical Methods (5)

Numerical solutions to engineering and science problems using modern scientific computing tools. Application of mathematical judgment in selecting computational algorithms and communicating results. Introduction to MATLAB programming for numerical computation. Prerequisite: MATH& 152 (MATH 118 recommended) or instructor permission of instructor.

ENGR& 204

Electrical Circuits (5)

An introduction to basic electrical circuits and systems. Topics include: basic analysis techniques; nodal and mesh analysis; Thevenin and Norton equivalent circuits; operational amplifiers; step, natural and steady state circuit response. Concurrent enrollment in MATH 212 is recommended. Prerequisite: MATH& 152 and PHYS& 222.

ENGR& 214

Statics (5)

First of a three-course sequence. The basic principles of vector statics; friction, analytical and graphical methods of solving force systems including frames, trusses, and other simple mechanisms; centroids and moments of inertia; chains and cables. Corequisite: MATH& 151.

ENGR& 215

Dynamics (5)

Second of a three-course sequence includes the study of kinematics and kinetics of a particle, work-energy, impulse-momentum, relative motion, and rigid-body mechanics. Vector methods will be stressed throughout. Prerequisite: MATH& 152.

ENGR& 225

Mechanics of Materials (5)

The last of a three-course sequence. Includes the study of stress, strain, deflection in beams, columns, machine and structural members. Includes bending moments, shear, torsion, deformation, unsymmetrical bending, and eccentric loading. Prerequisite: ENGR& 214.

ENGR 270

Research in Engineering (1-12)

Design a research project, set up experiments, collect data in the lab or in the field, and/or analyze data. Each credit hour requires 33 hours of activity per quarter. Prerequisite: instructor permission.

ENGLISH

ENGL 093

Independent Study (1-5)

Individualized instruction for the student whose needs are not currently being met by the available course offerings. Specialized curriculum and instruction are developed to meet each student's needs. Permission of instructor only.

ENGL 094

Spelling (1-5)

Topics covered in this course include basic spelling patterns, commonly confused words, apostrophe use, capitalization, plural formation, and how pronunciation helps to improve spelling. Students utilize materials according to pretesting information.

ENGL 095, 096

Vocabulary Development I & II (1-5)

Builds a base of words used in everyday communication, provides systematic study, and increases proficiency in oral and written communication and reading comprehension. Students are given a placement test and assigned materials at an appropriate level.

ENGL 097

Vocabulary Development III (1-5)

Course provides a systematic study of college level academic words and their roots, prefixes, and suffices to increase proficiency in oral and written communication.

ENGL 098

Writing & Grammar Review (1-5)

Study proper word usage, sentence structure, and punctuation. Writing includes personal essays and summaries. Emphasis is on improving grammar and writing skills for personal needs and preparation for technical coursework. Prerequisite: students must meet mandatory placement requirements to enroll.

ENGL 099

Fundamentals of English (1-5)

Prepares students for college composition. Students analyze texts, review sentence structure and punctuation, and write several short essays and other writing. Students must meet mandatory placement requirements to enroll.

ENGL& 101

English Composition I (C) (5)

Expository writing course which encourages students to think and write with clarity, conciseness, and enjoyment; to organize and develop their ideas; and to express themselves sharply, economically, and grammatically. Prerequisite: students must meet mandatory placement requirements to enroll. A minimum score of 83 on the COMPASS test, a minimum score of 46 on the ASSET test, or completion of five credits of ENGL 099 with a minimum grade of 2.0.

ENGL& 102

Composition II (C) (5)

A course in argumentative and persuasive writing, methods of research, development and preparation of original source-based papers and projects. Prerequisite: completion of ENGL& 101 with a minimum grade of 2.0

ENGL 103 (formerly ENGL 100)

Writing for College (1)

Lab hours in the Writing Center will support skill development and confidence in specific aspects of college writing, to be defined in an Individual Learning Plan (ILP) with instructor.

WRT 105 (Formerly ENGL 105)

Writing in the Workplace (5)

Study a variety of workplace communications, along with proper use of grammar, sentence structure, mechanics and vocabulary within those communications. Prerequisite: ENGL 098 or equivalent score on Compass/Asset test.

ENGL& 111

Introduction to Literature (H) (5)

Introduces the major genres, techniques and themes of literature by examining the work of a variety of classic and contemporary authors.

ENGL& 113

Introduction to Poetry (H) (5)

Introduction to modern poetry (mid-19th c. to present) through the study of major English language poets: their lives, influences, and works. Corequisite: ENGL& 101.

ENGL& 114

Introduction to Dramatic Literature (H) (5)

Survey of dramatic literature from classical Greek to modern plays, emphasizing basic elements of plot, character, language, and the traditional genres of tragedy and comedy. Students will attend two plays at their own expense.

ENGL 160

Women's Literature (H) (D) (5)

Examines literature written by women to understand how gender, class and race shape their experience and their writing. Genres will include poetry, short stories, non-fiction, fiction and drama. College-level reading and writing skills expected.

ENGL 180

Short Fiction (H) (5)

Survey of short story as representational vehicle in romanticism, realism, modernism, horror, satire, science fiction, magical realism. Primarily American in focus; includes cross-cultural comparisons. College-level reading, writing skills expected. Creative writing options.

ENGL 204

Introduction to Shakespeare (H) (5)

Learn about the life, times and works of William Shakespeare, how Elizabethans' likes and dislikes, superstitions, and social order influenced this golden age of the theatre by studying six of the Bard's 37 plays.

ENGL 208

Introduction to Creative Writing (H) (5)

Writers will move beyond the traditional "academic essay" into an exploration of literary genres to include poetry, creative nonfiction, short fiction, and drama in interactive workshop environment. Prerequisite: college level writing skills; test into ENGL& 101.

ENGL 209

The Hero's Quest: Survey of English Literature 7th Century (H) (5)

Surveys how medieval and early Renaissance English writers explored issues like the relationship between rulers and subjects, God and free will, and the war between the sexes. Covers the Beowulf poet, Chaucer, Shakespeare, and more.

ENGL 210

The Crisis of Faith: Survey English Literature 1616 (H) (5)

Surveys late Renaissance through Enlightenment writers like John Donne, Ben Johnson, Andrew Marvell, John Milton, Daniel Defoe, Jonathan Swift, Alexander Pope, and Samuel Johnson, emphasizing how writers reflected social concern about faith, politics, and gender roles.

ENGL 211

Survey of English Literature: 1798 - Present (H) (5)

This survey studies how, amid political, technological, religious, and artistic ferment, English literature was transformed by the Romantic poets, the rise of the Victorian novel, and the innovations of modern fiction, drama, and poetry.

ENGL 220

American Drama (H) (3)

Presents six classic American plays which deal with society and family expectations. Students will view, analyze, discuss, and write on the literary components and substance of these plays.

ENGL 233

Literature for Children and Adolescents (H) (5)

Introduction to historical framework of this genre of literature and the authors and illustrators of children's books from pre-school to adolescence. Classics as well as contemporary publications included. Reading to children at day-care included.

ENGL& 235

Technical Writing (C) (5)

An alternative to ENGL& 102 for science and engineering majors, focused on writing with clarity, objectivity, audience awareness, proper formats as well as research techniques, problem-solving, critical thinking and development of source-based writing. Prerequisite: completion of ENGL& 101 with a minimum grade of 2.0.

ENGL& 244

American Literature I (H) (5)

Surveys how great American writers have addressed classic American values and conflicts, tracing the development of our national literature through the Puritan, Transcendental, Realist, Naturalist, and modern movements and covering poetry, fiction, and nonfiction.

ENGL 249

The Great American Novel (H) (5)

Explore the development of the American novel and its major themes, focusing on classics by writers like Hawthorne, Melville, Twain, Chopin, Hemingway, Faulkner, and Morrison. This course requires college level reading and writing skills.

ENGL 250

Literary Themes (1-5)

A major theme is followed through important works of fiction, poetry, and drama. Themes vary depending on the instructor and the quarter in which it is offered.

ENGL 260

Non-Western World Literature (H) (D) (5)

Literature of the non-western world, ancient times to the present. Students will explore works from India, China, Africa, Japan, the Middle East, and Latin America.

ENGL 271

Intermediate Creative Writing (3)

Students will hone their creative writing, work shopping, and revising skills while working on an individual project. Prerequisite: ENGL 208 & instructor permission.

ENGL 272

Advanced Creative Writing (3)

For serious students who wish to prepare a manuscript for publication and/or writing program admission. Emphasis on work shopping, and revising of an individual project. Prerequisite: ENGL 271 & instructor permission.

ENVIRONMENTAL SCIENCE

ENVS& 100

Survey of Environmental Science (S) (5)

An introduction to the interactions between humans and the natural world. Topics include structure and function of ecosystems; populations' growth; mineral, water, forest, food and energy resources, waste management, pollution. Local and global environmental issues will be discussed.

ENVS& 101

Introduction to Environmental Science w/ lab (S) (5)

An interdisciplinary course for non-science majors and beginning science students. Topics include biodiversity, climate, pollution, energy and food. Independent laboratories and field trips included. Students cannot receive credit for Both ENVS& 100 and ENVS& 101.

ENVS 120

Watersheds: Connecting Mountains to the Sea (S) (5)

Investigate interconnections among geology, hydrology, biological diversity, ecology, human impacts and development along local rivers from headwaters to the ocean. General concepts presented in lectures are illustrated during day-long weekend field trips over rough terrain.

ENVS 121

Fire and Ice, Rain and Rocks-The Geology of water (1)

Examine the geologic and hydrologic characteristics and history of a river from its headwaters to its delta-how earthquakes, faulting, folding, climate, glaciers, volcanism, and man have affected the river. Includes a day-long field trip over rough terrain.

ENVS 122

Plants, People, and Watershed Health (1)

Investigate the role of upland forests and riparian vegetation on the health of watersheds and people. During a day-long field trip over rough terrain, identify plant species, measure ecosystem characteristics, observe healthy and impacted sites, and investigate the compatibility of forestry, agriculture and watersheds.

ENVS 123

Let the Bugs Speak: Biological Communities (1)

Investigate biological communities found in local streams and rivers, focusing on aquatic insects and aquatic vertebrates. Apply stream survey techniques to assess stream health. Includes a day-long field trip over rough terrain.

ENVS 124

Life in the Mud: Where the River Meets the Sea (1)

Estuaries, important and yet impacted ecosystems, are critical nursery habitats for many marine species, including endangered salmon and important overwintering habitat for migratory birds. Investigate the impacts of anthropogenic modification to the local estuaries and recent attempts at habitat restoration. Includes a day-long field trip over rough terrain.

ENVS 125

Life on the Edge: Surviving the Intertidal (1)

Investigate the flora and fauna living in the intertidal zones of sandy and rocky habitats in Puget Sound and the Straits of Juan de Fuca. Explore the physical and biological factors that regulate intertidal communities in the Pacific Northwest. Includes field trips over rough terrain.

ENVS 126

Our River's Keepers: Pollution/Remediation (1)

Examines pollution within the Chehalis River watershed, including pollutant types, sources, impacts, environmental fates and methods of remediation. Asses water quality, examine potential sources of pollutants, and visit restoration/remediation projects. Includes a day-long field trip over rough terrain.

ENVS 127

Fishes & Rivers in Northwest (1)

Investigate fish communities found in local streams and rivers. Examine the impacts of habitat loss, hydropower and dams, hatcheries, and overharvesting on local fish populations. Includes a day-long trip over rough terrain.

ENVS 170

Introduction to Natural Resources (S) (5)

What are Pacific Northwest forests, fishes and wildlife? Learn some common species, historical human uses; what policies drive their management, how to conserve them for future use, and how to plan for a career in the field.

FORENSIC SCIENCE

FORS 101

Introduction to Forensic Science (S) (5)

Application of biology, chemistry, and physical science in evaluating evidence. Examine the capabilities and limitations of forensic science, the organization of the forensic science laboratory, using analytical tools, and applying science to questions of law.

FRENCH

FRCH& 121, 122, 123

French I-III (H) (5)

A multimedia course that combines video, audio, and print. Emphasis is on communicative proficiency, self-expression and cultural insight. Resources include CDs, videos and the World Wide Web.

FRCH& 221, 222, 223

French IV-VI (5)

Reviews and expands essential points of grammar. Students will develop reading skills, build their vocabulary, and increase their listening and speaking skills in a variety of topics. French is used almost exclusively in the classroom. Prerequisite: FRCH& 123 or instructor permission.

GEOGRAPHIC INFORMATION SYSTEM

GIS 101

GIS Introduction (3) (PT)

Provides an overview and hands-on practice with Esri's ArcGIS Software (ArcMapy/ Arc Catalog). Encourages students to associate, relate, and apply GIS technology to major and career goal. Students will complete Esri 'Virtual Campus' Certificates. Prerequisite: CNT 117 or equivalent skills recommended.

GIS 102

GIS Spatial Data Design (3) (PT)

Provides in-depth analysis and hands-on practice with coordinate systems, projections, and the structure capabilities and methods for designing geodatabases within GIS. Students will complete Esri 'Virtual Campus' Certificates. Prerequisite: CNT 117 or equivalent skills recommended.

GIS 103

GIS Based Cartography (3) (PT)

Introduces the art and science of GIS cartography (map making). Create digital and hardcopy representations for a variety of audiences, using the latest Esri GIS software and extensions. Students will complete Esri 'Virtual Campus' Certificates. Prerequisite: CNT 117 or equivalent skills recommended.

GIS 104

GIS and GPS Integration (3) (PT)

Collect, transfer, and use Global Positioning System (GPS) data as primary and secondary data in GIS software for analysis and visualization. Students will complete Esri 'Virtual Campus' Certificates. Prerequisite: CNT 117 or equivalent; GIS 101 recommended.

GIS 110

Principles of GIS (5) (PT)

Introduction to the principles of geographic information systems: data sources, data models, capturing and manipulating GIS data, geography concepts, and spatial data. Hands-on practice with GIS software. Prerequisite: MATH 098 must have computer skills (email, file structure, windows).

GIS 200

GIS Extensions Analyst (3)

Introduction to Esri's ArcGIS Extensions that provide advanced analysis and visualization options while developing skills using 3D Analyst, Spatial Analyst, Network Analyst, Model Builder, Maplex, and others. Students will complete Esri 'Virtual Campus' Certificates. Prerequisite GIS 101, 102.

GIS 201

GIS Capstone (3)

In this culminating course, students plan and implement a project using skills such as spatial data design, cartography, and extensions analysis acquired in previous GIS courses. Prerequisite: GIS 101, 102, 103, 104, and 200.

GIS 250

GIS and Remote Sensing (5)

Application of geographic information systems (GIS) and techniques of remote sensing in natural resource management, including area determination, scale, height measurement, and forest analysis. Detailed cases are studied. Prerequisite: GIS 110, ENGL 099, MATH 099, or instructor permission.

GEOGRAPHY

GEOG& 200

Human Geography (D) (SS) (5)

Introduction to basic geographical concepts, with an emphasis on inter-relationships of people and their physical and cultural environments. Course will satisfy requirements for elementary education majors and meet state-mandated Essential Academic Learning Requirements for geography.

GEOG 201

Introduction to Physical Geography (S) (4)

Explore the characteristics of and relationships between Earth's natural systems: lithosphere, hydrosphere, atmosphere, and biosphere. Introduction to landforms, climates, vegetation, soils, mineral and water resources, plate tectonics, and maps. Concurrent enrollment in GEOG 201L. Coursework will include some college level writing and math.

GEOG 201L

Physical Geography Lab (S) (1)

Students will explore applications in physical geography. Maps, profiles, tables, graphs, aerial photos. Concurrent enrollment in GEOG 201 or instructor permission.

GEOLOGY

GEOL 100

Geology for Engineering & Environmental Studies (S) (3)

Explore minerals and rocks, geological processes, and geological investigation techniques that relate to geotechnical and environmental concerns.

GEOL& 101

Introduction to Physical Geology (S) (5)

Explore and recognize earth materials, processes and structures within a plate tectonics framework; origin and structure of the Earth, rocks and minerals, geologic time, earthquakes and volcanoes, ocean basins, formation of landscapes, special topics. Concurrent enrollment in GEO L& 101L.

GEOL 102

Earth Evolution & Global Change (S) (4)

Students will explore the evolution of the Earth and life through geologic time. Origin of the earth, its oceans and atmosphere, evolution of plants and animals, plate tectonics, changes in the continents through time, sedimentary deposits and environments, fossils, geologic time. No prerequisites but GEOL 101/101L recommended; concurrent enrollment in GEOL 102L. Coursework will include some college level writing and math.

GEOL 102L

Earth Evolution and Global Change (S) (1)

Identify common sedimentary and other rocks, minerals, and fossils; interpret sedimentary environments; determine relative ages; learn about plate tectonics. Concurrent enrollment in GEOL 102 or instructor permission.

GEOL 108

Natural Hazards and Catastrophes (S) (5)

An examination of earth materials and processes through the study of earthquakes, volcanoes, landslides, floods, tsunamis, hurricanes, tornadoes, wildfires, and meteorite impacts. Examination of causes and effects on human populations and the environment; preparedness, prediction and forecasting; mitigation of risks, and case studies.

GEOL 180

Cascade and Plateau Geology (S) (3)

Students will explore the geology of a selected area of interest, for example, Hawaii, Grand Canyon, Rocky Mountains, Cascades, Yellowstone, Tetons, Southwest Deserts, etc.

GEOL& 208

Geology of Pacific NW (S) (5)

Examines the geology and geologic history of the Pacific Northwest and geologic processes important to its evolution. Topics include volcanoes, earthquakes, plate tectonics, rock and minerals, faults and folds, mountain building, landforms, glaciation, and surface processes.

GEOL 270

Research in Geology (1-12)

Design a research project, set up experiments, collect data in the lab or in the field, and/or analyze data. Each credit hour requires 33 hours of activity per quarter. Prerequisite: instructor permission.

HEALTH

HLTH 120

Women's Health Issues (D) (HF) (3)

An opportunity to examine current women's health and well-being issues.

HLTH 125

Exploring Healthcare Professions (3)

An opportunity for investigating the many career opportunities in the health sciences.

HLTH 130

Health & Wellness (HF) (3)

An exploration of current personal health issues and a presentation of contemporary approaches to obtaining and maintaining a high level of wellness.

HLTH 135

Healthy Weight Control (HF) (2)

An introduction to healthy eating that focuses on a balance of foods, including a variety of lifestyle change strategies that will enhance the maintenance of a healthy weight.

HLTH 140

Exercise & Nutrition (HF) (3)

Two core components of a healthy lifestyle -a healthy diet and a safe exercise program -will be explained and developed. Students are expected to exercise outside of class time.

HLTH 145

Safety and Fitness (HF) (3)

Emphasizes the importance of safety, first aid, and exercise as they relate to an individual's level of health and fitness. The course includes American Red Cross Community First Aid and Community CPR certification.

HLTH 154

Community First Aid and CPR (1)

Introductory American Red Cross first aid class with emphasis on the basic skills needed in case of an emergency. Adult, child and infant CPR covered.

HLTH 160

EMT Training (8)

Techniques of emergency medical care presently considered as the responsibilities of a technician in his role. Designed to assure a uniformly high level of knowledge and skills among those involved in emergency care. Prerequisite: instructor permission.

HISTORY

HIST 110

History of Intolerance (D) (SS) (3)

An examination and analysis, through reading and film, of intolerance in America's history. Particular attention will be paid to historical events which demonstrate intolerance based on: religion, ethnicity, race, gender, sexual orientation and age.

HIST& 116

Western Civilization I (SS) (5)

Analysis of the development of major political, economic, social and cultural characteristics of Antiquity and Medieval Europe.

HIST& 117

Western Civilization II (SS) (5)

Analysis of the modern state with emphasis on the Renaissance, the Reformation, Absolutism, Scientific and Political Revolutions.

HIST& 118

Western Civilization III (SS) (5)

Analysis of the late 19th and 20th centuries with special attention paid to the development of political, social and economic trends and events.

HIST& 146

US History I (SS) (5)

Analysis of American history from the pre-invasion to the Antebellum Era. Emphasis will be on the political, social, and economic changes.

HIST& 147

US History II (SS) (5)

Analysis of American history from Antebellum Era to the Progressive Era. Emphasis will be on the political, social, and economic changes.

HIST& 148

US History III (SS) (5)

Analysis of American history from World War One to the present. Emphasis will be on the political, social, and economic changes.

HIST 210

Introduction to Pacific Asian History (D) (SS) (5)

Description and analysis of emergence of modern nations of Pacific Asia. Gain understanding of historical and geographical context of the political and economic development of the region.

HIS& 214

Pacific NW History (SS) (5)

Study of the early exploration and settlement of the Pacific Northwest. Emphasis will be on the economic, political and social developments. The course is designed to meet state certification requirements for teachers.

HIST& 215

Women in U.S. History (SS) (5)

Exploration of female experiences in the 18th, 19th, 20th and 21st centuries by looking at class, race and ethnicity and study women in the context of the major historical developments in their time.

HIST& 220

African American History (D) (SS) (5)

Examines the history of the continent from the pre-colonial era to the present. Topics include pre-colonial lineage, patterns of ethnic identity, colonialism and tribal identity, urbanization and its impact, and apartheid.

HIST 275

America in Vietnam (5)

Overview of the Vietnam Conflict, including the Vietnamese culture, and history; U.S. foreign policy; roots of the war; effects on world politics media conduct during and after the war; and impacts on American society.

HIST 280

History of American Foreign Relations (SS) (5)

Survey of American foreign relations from the 17th to the 21st centuries focusing on such issues as national security, economic needs capitalism democracy and imperialism.

HONORS PROJECT

HON 160

Honors Project (3)

Honors students will work with one faculty mentor to develop, complete, and publicly present a three-credit project or paper that requires original research and development. It is expected that the project will involve 60 to 90 hours of work, including initial and progress meetings with the faculty mentor.

HON 170

Honors Project (3)

Honors students will work with one faculty mentor to develop, complete, and publicly present a three-credit project or paper that requires original research and development. It is expected that the project will involve 60 to 90 hours of work, including initial and progress meetings with the faculty mentor.

HON 250

Honors Colloquium (5)

Honors students will explore the annual Phi Theta Kappa (International Honors society of the Two-Year College). Honors Study Topic in a colloquium setting, using texts, films, Internet, and other resources.

HUMAN RELATIONS

H R 110

Human Relations-Workplace (5) (PT)

Study of behavior, personality, self-management, self-development, and elementary business psychology in the workplace. Focus on understanding and demonstrating skills imperative to workplace success including communications, personal attitude, motivation, and workplace etiquette.

H R 210

Human Resource Management (5)

Introduction to fundamental concepts of human relations management. This course will focus on recruiting, employee selection and training, employee performance and compensation, and employee laws and labor relations.

HUMANITIES

HUM 110

Ethics and Cultural Values (D) (H) (5)

An interdisciplinary study of philosophy, literature, history and religion within Western and Oriental ethical systems of thought. It focuses on the importance of cultural values through a study of virtue, duty, utility, and rights.

HUM& 116

Humanities I (H) (5)

A survey of the major movements in art, architecture, music, philosophy and literature in a historical context, from pre-history to 1400 C.E

HUM& 117

Humanities II (H) (5)

A survey of the major movements in art, architecture, music, philosophy, and literature in a historical context, from 1300 C.E. to 1800 C.E.

HUM& 118

Humanities III (H) (5)

A survey of the major movements in art, architecture, music, philosophy, and literature in a historical context, from 1800 C.E. to the present.

HUM 270

Survey of Film Studies (H) (5)

An examination of the social, historical, technical, and artistic aspects of film through viewing, study and discussion of notable motion pictures.

HUM 281-286

Lyceum I-VI (1)

The Lyceum offers a variety of lectures on topics of current interest across a wide variety of disciplines. The theme may vary from quarter to quarter.

INTENSIVE ENGLISH PROGRAM

IEP 084, 088, 092, 096

Intensive English: Speaking I-IV (1-5)

Multi-level language course with emphasis on communicative oral proficiency. Instruction includes use of multimedia to enhance the learning of the English language and American culture.

IEP 085, 089, 093, 097

Intensive English Listening I-IV (1-5)

This course provides students with reciprocal listening training. They will also be introduced to non-reciprocal listening tasks both in a formal and non-formal method of communication.

IEP 086, 090, 094, 098

Intensive English Reading I-IV (1-5)

Multi-level reading course for non-native English Speakers that emphasizes the acquisition of reading skills at a post-secondary level, including vocabulary, comprehension, reading rate, and study skills.

IEP 087, 091, 095, 099

Intensive English: Writing and Grammar Level I-IV (1-5)

This is a multi-level class to prepare non-native English students for writing in college level academic and technical courses. Difficulty and length of writing assignments increase with each level. Students write about themselves, their culture or other familiar topics, discuss and write about American and world culture, and academic topics. Writing fluency is stressed, and correction focuses on structural and grammatical errors appropriate to each level. Paragraph development and short essay organization are emphasized. Writing includes description, narration, comparison/contrast, with some analysis and summarizing of short reading passages. Students keep a daily journal.

JOURNALISM

JOUR 106

Introduction to News Writing I (H) (5)

Learn the difference between news writing and other types of writing. Practice writing a variety of kinds of news articles.

JOUR 107

Introduction to News Writing II (H) (3)

Start, develop and polish hard news and soft news stories. Practice gathering information from a variety of sources. Prerequisite: JOUR 106.

JOUR 160

Introduction to Mass Media (H) (5)

A survey of the mass media in America: newspapers, magazines, books, recorded music, radio, television, motion pictures, the World Wide Web: with emphasis on structure, function, audience, content, effect and social responsibility.

JOUR 170

Racism, Sexism and the Media (D) (H) (3)

Issues of race and gender in the media from both an historical and a current perspective.

JOUR 180

Issues in Mass Media (2)

Discuss and interpret issues as they relate to the media. Learn to evaluate media messages critically.

JOUR 206

News Reporting and Writing (5)

Write a variety of in-depth and extended coverage news articles concentrating on enterprise and package projects. Practice writing editorials, columns and reviews. Learn the basics of broadcast and public relations writing. Prerequisite: JOUR 106, 107, 111, ENGL 101

LIBRARY

LIBR 180

Research in the 21st Century (5)

Students examine various strategies for locating, evaluating, and applying information resources in the research process. Attention is paid to information issues like intellectual property, censorship, and freedom of information. Prerequisite: eligibility for ENGL 101.

LIBR 182

Research Skills (2)

Student will learn how to use the tools of research, including both traditional library resources and those accessed over the internet. They will discover how information is organized and indexed for retrieval, the appropriate search syntax for a variety of databases, and the underlying search patterns that remain constant from resource to resource. Students will demonstrate acquisition of these skills through the creation of a topic pathfinder and individual weekly assignments. Prerequisite: ENGL 099 or equivalent.

MATHEMATICS

MATH 094

Independent Study (1-5)

Individualized instruction for the student whose needs are not currently being met by the available course offerings. Specialized curriculum and instruction are developed to meet each student's needs. Permission of instructor only.

MATH 095

Basic Mathematics (1-5)

For students who need to review basic math concepts such as whole number, fraction and decimal operations. Appropriate placement test scores

MATH 096

Pre-Algebra (1-5)

Covers percentages, proportions, unit conversions, geometry, simplifying algebraic expressions and solving simple first degree linear equations. Prerequisite: MATH 095 or appropriate test score placement.

MATH 097

Algebra for Statistics (5)

An algebra course for students intending to enroll in MATH& 146, Introduction to Stats. This course does not meet the algebra prerequisite or other quantitative skills courses or for transfer to the University of Washington. Prerequisite: MATH 096 or Compass score of 78+.

MATH 098

Algebra I (1-5)

For students with good arithmetic skills and familiarity with signed numbers and basic algebraic expressions. Problem-solving skills are emphasized. Topics include: linear equations and inequalities, graphing, polynomials, and rational expressions. Prerequisite: MATH 096.

MATH 099

Algebra II (1-5)

Introduces the concept of functions, their graphs and properties. Particular attention will be paid to linear, quadratic, exponential and logarithmic functions. Prerequisite: MATH 098 or equivalent.

TMATH 100 (Replaces MATH 100)

Technical Mathematics I (5) (PT)

Focus is on methods of problem solving for the technical fields. Course develops mathematical vocabulary and skill with algebraic expressions, formula manipulations, graphing techniques, right triangle trigonometry, geometry, exponents, logarithms, and equation/system of equation solving. Prerequisite: MATH 098 or equivalent

TMATH 101(Replaces MATH 101)

Foundational Math Concepts (5) (PT)

Study of foundational math theory and concepts including number sense, algebra, geometry, data analysis and math vocabulary through inquiry-based learning. Does not meet Quantitative Skills distribution requirement for AA degree. Prerequisite: MATH 095 or equivalent.

MATH& 107

Math in Society (M) (5)

Designed to enhance math proficiency of liberal arts students as they meet personal and professional demands. Includes mathematics in management, statistics, probability, art, and other practical applications in society. Not preparation for calculus. Prerequisite: MATH 099 or equivalent.

TMATH 110 (Replaces MATH 110)

Technical Mathematics II (PT) (3)

Course emphasizes trigonometric functions used to solve engineering, electronics, and mechanics application problems. This course does not satisfy the quantitative skills requirement for either an AA or AS degree. Prerequisite: MATH 100 or equivalent.

MATH 115

College Algebra for Business (M) (5)

Linear, polynomial and rational function models. Exponential and logarithmic functions, Mathematics of finance, matrices, linear programming, set operations, and probability. Prerequisite: MATH 099 or equivalent.

TMATH 116 (Replaces MATH 116)

Industrial Math (PT) (5)

Application of basic mathematical operations to specific workforce programs including common fractions, decimal fractions, percentages, ratio and proportion, practical algebra, and computations involving rectangles and triangles. Emphasizes the use mathematics in diesel and welding.

MATH 118

Linear Algebra (M) (5)

Computational and modeling tools with applications in physics, mathematics, engineering, economics, and business. Topics include systems of equations, matrix algebra, vector spaces, subspaces, bases, orthogonally, transformations, and eigenvalues. Prerequisite: MATH& 142 or equivalent placement.

TMATH 121

Electronics Math 1 (M) (PT) (5)

Students will be introduced to math concepts relating to electronics and robotics. Topics studied will include functions, direct and inverse relationships, unit analysis, calculator operation, linear and exponential equations, and spreadsheet math operations. Prerequisite: MATH 098.

TMATH 122

Electronics Math 2 (M) (PT) (2)

Continuation of Electronics Math 1 -students will learn math concepts applicable to AC electronics and semiconductor device performance. Trigonometry and complex numbers will be emphasized. Prerequisite: TMATH 121.

MATH& 131

Math for Elem Educators 1 (M) (5)

Designed to provide the conceptual framework for teaching mathematics from kindergarten through eighth grade. Prerequisite: MATH 099 or equivalent ASSET/COMPASS score.

MATH& 132

Math for Elem Educators 2 (M) (5)

The second of two courses designed to provide the conceptual framework for teaching mathematics from kindergarten through eighth grade. Prerequisite: MATH& 131.

MATH 135

Pre-calculus Refresher (M) (5)

Designed as a refresher course for students who have previously had a Pre-Calculus course. Content includes everything covered in MATH 141 and MATH 142. Prerequisite: High school pre-calculus equivalent or Instructor Approval.

MATH& 141

Pre-Calculus I (M) (5)

Study of elementary functions (polynomial, exponential, logarithmic), systems of equations, matrix algebra. Modeling and problem solving techniques are emphasized from a graphic, symbolic and numeric perspective. Prerequisite: MATH 099 or equivalent placement.

MATH& 142

Pre-Calculus II (M) (5)

Graphical, numerical, symbolic development of trigonometric functions and their inverses as defined on the unit circle and right triangles; identities, equations, and applications; complex numbers, polar coordinates, parametric equations, vectors, conics, and sequences and series. Prerequisite: MATH& 141.

MATH& 146

Introduction to Stats (M) (5)

Introduction to concepts of data collection, organization and summaries. Develop the fundamental concepts of mean, median and standard deviation, probability, probability distributions, and apply these ideas to hypothesis testing, linear regression and analysis of variance. Prerequisite: MATH 099 or equivalent.

MATH 150

Survey of Calculus (M) (5)

Serves the needs of students whose programs demand a relatively brief introduction to the calculus concepts of limit, change, rate of change, and integration with applications in the field biological, social and management sciences. Prerequisite: MATH& 141, MATH 115 or equivalent.

MATH& 151

Calculus I (M) (5)

The first in a four-quarter sequence. Limits, derivatives of algebraic and some transcendental functions, applications of derivatives, the indefinite integral. Topics covered from numerical, analytical and graphical viewpoints. Prerequisite: MATH& 142 or equivalent.

MATH& 152

Calculus II (M) (5)

The second in a four-quarter sequence. Covers the calculus of transcendental functions (exponential, logarithm, inverse circular, hyperbolic), techniques of integration, sequences, series, and power series. Prerequisite: MATH& 151 or equivalent.

MATH 156

Calculus I Lab (1)

Analyze concepts from Calculus I using algebra-based computer software. For students currently enrolled in Calculus I or who have instructor permission. Corequisite: MATH& 151.

MATH& 163

Calculus III (5)

Third in a four-quarter sequence. Polar coordinates, parametric equations, vectors, and vector fields, the analytic geometry of three-space, partial derivatives, and multiple integrals. Prerequisite: MATH& 152 or equivalent.

MATH 212

Elementary Differential Equations (5)

Linear ordinary differential equations with emphasis on supporting concepts of differential operators, Wronskians, characteristic polynomials, homogeneous and nonhomogeneous cases, variation of parameters, undetermined coefficients. Solution of IVP by Laplace transforms and power series method. Prerequisite: MATH& 163.

MATH 228

Discrete Mathematics (M) (5)

This class introduces the basic concepts of mathematics that are used in computer science. Topics covered include logic, mathematical induction, combinatorics, set theory, relations and functions and descriptive statistics. Prerequisite: MATH& 141 or equivalent.

MATH 264

Calculus IV (3)

Fourth in a four-quarter sequence. Optimization of 2 and 3 variable functions, Lagrange Multipliers, applications and techniques of multiple integration, Green's Theorem, Stokes Theorem, and line and surface integrals. Prerequisite: MATH& 163 or its equivalent.

MEDIA STUDIES

M ST 125

Introduction to Sports Announcing (1)

Learn about the history of Sports Broadcasting. Specific duties of announcers as well as technical knowledge, current trends, career paths, legal and ethical issues of Sports Broadcasting will be covered during the quarter.

M ST 126

Sports Announcing for Football (C) (1)

Learn and apply the basic skills and knowledge required of today's football announcers. This course will emphasize practical tips, ideas and theories that will help you on your way to becoming a quality football announcer.

M ST 127

Sports Announcing for Basketball (1)

Learn and apply the basic skills and knowledge required of today's basketball announcers. This course will emphasize practical tips, ideas and theories that will help you on your way to becoming a quality basketball announcer.

M ST 128

Sports Announcing for Baseball (1)

Learn and apply the basic skills and knowledge required of today's baseball announcers. This course will emphasize practical tips, ideas and theories that will help you on your way to becoming a quality baseball announcer.

M ST 158

Studio & Outdoor Lighting for Television & Film (2)

Discover the basic principles and techniques of lighting television and film sets in both indoor and outdoor situations.

M ST 159

Stagecraft for Television and Film (2)

Designed specifically for television and film majors, this class introduces students to the basic tools, materials, equipment and techniques used in the design and building of television and film sets.

M ST 190

Cooperative Work Experience (1-12) (PT)

See description under COOP 190 for additional information.

M ST 220

Introduction to Broadcast News and Production (4)

Learn basic media news writing, produce and broadcast news and feature stories on both radio and television. Some media production techniques will be covered during the quarter.

M ST 225

Introduction to Telecommunications (5)

The field of telecommunications is constantly changing and affecting the way we live our lives. Learn about the history, social impact, moral, ethical issues and philosophies of telecommunications in our society.

M ST 230

Introduction to Radio Broadcasting (C) (5)

As an introduction to radio broadcasting you will learn about programming philosophies, announcing skills, production techniques, copy writing and the FCC rules and regulations that apply to the industry.

M ST 231

Advanced Radio Broadcasting (3)

Learn strategies to research and prepare material for broadcast. The use of promotions and contests to increase station ratings also will be covered.

M ST 260

Introduction to TV & Video Production for Electronic Media (5)

Learn studio and control room operations, field and studio camera techniques, basic script writing and video editing. At the end of the quarter students will be able to write, produce and edit short videos.

M ST 261

Advanced TV & Video Production for Electronic Media (5)

Improve editing skills while producing documentary and music videos. Advanced camera, editing, studio and field production techniques will be covered. Students will also take part in producing live college basketball games.

M ST 262

Television Production (5)

Students will write, direct, produce and edit video packages and participate as crew members in producing classmate's video projects.

M ST 271

Radio Broadcasting Internship (1)

Practice and perfect your announcing skills on the campus radio station KCED FM. Prerequisite: M ST 230, 231 or instructor permission.

M ST 272

Radio Broadcasting Internship (2)

Practice and perfect your announcing skills on the campus radio station KCED FM. Prerequisite: MST 230, 231 or instructor permission.

M ST 273

Radio Broadcasting Internship (3)

Practice and perfect your announcing skills on the campus radio station KCED FM. Prerequisite: M ST 230, 231 or instructor permission.

M ST 274

Radio Broadcasting Internship (4)

Practice and perfect your announcing skills on the campus radio station KCED FM. Prerequisite: M ST 230, 231 or permission of the instructor

M ST 281

TV Broadcasting Internship (1)

Designed for students who wish to produce independent video projects outside of the classroom environment. Permission of instructor required. Prerequisite: M ST 260, 261, 262.

MEDICAL ASSISTING

MA 130

Medical Math (PT) (5)

A mathematics course that focuses on solving applications using percent, proportion, and unit conversion as well as descriptive data interpretation. Satisfies the math requirement for the Medical Assistant ATA. Prerequisite: MATH 096 or equivalent.

MA 139 (Replaces HLSV 260)

MA Medical Terminology (PT) (5)

A required class for all students enrolled in the Medical Assistant Program to develop a medical vocabulary from an anatomy, physiology, and pathology format. It is suitable for others entering medical-related fields.

MA 140

Medical Assisting Introduction (PT) (5)

An introduction to the profession of medical assisting in the ambulatory health care setting. Designed to explore the medical assistant as a valuable member of the health care team. Prerequisite: MA 139 with a 2.5 gpa.

MA 208

MA Electrocardiography (2)

Electrocardiography (ECG) for the medical assistant student; including anatomy of the heart and the cardiac cycle, ECG applications and methods for testing in ambulatory care. Prerequisite: acceptance into 2nd year MA program.

MA 241 (Replaces HLSV 141)

MA Clinical Procedures I (10)

Overview of physical examinations, procedures, and testing that a medical assistant would assist a health care provider within an ambulatory care setting. Prerequisite: BTEC 260, 270, BIOL& 170, HLSV 140.

MA 242 (Replaces HLSV 142)

Medication Administration (6)

An overview of pharmacology and medication administration as it applies to the medical assistant's responsibilities in ambulatory care. Prerequisite: HLSV 140, MA 241.

MA 243 (Replaces HLSV 143)

MA Clinical Procedure II (6)

Surgical setup for clinical/office procedures explored in detail; review of the role of diagnostic imaging, rehabilitation, and nutrition in the interdisciplinary approach of patient care. Prerequisite: HLSV 140, MA 241, 242, 246.

MA 244 (Replaces HLSV 144)

MA Externship Seminar (1)

This class allows the medical assistant extern to explore objectives and challenges in bridging their classroom/lab experiences to the experiences they are encountering in their externships. Prerequisite: HLSV 140, MA 241, 242, 246.

MA 245 (Replaces HLSV 145)

MA Clinical Externship (6)

One hundred eighty unpaid hours of externship in an ambulatory health care setting that allows the medical assistant student to bridge their classroom education and lab training to the real world medical setting. Prerequisite: HLSV 140, MA 241, 242, 246.

MA 246 (Replaces HLSV 146)

MA Laboratory Procedures (5)

Overview of laboratory procedures and regulations for the ambulatory health care setting, including phlebotomy training. Prerequisite: HLSV 140, MA 241.

MA 249

MA Administrative Procedures (8)

Administrative protocols and procedures related to front and back office responsibilities in an ambulatory care setting; with emphasis on communications, medical records management, and fiscal management practices. Prerequisite: acceptance into 2nd year MA program.

MUSIC

MUSC 100

Music Reading (2)

Designed for the student that has not previously had exposure to reading music. The skills acquired can be used to perform, create music, or enter the field. Practice rooms with pianos are available at the college.

MUSC& 105

Music Appreciation (H) (5)

Explores music's history from the early beginnings of music into the twenty-first century. Topics include: elements of music, appreciation process, musical styles, music history, sound, musical instruments, and listening techniques. No prior music knowledge is required.

MUSC 108

Piano I (1)

Introductory piano. Emphasizing basic keyboard skills, music reading, and conceptual understanding pertinent to early level study. Includes transposition, harmonization, sight reading, improvisation, and basic keyboard repertoire. Pre/corequisite: MUSC& 131.

MUSC 109 & 110

Piano II-III (1)

Continued piano study for the non-keyboard music major. Emphasizes arpeggios, inversions, seventh chords, modes, pedaling and performance of elementary-level repertoire. Prerequisite for MUSC 109: MUSC 108 with a minimum grade of 2.5 or instructor permission. Prerequisite for MUSC 110: MUSC 109 with a minimum grade of 2.5 or instructor permission.

MUSC 114

Fundamentals of Music for Education (3)

A beginning music course to prepare elementary education majors for the upper division course or courses required which they will take to complete the education degree. Also aimed at the student seeking an AA degree who may have an interest in learning the mechanics of music reading and composition. In addition this course can be taken in preparation for those students who wish to major in music but who do not have enough basic skills to begin the Music Theory Sequence.

MUSC 115, 116, 117

Applied Music I-III (1)

Study of specific instrument literature and techniques applied to performance. Required of all music majors. By audition and permission of instructor only.

MUSC& 121

Ear Training I (H) (2)

An aural study of musical scales and intervals, designed for music majors and minors. Emphasis on dictation, sight singing, functional keyboard skills. Required of all music majors. (Music majors are required to register for MUSC& 131 with MUSC& 121.) Prerequisite: Music reading skill.

MUSC& 122

Ear Training II (2)

An aural study of musical scales and intervals, designed for music majors and minors. Emphasis on dictation, sight singing, functional keyboard skill. Required of all music majors. The student must simultaneously register for MUSC& 132. Prerequisite: MUSC& 121 or permission of instructor.

MUSC& 123

Ear Training III (2)

An aural study of musical scales and intervals, designed for music majors and minors. Emphasis on dictation, sight singing, functional keyboard skills. Required of all music majors. Students must simultaneously register for MUSC& 133. Prerequisite: MUSC& 122 or permission of instructor.

MUSC 130

History of Western Music (H) (5)

Introduction to musical elements, musical form, and stylistic periods in western music.

MUSC& 131

Music Theory I (H) (3)

A technical study of music, designed for music majors and minors. Emphasis on part-writing, harmonization of melody and harmonic analysis. Required of all music majors. Prerequisite: Ability to read music Corequisite: MUSC& 121.

MUSC& 132

Music Theory II (3)

A technical study of music, designed for music majors and minors. Emphasis on part-writing, harmonization of melody and harmonic analysis. Required of all music majors. Prerequisite: MUSC& 131 or permission of instructor. Corequisite: MUSC& 122.

MUSC& 133

Music Theory III (3)

A technical study of music, designed for music majors and minors. Emphasis on part-writing, harmonization of melody and harmonic analysis. Required of all music majors. Prerequisite: MUSC& 132 or permission of the instructor. Corequisite: MUSC& 123.

MUSC 139

Music of the World (D) (H) (5)

A music survey of diversity found in music around the world. Examines music as accompaniment to ceremony and ritual, aid to work and routine, and an expression of universal unchanging human emotions. Prior musical experience is not necessary. Prerequisite: Proficiency in reading, grammar skills.

MUSC 140

History of American Popular Music (D) (H) (5)

Exposure to styles of American popular music from the 1890's to the present. The development of four American styles: Blues, Ragtime, Dance and Jazz showing the evolution of American popular music. Prior musical training is not required. Prerequisite: Proficiency in reading, grammar skills.

MUSC 144, 145, 146, 147, 148, 149

Choir I-VI (2)

A vocal group consisting of the part distribution: soprano, alto, tenor, and bass. Will perform both sacred and secular music literature. Participation in one evening concert per quarter is mandatory. Previous choral experience not necessary. Prerequisite: by audition only.

MUSC 215, 216, 217

Applied Music IV - VI (1)

Study of specific instrument literature and techniques applied to performance. Required of all music majors. By audition and permission of instructor only.

MUSC& 221

Ear Training IV (2)

An aural study of musical scales and intervals, designed for music majors and minors. Emphasis on dictation, sight singing, functional keyboard skills. Required of all music majors. Prerequisite: MUSC& 123 or permission of instructor. Corequisite: MUSC& 231.

MUSC& 222

Ear Training V (2)

An aural study of musical scales and intervals, designed for music majors and minors. Emphasis on dictation, sight singing, functional keyboard skills. Required of all music majors. Prerequisite: MUSC& 221 or permission of instructor. Corequisite: MUSC& 232.

MUSC& 223

Ear Training VI (2)

An aural study of melody, harmony and musical form, designed for music majors and minors. Emphasis on dictation and sight singing. Required of all music majors. Prerequisite: MUSC& 222 or permission of instructor. Corequisite: MUSC& 233.

MUSC& 231

Music Theory IV (3)

An advanced technical study of western music. Emphasis on modulation, advanced harmonic analysis including secondary dominants, diminished seventh chords, augmented sixth chords, and Neapolitan sixth chords. Prerequisite: MUSC& 133 or permission of instructor. Corequisite: MUSC&221.

MUSC& 232

Music Theory V (3)

An advanced study of musical harmony and form. Study of chords with extensions. Emphasis placed on analysis of music of the romantic period. Music Majors must also register simultaneously for the course, MUSC&222 (Ear-Training V). Prerequisite: MUSC& 231 or permission of instructor; corequisite: MUSC& 222.

MUSC& 233

Music Theory VI (3)

A technical study of music of the twentieth century. Emphasis is placed on analytical skill for music of this century both tonal and atonal. Music majors must also register simultaneously for the course, MUSC&223. Prerequisite: MUSC& 232 or permission of instructor; corequisite: MUSC& 223.

MUSC 234, 235, 236, 237, 238, 239

Jazz Band I-VI (2)

Jazz ensemble consisting of the following instrumentation: saxophone, trumpet, trombone, piano, bass, guitar and percussion. Perform both on and off campus. Participation in one evening concert is mandatory. Auditions held on first day of class. Prerequisite: by audition only.

MUSC 244, 245, 246, 247, 248, 249

Performance Ensemble I-VI (1)

An ensemble is for the advanced performer (Instrumentalists or Vocalists). Music reading is imperative. Will perform many styles of music. Concert performances will be both on and off campus and/or tour. By audition ONLY.

MUSC 250

Musical Theatre Production I (H) (5)

Designed to introduce the student to all the elements of musical theatre. The student will study the audition process, the effect of musical choreography, the historical setting of the work chosen, musical score and dialogue.

MUSC 251

Musical Theatre Production II (5)

The student will continue to study the audition process, the effect of musical choreography, the historical setting of work chosen, musical score and dialogue. Prerequisite: by audition only.

MUSC 254, 255, 256, 257, 258, 259

Vocal Ensemble I-VI (2)

A small vocal ensemble that prepares and performs chamber works, and contemporary vocal literature. Placement is by audition only. Auditions will take place during the first scheduled class.

MUSC 264

Music History I (D) (5)

Traces the development of musical composition from antiquity and the early Christian era, through the Baroque era. Music listening is a strong component of the course.

MUSC 265

Music History II (5)

Traces the development of musical composition from the pre-classical period through the Romantic era. Students are introduced to a wide variety of musical styles, chronologically and geographically.

MUSC 266

Music History III (5)

Studies the development of music from the early twentieth century through contemporary music of the twenty first century. Music listening will be a strong component of the course.

MUSC 276

Music Technology (5)

Detailed study of Finale and Pro Tools used by music institutions of higher education and industry. Required of all music majors. Corequisite: MUSC& 121 or MUSC& 131.

MUSC 281, 282, 283, 284, 285, 286

Instrumental Improvisation I-VI (2)

An historical study of improvisation in instrumental styles: Dixieland, jazz, and contemporary popular music. Course will involve stylistic and chordal analysis as well as performance on the student's major instrument.

NATURAL RESOURCES

NATR 131

Plants of the Pacific Northwest (5)

Basic biology, life history and distribution of plants of the Pacific Northwest, emphasizing major tree species. Laboratory exercises focus on taxonomy and identification methods. An accelerated two-week course: first in a three part series. Prerequisite: ENGL 099, placement in ENGL& 101 or instructor permission.

NATR 150

Disturbance Ecology (5)

Investigation of forces that change forest and riparian plant communities: fire, wind, floods, and insects and diseases endemic to the Pacific Northwest. An accelerated two-week course; second part of a three-part series. Prerequisite: ENGL 099 or placement in ENGL& 101 or instructor permission.

NATR 160

NW Terrestrial Habitats (5)

Exploration of diverse Pacific Northwest ecosystems. Succession, plant associations, site characteristics, biodiversity, population ecology and community ecology are studied within the context of ecosystem sustainability. A two-week, accelerated course; third in a three-part series. Prerequisite: ENGL 099 or placement in ENGL& 101 or instructor permission.

NATR 191

Work Experience Seminar (1) (PT)

Preparation for cooperative work experience required for the Natural Resources-Forestry Technician program: job applications, resumes, cover letters, interview techniques, and employment research.

NATR 260

Forest Mensuration w/lab (5)

Forestry measurement requirements, such as timber cruising, log scaling, tree grading, inventory techniques, and computer applications. Labs, some in the field, emphasize equipment and techniques necessary to measure forest resources. Prerequisite: ENGL 099, MATH 099 or college-level placement or instructor permission.

NATR 265

Forest Management w/lab (5)

Contemporary forest management principles, economics and concepts. Emphasizes sustainable forest management; certification systems, fragmentation and current forest rules including policy and regulatory issues on the state and federal levels.

NATR 270

Silviculture w/lab (5)

Forestry fundamentals, including methods of regeneration, site preparation, planting practices, animal damage control, nursery practices, pesticide/herbicide use and safety, prescribed burning, pre-commercial and commercial thinning and harvest treatments.

NATR 280

Harvest Systems and Products w/lab (5)

Forest harvest techniques; includes transport systems, logging plans, wood products and other forest products, road layout and construction, best management practices, timber appraisal and contracts.

NURSING

NURS 100

Introduction to Nursing (1) (PT)

The definition, function, responsibilities, and current and historical roles of the nurse and other health care personnel are presented. Nursing theory, educational requirements, law, and ethics of nursing practice are included.

NURS 101

Basic Nursing Care Concepts (12) (PT)

Program themes of homeostasis, the role of the nurse, and continuum of care are applied at on-campus theory and skills labs and off-campus clinical experiences at assisted living and long-term care facilities. Prerequisite: admission to the Centralia College Nursing Program.

NURS 102

Common Alterations I (12) (PT)

Progressive competencies reflecting program themes are applied to nutrition; cardiac, respiratory, and endocrine systems; and medication and fluid administration. On-campus theory, skills labs and off-campus clinical experiences are provided. Prerequisite: NURS 101 or equivalent.

NURS 103

Common Alterations II (12) (PT)

Progressive competencies reflecting program themes are applied to surgical, neurologic, musculoskeletal, renal, and gastrointestinal nursing care. On-campus theory and skills labs and off-campus acute care clinical experiences are provided. Prerequisite: NURS 101, 102 or equivalent.

NURS 108

Electrocardiography for Health Care Professional (2) (PT)

Review of cardiac anatomy and physiology; ECG equipment operation and supplies; patient preparation; ECG testing procedure; rhythm recognition and interpretation; cardiovascular disorders; pharmacology in ECG testing. Includes hands on ECG training and practice. Corequisite: RN, LPN, or nursing student or instructor permission.

NURS 110

Nursing Care Management (4) (PT)

Presents basic concepts related to managing and directing members of a team, including delegation, communication, and evaluation. Emphasizes decision-making in the leadership role within the scope of practice for the practical nurse. Prerequisite: ENGL 101 and NURS 102

NURS 190

Cooperative Work Experience (1-5) (PT)

See description under COOP 190 for additional information.

NURS 200

LPN to RN Transition (2)

Explores LPN and RN roles and responsibilities. Centralia College Nursing Program philosophy, purpose, conceptual framework, and outcome criteria are reviewed. Includes orientation to clinical facilities and classroom, campus, and off-campus lab expectations. Prerequisite: Admission to RN program.

NURS 201

Mental Health & Lifespan (10)

Progressive competencies reflecting program themes are applied to the care of clients with mental health alterations, complications of child-bearing and high-risk newborns and children. Community-based and in-patient clinical experiences are provided. Corequisite: NURS 101, 102 & 103 or equivalent.

NURS 202

Complex Alterations (12)

Progressive competencies reflecting program themes are applied to the care of clients with complex alterations in health. Women's Health and Pediatric and Adult acute care clinical opportunities are provided at regional facilities. NURS 201 and 220 or equivalent.

NURS 203

Complex Management (8)

Progressive competencies reflecting program themes are applied to the care of clients with complex alterations in health. Community-based and acute care inpatient clinical opportunities are provided at regional facilities. Prerequisite: NURS 201 and 202 or equivalent.

NURS 210

BLS for Healthcare Providers (1)

Covers the information and skills needed for adult, child, and infant cardiopulmonary resuscitation; the use of an automated external defibrillator; recognition and treatment of choking; safety factors in training and actual rescue. Corequisite: admission to the nursing program or permission of the instructor.

NURS 220

Management & Leadership (2)

Expands on the program theme of the role of the nurse to provide a stronger theoretical foundation for assuming a management and leadership role in a variety of care settings. Prerequisite: NURS 101, 102 and 103 or equivalent; corequisite: NURS 201.

NURS 222

Transition to Practice (4)

Preceptor-guided experiences in a variety of community health care organizations are provided. Community-based and personal professional development projects are assigned. Prerequisite: NURS 201 and 202 or equivalent; corequisite: NURS 203.

NURSING ASSISTANT

HLSV 110

BLS for Healthcare (1) (PT)

Course covers the information and skills needed for adult, child, and infant cardiopulmonary resuscitation; the use of an automated external defibrillator; recognition and treatment of choking; safety factors in training and actual rescue.

HLSV 121

Intro to Healthcare (2) (PT)

The complexity of health care, health care provider certifications and team concepts will be introduced. Professionalism, safe patient handling, physical/emotional changes with aging, and specific infection control issues for all care givers will be explored.

HLSV 130

Basic Fundamentals of Caregiving (2) (PT)

Focus is on the requirements for basic caregiving. Topics include client rights, communication, problem solving skills, and protecting the health and safety of residents.

HLSV 131

Nursing Assistant Certification (9) (PT)

Awareness of the role of the nursing assistant in nursing care and skill development. Topics: maintain a safe environment, provide restorative care, communication, and practice basic concepts of care. Background check is required for clinical.

HLSV 132

Nurse Delegation (2) (PT)

Class is for Washington State caregivers who work in or will work in specific community-based long-term care settings. Course covers: medication administration, diabetes care, roles and laws pertaining to delegation and hands-on skills practice. Prerequisite: NAC Certification or co-enrollment in NAC.

HLSV 133

Mental Health (1) (PT)

Learn how a caregiver, in a generalized residential setting, can work effectively with a person who has a major mental disorder. Prerequisite: NAC certification or currently enrolled in NAC course.

HLSV 134

Dementia (1) (PT)

Learn how a caregiver, in a generalized residential setting, can work effectively with a person who has memory impairments. Prerequisite: NAC certification or currently enrolled in NAC course.

HLSV 163 (Replaces HLTH 163)

Emergency Medical Responder (5) (PT)

This course prepares students for certification as a First Responder in the State of Washington. Both lecture and hands-on practical training are used to teach important aspects of basic pre-hospital emergency care.

NUTRITION

NUTR& 101

Nutrition (S) (5)

An exploration of the six basic nutrients with diet planning principles, human metabolism, weight control and digestion also being studied. Some chemistry or biology background is helpful. Prerequisite: prior knowledge of chemistry or biology would be helpful.

NUTR 202

Nutritional Laboratory (1)

Consumer-oriented labs will teach students how to analyze their diet, apply nutrition knowledge to menu planning and reading food and supplement labels. Prerequisite: NUTR 201, HLTH 140 or permission of instructor.

NUTR 203

Issues in Nutrition (S) (5)

Examines the interrelationship between diet and individual lifestyles with regard to health risks during all stages of life.

OCEANOGRAPHY

OCEA& 101

Introduction to Oceanography (S) (5)

Explore the physical, geological, chemical and biological characteristics of the ocean: waves and tides, ocean and atmosphere circulation, coastal features and beach processes, ocean basins, sediments, ocean chemistry and physics, plate tectonics, and marine life. Corequisite: OCEA& 101L is integrated.

PHILOSOPHY

PHIL& 101

Introduction to Philosophy (H) (5)

Investigate the assumptions philosophers have made about reality, knowledge, truth, God, morality, social construction, freedom, and paternalism.

PHIL 103

Introduction to Ethics (H) (5)

Focus on choices made in concrete circumstances. Study traditional ethical theories and present-day moral dilemmas.

PHYSICAL EDUCATION

P E 101

Introduction to Physical Education (3)

A survey course designed for students considering a career in physical education, recreation and sports. Presents background information for the wide scope of career opportunities.

P E 103

Basketball (1)

This course will cover the basic skills and techniques of basketball. Includes team defense and team offense.

P E 107

Cycling Basics (HF) (2)

A class consisting of road tours of varying distances as well as classroom lectures. Each student must have a bicycle in good repair and an approved helmet.

P E 109

Golf (1)

Instructions for beginners, fundamentals, rules, and etiquette. Off campus but first class will meet in HWC 103.

P E 110

Physical Fitness (HF) (1)

Study all five areas of fitness: aerobic endurance, muscle strength, muscle endurance, flexibility, and body composition. Students work at their own fitness levels.

P E 111
Fitness in the Workplace (HF) (1-2)
Course will increase cardiovascular endurance, flexibility, and increase strength. Students will develop and conduct their own personal fitness program.

P E 115
Volleyball (1)
This course will cover the fundamental skills and techniques of beginning volleyball. Includes basic rules, scoring and strategy.

P E 117
Lifeguard Training (2)
Students will obtain the knowledge and skills needed to prevent and respond to aquatic emergencies. Upon successful completion of this class a student will obtain the American Red Cross Lifeguarding certificate. Prerequisite: PE 114 or instructor permission.

P E 120
Lifestyle Management and Exercise (HF) (2)
Designed to assist individual in making life style changes associated with health and fitness.

P E 123
Basic Weight Training/Conditioning (HF) (1)
Designed to condition the musculature of the body using machine and free weights.

P E 125
Free Weights (HF) (1)
Designed to develop muscle fitness through lifting free weights, Olympic lifts, plyo-metrics and power lifting. Students need prior weight training experience.

P E 130
Basketball Applications (3)
A course designed to provide experience in advanced strategies, fundamental skills, and team concepts of basketball. Prerequisite: PE 103, 167 or instructor permission.

P E 131
Baseball Application I (3)
Learn the techniques and strategies in a practice or game situation with an emphasis on fundamentals, conditioning, team concept and sportsmanship.

P E 139
Volleyball Applications (3)
A course designed to provide experiences in advanced strategies, skills, and team concepts of volleyball. Prerequisite: PE 115 or instructor permission.

P E 140
Boot Camp Basics (HF) (1)
A high-impact exercise class designed to improve muscle strength, endurance, flexibility and aerobic capacity.

P E 142
Cardio Combo (HF) (1)
A combination of cardio experiences to improve cardiovascular endurance, body composition, muscle fitness and flexibility. A variety of movements will be explored, including step aerobics, kickboxing, Drums Alive, Zumba, and circuits and weights.

P E 150
Yoga (HF) (1)
An exercise class integrating components of flexibility, muscular strength and endurance, and relaxation. Students will be encouraged to work at their own level of fitness.

P E 151
Aerobic Fitness/Walking (HF) (1)
A fitness program emphasizing aerobic activities only. Designed to develop cardiovascular endurance, flexibility and body composition.

P E 152
Pilates/Core (HF) (1)
An exercise class designed to teach breathing with movement, body mechanics, balance, coordination, spatial awareness, strength and flexibility.

P E 153
Tai Chi Basics (HF) (1)
Develop balance, lower-body strength and relaxation in motion with Wu Style Tai Chi. Students will work at their own level of fitness.

P E 158
Beginning Tae Kwon Do (HF) (2)
Develop balance, coordination, agility, spatial awareness, strength, and flexibility through the Korean art of Tae Kwon Do. Students will work at their own level of fitness.

P E 159
Intermediate Tae Kwon Do (2)
Further development of the techniques, forms, the sport, and self-defense aspects required to advance to blue belt in the Korean martial art of Tae Kwon Do.

P E 160
Advanced Tae Kwon Do (2)
Further development of the techniques, forms, the sport, and self-defense aspects required to advance to blue and orange belt in the Korean martial art of Tae Kwon Do.

P E 162
Softball Fundamentals (1)
A mental and physical approach to the fundamentals of fast pitch softball. An emphasis will be placed on the basic skills and concepts needed to play the game effectively.

P E 163
Step Aerobics (HF) (1)
Combines simple, low impact step movements with music to improve cardiovascular endurance, flexibility and body composition.

P E 164
Softball Theory (3)
An analysis of the mental approach to the game of softball. An emphasis will be placed on the theories and strategies of fast pitch.

P E 165
Softball Applications I (3)
Learn how to apply the fundamentals of softball in game like situations.

P E 166
Baseball Fundamentals (1)
On-the-field practice in development of the basic fundamentals of baseball. Emphasis on basic skills and conditioning.

P E 167
Basketball Fundamentals (1)
This course will implement basic fundamentals with theory of various phases of the game. Conditioning for a lifetime activity is an important aspect of the course.

P E 168
Lifetime Fitness (HF) (2)
Cardiovascular endurance, muscle fitness, weight management and flexibility will be studied. One lecture hour and two hours of activity per week.

P E 169
Cardio Kickboxing (HF) (1)
Designed to offer high-impact aerobic conditioning. Each week new basic body moves and techniques introduced to improve the individual's level of fitness.

P E 172
Theory of Baseball (3)
A practical course with emphasis on the coaching of offensive and defensive strategies, theory, psychology and basic rules. First class meets in the Gym.

P E 174
Team Games (3)
Planning, organizing and proper supervising of physical education team game activities. Practical experience in presentation, evaluation and safety in team games.

P E 175
Physical Education Activities/Elementary Level (3)
Instruction in organization, skills and rules of various games. Opportunity for planning, organizing, creating and leading activities suitable for elementary and middle school age levels.

P E 180
Officiating Basketball (3)
A course designed for physical education and recreation majors. Presentation of rules and techniques involved in officiating basketball. Practical officiating experience in a laboratory situation to be included

P E 181
Officiating Team Sports (2)
Designed to present the rules and techniques involved in officiating basketball, volleyball, and soccer. Required for Physical Education Teaching majors but open to the public. Practical officiating experience in a laboratory situation to be included.

P E 203
Advanced Basketball (1)
This course will review basic skills and techniques of basketball. Included in the course also will be advanced skills and techniques along with game strategies, team offense, and team defense. Prerequisites: PE 103 or instructor permission.

P E 209
Advanced Golf (1)
The course is designed to help the individual develop more advanced skills and strategies of golf. Prerequisite: PE 109 or instructor permission. First class meets in the Gym.

P E 210
Advanced Physical Fitness (HF) (1)
Designed to continue the individual's personal health-related physical fitness - cardiovascular endurance, muscular strength, muscular endurance, body composition and flexibility. Students will be encouraged to work at their own level of fitness. Prerequisite: PE 110 or instructor permission.

P E 213
Advanced Tennis (1)
For students who are more advanced than the beginning level in tennis. First class will meet in the gym classroom. Borst Court will be used.

P E 215
Advanced Volleyball (1)
Advanced techniques and skills included in competitive volleyball. Advanced offensive and defensive tactics and strategy will be covered. Prerequisite: PE 115 or instructor permission.

P E 223
Advanced Weight Training (HF) (1)
Advanced weight training methods and programs including Olympic lifting and power lifting programs. Prerequisite: PE 123.

P E 228
Advanced Modern Dance (1)
The development of creative dance movements with emphasis on form and choreography. Prerequisite: PE 128 or instructor permission.

P E 229
Physical Fitness Concepts (HF) (3)
A combination of theory and practice in the development of physical fitness. Two lecture hours and two activity hours per week.

P E 230
Advanced Basketball Applications (3)
A course designed to provide experiences in advanced strategies, advanced fundamental skills, and advanced team concepts of basketball. Prerequisite: PE 130 or instructor permission.

P E 231
Baseball Application II (3)
Learn advanced techniques and strategies in a practice or game situation with an advanced emphasis on fundamentals, conditioning, team concept and sportsmanship. Prerequisite: PE 131 or instructor permission.

P E 239
Advanced Volleyball Applications (3)
Provides experiences in advanced techniques and tactics needed to execute advanced team concepts of volleyball.

P E 251
Advanced Aerobic Fitness/Walking (HF) (1)
Advanced aerobic conditioning class for the well-conditioned aerobic athlete. Prerequisite: PE 151.

P E 262
Advanced Softball Fundamentals (1)
Continuation of the physical and mental skills needed for playing fast pitch softball. Emphasis will be on a variety of strategies utilized in the game of softball.

P E 263
Advanced Step Aerobics (HF) (1)
Combines simple, low impact step movements with music to improve cardiovascular endurance, flexibility, and body composition. Prerequisite: PE 163.

P E 264
Advanced Softball Theory (3)
An advanced analysis of the mental approach to the game of softball. An emphasis will be placed on the theories and strategies of fast-pitch. Prerequisite: PE 164.

P E 265
Softball Applications II (3)
Learn how to apply the advanced techniques of softball in game-like situations. Prerequisite: PE 165 or instructor permission.

P E 266
Advanced Baseball Fundamentals (1)
On the field practice in development of the advanced fundamentals of baseball. Emphasis on advanced skills, strategies, and techniques. Prerequisite: PE 166 or instructor permission.

P E 267
Advanced Basketball Fundamentals (1)
More advanced skills practiced. Prerequisite: PE 167 or instructor permission.

P E 269
Advanced Cardio Kickboxing (HF) (1)
Designed to offer high-impact aerobic conditioning with the addition of hand weights. Each week more involved forms of body moves and techniques introduced to improve the individual's level of cardiovascular fitness. Prerequisite: PE 169.

P E 271
PE Practicum I (1)
Physical Education Majors will observe K-6 Physical Education teachers. Exercise Science Majors will observe a commercial Fitness Center. Both majors will attend seminars to discuss their findings. Prerequisite: EDUC 201 or concurrent enrollment or instructor permission.

P E 272
Physical Education Practicum II (1)
Physical Education Majors will observe Middle School Physical Education teachers. Exercise Science Majors will observe a medical setting. Both majors will attend seminars to discuss their findings. Prerequisite: PE 271 or instructor permission.

P E 273
Physical Education Practicum III (1)
Physical Education Majors will observe Physical Education teachers in the high school setting. Exercise Science Majors will observe a community recreation program. Both majors will attend seminars to discuss their findings. Prerequisite: PE 272 or instructor permission.

P E 275
Prevention and Care of Athletic Injuries (3)
The prevention, recognition, and care of athletic injuries.

PHYSICS

PHYS& 110

Physics: Non-Science Majors w/lab (formerly PHYS& 100) (S) (5)

A survey of physics with applications in everyday life for non-science majors. Basic concepts in Newtonian mechanics, thermodynamics, electricity, magnetism, optics, and modern physics. Requires knowledge of basic algebra. Includes a 2 hour lab.

PHYS& 114

General Physics I w/lab (S) (5)

Fundamentals of classical mechanics. The first of a three quarter sequence for science majors not requiring calculus based physics. Classical mechanics including statics and dynamics of particles, rigid bodies, and fluids. Prerequisite: two years HS algebra and trigonometry or concurrent enrollment in MATH 110.

PHYS& 115

General Physics II w/lab (S) (5)

Fluids, electrostatics, simple circuits, and the fundamental laws of thermodynamics. A continuation of PHYS& 114. Prerequisite: PHYS& 114.

PHYS& 116

General Physics III w/lab (S) (5)

Magnetism and A.C. circuits, optics, and modern physics. Includes Laws of Faraday, Lenz, and Ampere, geometrical and physical optics, special relativity, atomic and nuclear physics. A continuation of PHYS& 114 and PHYS& 115. Prerequisite: PHYS& 115.

PHYS& 221

Engineering Physics I (S) (5)

First in a three quarter calculus-based sequence for science and engineering majors stressing classical mechanics. Include dynamics of translational, rotation, and oscillatory systems of solids, particles and fluids. Prerequisite: MATH& 151 and corequisite: MATH& 152

PHYS& 222

Engineering Physics II w/lab (S) (5)

Wave motion, thermodynamics, and electrostatics. Includes sound, heat transfer, law of thermodynamics, and electric fields. Prerequisite: PHYS& 221 and MATH& 152 and corequisite: MATH& 153

PHYS& 223

Engineering Physics III (S) (5)

Optics modern physics, electricity and magnetism. Includes geometrical and physical optics, Maxwell's equations, AC/DC circuits and special relativity. Prerequisite: PHYS& 222 and MATH& 153.

PHYS 270

Research in Physics (1-12)

Design a research project, set up experiments, collect data in the lab or in the field, and/or analyze data. Each credit hour requires 33 hours of activity per quarter. Prerequisite: instructor permission.

POLITICAL SCIENCE

POLS& 101

Introduction Political Science (SS) (5)

Exploration of the fundamentals of political science: key concepts, principles, and theories. Analyze why and how leaders make the decisions they do, and why citizens obey most of these decisions.

POLS& 202

American Government (SS) (5)

Students will examine the American political structure and its ideological roots. We will explore how the structure is organized and how it operates.

POLS& 204

Comparative Government (D) (SS) (5)

Examine political theory and application within a comparative framework: ideology, nature of participation, as well as a variety of governmental structures, and functions. Contemporary situations will provide the cases for example and analysis.

POLS 220

International Terrorism (5)

An introduction to terrorism in contemporary society, focusing on the underlying political, social, economic, cultural and religious causes, its use as a political tool and measures to be taken to counter and prevent its use.

POLS 280

History of American Foreign Relations (SS) (5)

Survey of American foreign relations from the 17th to 21st centuries, focusing on such issues as national security, economic needs capitalism, and democracy and imperialism.

PSYCHOLOGY

PSYC& 100

General Psychology (SS) (5)

An introduction to the scientific study of behavior: history, research methods, biology of behavior, lifespan development, sensation and perception, learning, memory, intelligence, motivation, emotion, personality, psychological disorders and therapies, and social psychology.

PSYC& 200

Lifespan Psychology (SS) (5)

Human development from conception to death. Basic concepts and principles of biological, cognitive, and psychosocial development are integrated for each age period. Typical developmental tasks as well as problems are emphasized. Prerequisite: PSYC& 100 or instructor permission.

PSYC 202

Biopsychology (5)

Biopsychology, studies the branch of neuroscience that explains human behavior in terms of the biology of the brain, including mechanisms that produce motivation, emotion, and aggression. Prerequisite: PSYC& 100.

PSYC 209

Research Methods (5)

Overview of scientific method, major research designs, statistical concepts and utilization of materials related to scientific journals. Prerequisites: PSYC& 100 (may be currently enrolled), eligible for ENGL& 101 and college-level math.

PSYC 210

Introduction to Personality (5)

An introduction to the study of personality, including major theories, with a focus on basic principles of psychology and their application to personality development, personal growth and psychological adjustment. Prerequisite: PSYC& 100 or instructor permission.

PSYC& 220

Abnormal Psychology (5)

An introduction to the study of abnormal behavior, including behavioral problems, personality disorders and maladjustment, and the study of the causes, diagnoses, and treatment. Prerequisite: PSYC& 100 or instructor permission.

PSYC 250

Social Psychology (5)

The scientific study of how a person's thoughts, emotions and behaviors are influenced by other people. Includes an exploration of: propaganda, persuasion, social cognition, human aggression, prejudice, love, and interpersonal sensitivity. Prerequisite: PSYC& 100 or instructor permission.

READING

READ 096

Independent Study (1-5)

Individualized instruction for the student whose needs are not currently being met by the available course offerings. Specialized curriculum and instruction are developed to meet each student's needs. Permission of instructor only.

READ 097

Specific Reading Skill Development (1-3)

This course is designed to provide students with opportunities to improve their reading specifically identified areas of need. Comprehension building, word attack skills, and content area reading are a few of the specific areas that can be targeted by this class.

READ 099

Improvement of Reading (1-5)

Students strengthen thinking, reading comprehension, and vocabulary skills in learning to read and study textbooks, writing summaries, note taking, and test taking. Completion of course satisfies the basic skill deficiency in reading. Prerequisite: ASSET placement (reading) 33-41.

READ 100

Technical Reading (3)

Designed to teach discipline-specific reading strategies useful to students in both vocational and academic areas. It will also teach awareness of academic though processes and present skills to enhance that thinking process.

READ 110

Speed Reading (3)

Self-paced course for students wishing to increase reading rate and comprehension using proper eye movements, improved vocabulary, and correct reading methods based on reading material. Prerequisite: college level reading and vocabulary skills.

SCIENCE

SCIE 103

Survey of Earth Sciences (S) (5)

Explores topics in earth sciences: geology, oceanography, meteorology, astronomy. Earthquakes, volcanoes, glaciers, streams, floods, landslides, tides, coastal features, weather and climate, planets and stars. Integrates information about the relationship between humans and the physical environment. SCIE 103L must be taken concurrently or a later quarter to satisfy the requirement for a science course with a lab. Designed for students with little or no science background.

SCIE 103L

Survey of Earth Sciences Lab (S) (0)

Explore topics in earth sciences through campus laboratories, correspondence exercise and/or field trips. Requires prior or concurrent enrollment in SCIE 103 or instructor permission.

SCIE 104

Introduction to Physical Science w/lab(S) (5)

Study the basic concepts of physical science, learn to apply the scientific method to problem solving and popular science, and apply the scientific methods to a project.

SCIE 115

Weather and Climate (S) (5)

Study of Earth's atmosphere, atmospheric processes, weather, climate, and climate history. Experience will be provided in weather map interpretation, use of instruments, forecasting, interpretation of past climate conditions, and hands-on dendrochronology. Prerequisite: MATH 098 or equivalent.

SCIE 115L

Weather and Climate Lab (S) (0)

Explore topics in meteorology through problem solving, and laboratory or home exercises. Prerequisite: concurrent enrollment in SCIE 115 or instructor permission.

SOCIOLOGY

SOC& 101

Intro to Sociology (SS) (5)

Study of society and human interaction. Topics include social ranking, change, deviance, social control, the creation of thought and personality, groups, institutions, political and economic power, social movements, and how to gather valid sociological information.

SOC 125

Sociology of the Family (SS) (5)

Introduction to the study of the family as a social institution. An overview of social theories and methodological underpinnings will be included.

SOC 190

Cooperative Work Experience (1-12) (PT)

See description under COOP 190 for additional information.

SOC& 201

Social Problems (SS) (5)

Investigate problems within society and how we view certain social conditions as social problems. Topics include technology, environment, population, economy, class, race/ethnic relations, sexism, ageism, family problems, education, cities, deviance, crime, mental health, physical health.

SOC 225

Cultural & Ethnic Pluralism in Contemporary Society (D) (SS) (5)

Examine ethnicity, ethnic identity, and cultural characteristics of ethnic and social groups in North America and around the world. Understand the relationship between social organization and forms of social, economic, and political domination and subordination.

SPANISH

SPAN 105

Spanish for Public Service (3)

Basic Spanish to meet the needs of working professionals who wish to communicate with Spanish speaking persons.

SPAN 106 & 107

Spanish for Social Services (3)

Basic Spanish to meet the needs of working professionals who wish to communicate with Spanish speaking persons.

SPAN& 121, 122, 123

Spanish I-III (H) (5)

Learn the fundamental skills of listening comprehension, speaking, reading and writing. Develop an awareness of Spanish speaking countries and their cultures. Compact discs are used outside of class to promote oral proficiency.

SPAN& 221, 222, 223

Spanish IV -VI (H) (5)

Discuss Hispanic cultures in Spanish, develop oral and written skills, review and expand essential points of grammar, and build vocabulary. Prerequisite: SPAN& 123 or permission of instructor.

SPEECH

SPEE 101

Fundamentals of Public Speaking (H) (3)

A course focusing on development, preparation, and delivery skills for beginning public speakers. Attention given to anxiety reduction techniques in addition to the preparation and use of visual aids in informative and persuasive speeches.

SPEE 110

Principles of Speech Communication (H) (5)

Introduction to principles of human communication emphasizing interpersonal/intercultural relationships, group process, and problem-solving skills; designing, preparing, and delivering effective informative and persuasive speeches; reducing anxiety; and preparing and using visual aids.

SPEE 111

Interpersonal Communication in Film (1)

Highlights concepts introduced in SPEE 110 by using films to identify a different application of the principles of interpersonal communication.

SPEE 220

Theory and Practice of Public Speaking (H) (5)

Development, preparation, and delivery skills needed for a variety of public speaking events plus visual aids utilization. Ethics of public speaking are examined and applied. Study of classic speeches provides historical framework.

SPEE 250

Intercultural Communications (D) (H) (5)

Students will explore the dynamics of intercultural communication; how variables such as perceptions, language usage, nonverbal style, gender, class, and values influence face-to-face communication among individuals of different cultures; and strengthen communication skills.

STUDENT DEVELOPMENT

SDEV 099

Study Skills (1-5)

Students learn essential skills needed for effective study. Course includes learning style assessment, time management, study reading, memory techniques, test-taking strategies, and research techniques.

SDEV 100

Start Smart (1)

A seminar for new students on college expectations and communication and technological skills for college. Introduction to academically related technology. Students will participate in small group activities, reading, writing and discussion exercises and practice accessing on-line resources.

SDEV 101

Centralia College 101 (1)

An orientation class emphasizing utilization of campus resources and offering multiple workshops on library research skills, note taking, test taking, stress management, reading skills and memory improvement.

SDEV 105

Career Planning (2)

Students identify their interests, skills and abilities and evaluate their personality styles, values and work environments as they relate to careers. Activities include interest inventory test, computer programs, job market research and informational interviewing. The format is lecture, discussion, group activities and individual projects.

SDEV 126

Career Workshops (1)

Nine workshops cover analyzing peoples' interests, values, aptitudes and personalities as they relate to career success. Includes career information, transfer information, resume writing, interviewing, placement and workforce trends.

SDEV 150

Student Success (3)

College success strategies; goal-setting, time management, memory improvement, textbook reading strategies, note-taking, test-taking, project management. Taught by lecture, group and individual work. Includes Saturday field trip for challenge course activities.

SDEV 155

College Success (5)

Major topics include setting academic, career and personal goals; effective communication and presentation skills; study, research and test-taking strategies; critical thinking; note taking and memory improvement. Includes Saturday field trip for challenge course activity.

SDEV 166

Stress Management for Test Anxiety (2)

Identify causes of stress and physical and emotional side-effects. Learn methods for reducing stress, including progressive relaxation, meditation, biofeedback, cognitive analysis, and nutrition and exercise strategies. Management of test and math anxiety is emphasized.

WELDING

WELD 126

Industrial Drafting (2) (PT)

Basic concepts in developing working drawings for use in industry. Emphasis is on the use of freehand sketching and drawing instruments to produce drawings of three-dimensional objects. Also included is basic dimensioning and pictorial drawing.

WELD 151

Welding Theory for Mechanics (1-3) (PT)

Introduction to principles of gas and arc welding and cutting processes. Includes information in welding equipment and material, various welding techniques and proper safety procedures. Corequisite: concurrent enrollment in WELD 152 or instructor permission.

WELD 152

Welding Procedures for Mechanics (1-5) (PT)

Practical application of welding and cutting techniques using oxyacetylene and electric arc welding equipment. Metal preparation, layout, and weldment testing included. Concurrent enrollment in WELD 151 required.

WELD 159

Oxyfuel and GTAW Theory (4) (PT)

Theory of oxyacetylene welding, brazing, cutting and gas tungsten arc welding theory. Topics: safety practices for equipment operation, handling and use of compressed gases, identification of filler rods, base metals, types of weld joints, and procedures. Concurrent enrollment in WELD 160 or permission of instructor required.

WELD 160

Oxyfuel and GTAW Lab (9) (PT)

Consists of oxyacetylene welding, brazing, cutting and gas tungsten arc welding lab exercises. Expand on theories taught in WELD 159. Welding demonstrations and practice are on butt, lap, tee, and corner joints in all positions. Prerequisite: WELD 159.

WELD 161

Shielded Metal-Arc Welding (SMAW) Theory (4) (PT)

Theory related to shielded metal arc welding safety, joint design, electrode selection, welding machine setup and welding operations in all positions. Correct procedures for air-arc cutting and weld testing will also be covered.

WELD 162

Arc Welding Lab (9) (PT)

Shielded metal-arc welding safety, machine setup and welding procedures. Shielded metal-arc welding practices include welding butt, lap, tee and corner joints in all positions. Weld testing and air carbon arc cutting included. Prerequisite: WELD 161

WELD 164

M.I.G. Welding Theory (4) (PT)

Theory related to gas metal-arc welding (GMAW) and flux cored arc welding (FCAW); process and shop safety; machine setup, operation and troubleshooting; welding procedures and techniques; filler electrode selection and AWS weld testing.

WELD 165

Gas Shielded Arc Welding Lab (6) (PT)

Welding lab consists of GMAW and FCAW gas shielded arc welding instruction, practices and procedures on butt, lap, tee, and corner joints in all positions on steel. Also includes GMAW with aluminum.

WELD 167

Metallurgy for Welders (4) (PT)

Study of metals relevant to welding technology, extraction of metals from ores, refining metals, the manufacture of metal products, mechanical, physical and chemical properties of metals and the hardening, tempering and heat treating of metals.

WELD 180

Oxyacetylene and Gas Tungsten Arc Welding (5) (PT)

Safety, setup, brazing, cutting, and welding in all positions using oxyacetylene and gas tungsten arc welding equipment.

WELD 181

Shielded Metal Arc Welding (5)

Safety, setup, and welding in all positions using AC/DC arc welding equipment.

WELD 182

Gas Metal Arc Welding (5)

Safety, setup, and welding in all positions using gas metal arc welding equipment.

WELD 190

Cooperative Work Experience (1-12)

See description under COOP 190 for additional information.

WELD 265

Advanced Arc Welding Theory (4)

Outline practices and procedures to follow to prepare for Washington Association of Building Officials (WABO) certification test on plate and pipe. Included are layout procedures, cutting, fitting, inspection, physical testing, and troubleshooting of welding problems. Corequisite: WELD 266; Prerequisite: WELD 161.

WELD 266

Advanced Arc Welding Lab (9)

Practical exercises enable students to prepare for the Washington Association of Building Officials (WABO) tests. Includes shielded metal arc welding of test plates and pipe in all positions. Concurrent enrollment in WELD 265 or permission of instructor is required. Prerequisite WELD 160 and 161.

WELD 267

Advanced Gas Shielded Arc Welding Theory (4)

Procedures to prepare for the Washington Association of Building Officials tests in Gas Metal Arc. Flux Cored Arc, and Gas Tungsten Arc Welding. Equipment setup, base and filter metal selection, pipe layout and fitting procedures. Prerequisite: WELD 164 and 165 or permission of instructor.

WELD 268

Gas Shielded Arc Welding (9)

Exercises enable students to prepare for the Washington Association of Building Officials tests. Includes Gas Metal Arc, Flux Cored Arc and Gas Tungsten Arc Welding on test plates and pipe in all positions; Oxy fuel introduced. Concurrent enrollment in WELD 267. Prerequisite: WELD 164 or permission of instructor.

WELD 269

Adv. Fabrication and Welding Theory (4)

Fabrication and fitting tools, setup and procedures. Correct steps to follow when designing, cost estimating, and planning a large scale welding project. Blueprint interpretation and the completion of scale drawing will also be required. Prerequisite: WELD 267 or permission of instructor.

WELD 270

Advanced Fabrication and Welding Procedure Lab (6)

Fabrication and fitting tools, setup, and procedures. Butt and tee joint will be required in the flat position using various welding processes. Students will have the opportunity to work on individual projects. Prerequisite: WELD 268 or permission of instructor. Corequisite: WELD 269.

WELD 271

Blueprint Reading for Welders (4)

Fundamentals of drawing interpretation in the welding trade. Included are blueprint reading, welding symbols, fabrication techniques, identification of welds, and welding abbreviations.

WELD 281

Adv. Gas Metal Arc Welding - Aluminum (5)

Provides a thorough understanding of welding safety and gas metal arc welding of aluminum. Prerequisite: WELD 165, WELD 181 or prior welding experience with permission of instructor.

WELD 285

Arc Welding Certification (5)

Practical exercises enable students to prepare for the Washington Association of Building Officials (WABO) certification tests in gas metal arc welding (GMAW), flux cored arc welding (FCAW), and shielded metal arc welding (SMAW). Prerequisite: prior welding experience required.

WELD 287

Welding Fabrication (5)

Fabrication and fitting tools, setup and procedures. Students have the opportunity to work on individual projects and/or cooperative work experience. Prerequisite: prior welding experience required.

ZOOLOGY

ZOOL 221

Basic Anatomy and Physiology (3)

Survey of basic human structure and function including tissues, organ systems, growth and development, and genetics. Does not meet the requirements for most nursing and health sciences programs, but good preparation for ZOOL 251, 252, and 253. BIOL 105 or BIOL 130 recommended.

Applied Baccalaureate Programs

Bachelor of Applied Science (BAS) Degree Programs

What is a Bachelor of Applied Science (BAS) degree?

A traditional bachelor degree requires general education classes from many disciplines and is designed to provide you with a wide base of knowledge allowing you to concentrate your education in the third or fourth year of your education. A BAS degree gives you the chance to focus your education on your specific educational and career goals early within your education and incorporates more practical and concentrated hands-on learning in a specific industry or the career of your choice.

The Bachelor of Applied Science in Applied Management (BASAM) degree at Centralia College is specifically designed for working students throughout the region who want to prepare for management positions in a wide range of business and industry. Students meet on campus just two evenings a week, with the rest of the coursework available online. This hybrid format allows busy professionals and those seeking promotions at their present jobs to achieve the education they need for advancement while continuing to work. With two and three year tracks available, a BASAM degree at Centralia College is achievable for even the busiest professional.

The Bachelor of Applied Science in Diesel Technology (BASD) degree at Centralia College incorporates many of the benefits of an education in advanced diesel technology, then includes leadership and management coursework to prepare you for supervisory and management positions within the diesel industry. In addition to the significant, quality hands-on training you'll receive in advanced diesel technologies such as alternative fuels, power technology, hybrid technology and others, with a BASD degree from Centralia College you'll be prepared to enter the rapidly advancing diesel industry with the management and supervisory skills you need to set yourself apart as a leader. This program is conducted in face-to-face classes with some courses being Web-enhanced.

All BAS degrees are in candidacy status from our regional accreditation body, the Northwest Commission on Colleges and Universities (NWCCU).

Steps to Apply to a Bachelor of Applied Science Program

1) Determine if you meet the requirements to apply by reviewing the entrance requirements for the desired program. Refer to www.bachelors.centralia.edu website for a complete list of entrance requirements.

2) Complete and submit the application materials for the desired program within the date for priority registration.

3) Apply to Centralia College if you are not a current CC student, or have not attended CC in the last 12 months.

Advising

Students accepted into a bachelor program will receive quarterly advising from the Associate Dean of BAS Programs or by an appointed faculty advisor

Registration

Students accepted into a BAS Program will be provided registration information, quarterly, by the office of the Associate Dean of BAS Programs. Registration for 300 and 400 level courses is restricted to students accepted into a BAS Program.

Tuition

The Washington State Board for Community and Technical colleges sets the tuition rate for Applied Baccalaureate programs. Refer to www.bachelors.centralia.edu website for current rates.

Financial Aid & Scholarships

Please see page 14-15 of the catalog for information on applying for financial aid and scholarships.

Minimum Centralia College Content

To be eligible for the awarding of a degree, BAS students must complete a minimum of 30 credits of BAS coursework at Centralia College and that coursework must include aNY of the BAS capstone courses.

Minimum Grade

The student must achieve a grade of 2.0 or better in each of the upper division courses that comprise the BAS program. No credit is given for any grade lower than 2.0, and if the course is a prerequisite for another BAS course, that prerequisite is not met. A student who earns a grade lower than 2.0 in a BAS course may repeat that course only once. A student who earns grades lower than 2.0 in two or more courses is subject to removal from the program. The Associate Dean of BAS in consultation with the VP Instruction will determine the feasibility of a student repeating more than one BAS course due to a grade less than 2.0

BAS Course Enrollment by Non-Matriculated Students

The BAS-AM program is designed for student
cohorts who are committed to the attainment of the Bachelor of Applied Science in Applied Management degree. Non-matriculated students may be enrolled in specific courses on a space available basis at the discretion of the respective faculty member and with the concurrence of the Associate Dean of BAS-AM. A maximum of three courses may be taken by any non-matriculated student. Non-matriculated students must meet all of the normal BAS-AM entrance requirements with the exception of the requirement to have an associate degree. Centralia College will consider non-matriculated students for enrollment in 300/400 level courses including:

- Community members employed in the occupation who could benefit from the specific course as an educational or skills upgrade.
- Students with deferred admission status.
- Students seeking future admission interested in trying an upper division course before applying to the program.
- Students in related lower division programs who use the 300 or 400 level courses as electives or substitutes for required courses in the associate degree.

Contact Information

Connie Smejkal
Associate Dean, Baccalaureate Programs
(360) 736-9391 ext. 432
bacehlors@centralia.edu
Office located in Walton Science Center, room 120

Bachelor of Applied Science in Applied Management (BAS-AM)

The Bachelor of Applied Science in Applied Management (BAS-AM) degree is designed to provide a rigorous educational experience that fulfills the program's mission.

Our mission is to ensure that graduates of the Centralia College Bachelor of Applied Science in Applied Management degree program will have the qualifications for entry into or promotion into management positions in a wide range of business or industries. Graduates will acquire skills to improve the success of small business or entrepreneurial ventures.

Centralia College's Bachelor of Applied Science in Applied Management (BAS-AM) builds on an existing Associate in Arts, Associate in Applied Science, or Associate in Applied Science-Transfer adding upper division coursework to complete a four-year degree. Applicants are accepted for the fall quarter of each year. The BAS-AM operates as a cohort-based program with all students starting in fall quarter and completing the program in either two years (six quarters) or three years (nine quarters).

The BAS-AM degree program is designed to meet employment needs of the Centralia College service area and to provide the program graduates with the knowledge and skills needed to move into or advance in management and supervisory positions as well as to become entrepreneurs.

All classes are conducted using the hybrid modality with each class meeting on campus for one, two-hour period in the evening each week. Classes are on Tuesdays from 5-7pm, 7-9pm and Thursdays from 6-8pm. The balance of class work is online.

Selection into the program is merit based, with a strong academically based threshold for entrance into the admissions pool. In order to be placed into the admissions pool, applicants must complete and submit all of the following:

- An earned associate or higher degree from a regionally accredited college or university.
- Successful completion of these required courses with at least a 2.5 cumulative grade point average and at least a 2.0 grade in each course:
  - English 101 (5 credits).
  - QSR Math course for which intermediate algebra is a prerequisite(5 credits).
  - Social Science course (5 credits).
  - Natural Science course (5 credits).
  - Five additional general education requirements.
- A personal essay/statement to include, but not limited to, previous experience, career goals, application of the degree to career advancement.
- Evidence of a minimum of the equivalent of six months of full-time work experience.
- Resume.
- Official transcripts from previous colleges.
- Two non-family references.

Additional admissions consideration will be given to applicants in the admissions pool who have successfully completed (2.0 grade minimum) these recommended courses:

- English 102 Composition II (5 credits) or English 235 Technical Writing (5 credits).
- Speech 110 Principles of Speech Communications (5 credits) or Speech 220 – Theory and Practice of Public Speaking (5 credits).

Degree Requirements

To qualify for a Bachelor of Applied Science -Applied Management degree you must complete a minimum of 180 credits in courses numbered 100 and above of which 90 credits must be BAS courses all of which are numbered 300 or above. You must have a cumulative grade point average (GPA) of at least a 2.0 ("C" average) for the BAS courses and all credits at the 300 or above levels must have been earned with a minimum grade of 2.0 in each course. The 180 credits must include the following general education requirements

Preadmission general education requirements:

Foundation Coursework from Associate Degree

- ENGL& 101 English Composition
- Social Science course
- College-Level Math with prerequisite of intermediate algebra
- Physical, biological or earth science (lab course)
- Five additional credits in general education in one of the above distribution areas is required for admission.

BAS-AM general education coursework

- BAS 330 Professional and Organizational Communications
- BAS 315 Ethics
- BAS 325 Legal Issues
- BAS 320 Leadership and Organizational Behavior
- BAS 305 Managerial Economics
- BAS 350 Managerial Statistics
- BAS 440 Environmental Issues

Management Core Coursework

- BAS 300 Foundations of Management
- BAS 310 Accounting Principles for Managers
- BAS 340 Applied Financial Management
- BAS 360 Business Principles, Planning and Strategy
- BAS 370 Practicum
- BAS 380 Marketing for Managers
- BAS 410 Project Management
- BAS 420 Human Resource Management
- BAS 435 Operations Management
- BAS 470 Management Internship
- BAS 490 Strategic Management and Policy

BAS Electives (must take 5)

- BAS 310 Accounting Principles for Managers
- BAS 401 Governmental Accounting*
- BAS 380 Marketing for Managers
- BAS 402 Audit & Fraud*
- BAS 360 Business Principles, Planning & Strategy
- BAS 301 Intermediate Accounting I*
- BAS 410 Project Management
- BAS 302 Intermediate Accounting II*
- BAS 435 Operations Management
- BAS 403 Issues in Federal Taxation*

*Prerequisite ACCT 200

MANAGEMENT (BAS-AM) PROGRAM OF STUDY

Emphasis: ***Applied Management***

Degree: ***Bachelor of Applied Science***

PURPOSE: The BAS-AM program is designed to provide a rigorous educational experience to graduate individuals who are well-grounded in management knowledge and ethical values, who possess the requisite skills in communications, teamwork, and business fundamentals, and who are ready to provide leadership and effective decision-making to both existing and startup organizations.

PROGRAM OUTCOMES: Students who successfully complete this program should be able to:

(A) Communication Skills

- Employ effective oral, written and analytical communication appropriate to organizational settings.
- Recognize communication issues in organizations and apply communication concepts to explain and manage such issues.
- Analyze and apply communication skills in human resource management, negotiations and small and large group discussions.

(B) Decision-making

- Differentiate among decision-making strategies and their application in management and analyze the institutional resource commitment required by different decisions.
- Apply analytical tools and quality information resources in the decision making process.
- Design evaluation strategies that will be integrated into business practices to foster continuous improvement.

(C) Diversity

- Articulate the benefits of diverse populations contributing diverse perspectives for better management decisions.
- Articulate the ethical issues with regard to community diverse populations that go beyond legal considerations.
- Analyze workplace scenarios to show how careful attention to members of a diverse population can result in significant competitive advantages.
- Access and articulate the key laws and regulations that structure personnel standards and guide management actions.
- Articulate how organizations can move from accommodation, to inclusion, to aggressive recruitment to attain a competitive advantage.

(D) Finance and Analytics

- Locate information using a variety of media and technologies and evaluate their reliability and usefulness.
- Design statistical models and apply standard statistical techniques to gather and analyze data in support of business decision-making and process refinement.
- Apply managerial accounting tools in the development and analysis of capital and operating budgets.
- Analyze financing options and avenues to best meet organizational needs.

(E) Global Perspectives

- Demonstrate an understanding of the interconnectivity between economies and markets and how overseas events often impact U.S. markets and U.S. businesses.
- Articulate the challenges and financial impacts associated with offshore supply of final goods, raw materials and components.

(F) Leadership and Management

- Analyze leadership and management practices, roles and styles in business and management situations.
- Work collaboratively in a team setting and identify practices that support and sustain positive team environments.
- Recognize the value of diversity and community involvement in business ventures.

(G) Legal issues & Ethics:

- Articulate a personal ethical philosophy and explain its application to the workplace.
- Develop and defend a course of action to address ethical issues in the context of business decision-making.
- Analyze the relationship between business ethics, business law and organizational integrity.
- Evaluate the impact of applicable local, state, and federal laws and regulations to business and management scenarios.
- Apply human resource management laws, principles, and practices in business and organizations.
- Analyze the impact of state and federal laws on management behavior and organizational practices.

(H) Operations Management

- Integrate operations management theory into the process for delivering goods and services.
- Apply established marketing principles to guide product and service development as well as the development of marketing plans.
- Apply current technologies to increase effectiveness in the practice of management.

(I) Strategic Management

- Apply financial management theory and tools in the strategic planning process.
- Use economic theory to explain the influence of local, national, and global economic issues in strategic planning.
- Apply project management concepts to develop a project plan and manage and track a project.
- Demonstrate the value of adjusting marketing strategies based on the analysis of company/product strengths to drive products and/or improve customer service.
- Use economic theory to explain the influence of local, national, and global economic issues in strategic planning.

(J) Tax & Audit:

- Report financial performance in accordance with accounting principles required in tax, commercial, or government conceptual frameworks.
- Apply audit procedures necessary in creating reasonable assurance as it pertains to financial performance presentation.

Required course schedule – Two Year Track (subject to change)

Fall Quarter, First Year			Credits
BAS	300	Foundations of Management	5
BAS	320	Leadership & Org. Behavior	5
BAS	380	Marketing for Managers	OR
BAS	402	Audit & Fraud*	5
			15

Winter Quarter, First Year			Credits
BAS	315	Ethics	5
BAS	330	Pro. & Org. Communication	5
BAS	420	Mgmt of Human Resources	5
			15

Spring Quarter, First Year			Credits
BAS	310	Accounting Principles for Mgrs	OR
BAS	401	Governmental Accounting*	5
BAS	325	Legal Issues	5
BAS	370	Practicum in Management	5
			15

Fall Quarter, Second Year			Credits
BAS	305	Managerial Economics	5
BAS	340	Applied Financial Mgmt	5
BAS	360	Business Principles, Planning & Strategy	OR
BAS	301	Intermediate Accounting I*	5
			15

Winter Quarter, Second Year			Credits
BAS	350	Managerial Statistics	5
BAS	410	Project Management	OR
BAS	302	Intermediate Accounting II*	5
BAS	440	Environmental Issues	5
			15

Spring Quarter, Second Year			Credits
BAS	470	Applied Mgmt Internship	5
BAS	490	Strategic Mgmt & Policy	5
BAS	435	Operations Mgmt	OR
BAS	403	Issues in Federal Taxation*	5
			15

*Prerequisite: ACCT& 202

Required course schedule – THREE year track

Fall Quarter, First Year			Credits
BAS	300	Foundations of Mgmt	5
BAS	320	Leadership & Org. Behavior	5
			10

Winter Quarter, First Year			Credits
BAS	315	Ethics	5
BAS	330	Prof. & Org. Communication	5
			10

Spring Quarter, First Year			Credits
BAS	310	Accounting Principles for Mgrs	OR
BAS	401	Governmental Accounting*	5
BAS	370	Practicum in Management	5
			10

Fall Quarter, Second Year			Credits
BAS	305	Managerial Economics	5
BAS	380	Marketing for Managers	OR
BAS	402	Audit & Fraud	5
			10

Winter Quarter, Second Year			Credits
BAS	420	Mgmt of Human Resources	5
BAS	435	Strategic Mgmt & Policy	5
			10

Spring Quarter, Second Year			Credits
BAS	325	Legal Issues	5
BAS	490	Strategic Management	5
			10

Fall Quarter, Third Year			Credits
BAS	340	Applied Financial Mgmt	5
BAS	360	Business Principles	OR
BAS	301	Intermediate Accounting I*	5
			10

Winter Quarter, Third Year			Credits
BAS	350	Managerial Statistics	5
BAS	410	Project Management	OR
BAS	302	Intermediate Accounting II*	5
			10

Spring Quarter, Third Year			Credits
BAS	470	Applied Mgmt Internship	5
BAS	435	Operations Mgmt	OR
BAS	403	Issues in Federal Taxation*	5
			10

*Prerequisite: ACCT& 202

BAS APPLIED MANAGEMENT COURSE DESCRIPTIONS

BAS 300

Foundations of Management (5)

Foundation course that explores organizational theory and introduces the principles and concepts of effective management including planning, organizing, leading and controlling. Effective decision-making, conflict resolution, change management and motivating employees will be discussed.

BAS 305

Managerial Economics (5)

This course surveys economic condition and the application of tasks normally associated with a corporate economist. Topics of study include free market economies, supply and demand, regulation, inflation, price elasticity, and comparative advantage.

BAS 310

Accounting Principles for Managers (5)

Foundation course in accounting principles from a management perspective. Analyze the interrelationships of financial statements and cost behavior to measure and control the performance of a business entity, and make decisions based on this information.

BAS 315

Ethics (5)

Foundation course in ethics as applied to businesses and organizations related to management issues. Students will explore theoretical concepts in business ethics and apply them to real-world situations based on challenges managers face.

BAS 320

Leadership & Org. Behavior (5)

Relate theory and research to organizational problems by reviewing advanced concepts in motivation, perception, leadership, decision-making, communication and influence, group behavior, diversity, conflict and cooperation, politics, corporate culture, organizational structure, and environmental influences.

BAS 325

Legal Issues (5)

A core course concerning the impact of laws, regulations and legal responsibilities on management behavior with a focus on the application of this learning to real life situations for organizations both large and small.

BAS 330

Prof & Org Communication (5)

Foundation course designed to develop effective written and verbal communication skills in organizational settings. Students will gain an appreciation for the crucial role communication plays in organizations and how to improve their employability.

BAS 340

Applied Financial Management (5)

Surveys the application of tasks normally associated with the corporate financial manager. Topics of study include planning, controls, capital markets, capital budgeting, capital structure, and working capital management. Prerequisite: BAS 310 with minimum grade of 2.0.

BAS 350

Managerial Statistics (5)

Statistical analysis techniques will be examined and applied in case studies involving real-world management issues. Students will examine difficulties, subjective decisions, and pitfalls when analyzing data and making inferences from numbers. Prerequisite: QSR math distribution.

BAS 360

Bus Principles, Planning & Strategy (5)

Core course in strategy and planning. Topics include: establishing organizational mission, formal planning, strategy formulation, and implementation. Identify strengths, weaknesses, opportunities, and threats facing organizations.

BAS 370

Practicum in Management (5)

This course will explore and build student comprehension of the application of management functions covered in BASM courses via direct interaction between students and local managers and entrepreneurs from private, public and non-profit sectors.

BAS 380

Marketing for Managers (5)

A core course designed to develop the marketing knowledge and skills necessary for the successful manager of a profit or non-profit organization. Students will develop and present a comprehensive marketing plan.

BAS 410

Project Management Application (5)

The theory and practice of project management as it relates to managers. Planning, organizing, securing and managing the human, financial, and physical inputs required to meet project objectives will be covered.

BAS 420

Management of Human Resources (5)

Core course in the responsibilities and role of human resource management in today's workplace. Material will concentrate on both regulatory and strategic responsibilities of HR. Topics include recruitment, interviewing, compensation and current HR issues.

BAS 435

Operations Management (5)

Introduction to the key ideas and technique4s used to plan, measure and improve an organization's production of goods and services. Topics explored include process-system modeling, product design/quality, inputs, processes, supply-chains, inventory, and people management. Prerequisite: enrollment in BASM or by instructor permission.

BAS 440

Environmental Issues (5)

An exploration of environmental issues and their effect on business, communities and consumers. Case studies are used to examine basic concepts of ecology and environmental science as they relate to permitting and other business decisions. Prerequisite: enrollment in BASM or by permission.

BAS 470

Management Internship (5)

A capstone course applying BASM program outcomes in an internship with specific outcomes as agreed to by the student, internship provider and instructor. Classes will focus on sharing progress, issues or barriers from the internships. Prerequisite: completion of BAS foundation courses and 30 additional BAS core credits.

BAS 490

Strategic Management (5)

A capstone course which focuses on the key aspects that must be addressed for sustained organizational success, effective problem solving, and the capture of opportunities from the perspective of the general manager or the entrepreneur. Prerequisite: BAS 490.

BAS 301

Intermediate Accounting I (5)

The first installment of a two-part course designed to teach a professional level understanding of financial accounting and reporting as it applies to business entities both publically traded and privately held. Prerequisite: enrollment in BAS-AM or by permission.

BAS 302

Intermediate Accounting II (5)

The second installment of a two-part course designed to teach a professional level understanding of financial accounting and reporting as it applies to business entities both publically traded and privately held. Prerequisite: BAS 301.

BAS 401

Governmental Accounting (5)

An accounting course as it applies to government and not-for-profit entities. The topics include fund management, budget preparation, presentation of both fund and government-wide financial statements, and not-for-profit entity financial performance. Prerequisite: enrollment in BAS-AM or by permission.

BAS 402

Audit & Fraud (5)

This course is designed to teach the audit environment of professional financial accounting and reporting as it applies to fraud and internal controls. Prerequisite: enrollment in BAS-AM or by permission.

BAS 403

Federal Taxation Issues (5)

This course is designed to teach the application of tax law and internal revenue code used to complete tax returns associated with not-for-profit entities, estates, and trusts. Prerequisite: enrollment in BAS-AM or by permission.

Bachelor of Applied Science in Diesel Technology (BAS-D)

In order to be considered for admission to the Bachelor of Applied Science in Diesel of Technology (BASD) program, you must complete and submit all of the following:

- An earned associate (two-year) degree in diesel technology or diesel mechanics from a regionally accredited college or university.
- Successful completion of these required courses with at least a 2.0 grade in each course:
  English 101 -English Composition* (5 credits).
  Any college level MATH requiring MATH 099 as a prerequisite (such as MATH& 107, MATH& 141, MATH& 146)

To qualify for the Bachelor of Applied Science Diesel Technology you must complete a minimum of 180 credits in courses numbered 100 and above of which 70 credits must be upper division courses which are numbered 300 or above. You must have a cumulative grade point average (GPA) of at least a 2.0 ("C" average) for the upper division courses and all credits at the 300 or above levels must have been earned with a minimum grade of 2.0 in each course. The 180 credits must include the following

General Education Requirements

Communications

- ENGL& 101 English Composition (required for admission)
- ENGL 235 Technical Writing

Humanities

- BAS 315 Legal Issues
- Humanities elective

Social Science

- ECON 201/202 Micro OR Macroeconomics
- PSYC 100 General Psychology

Mathematical

- MATH college-level math with prerequisite of intermediate algebra (required for admission)
- BAS 350 Managerial Statistics

Natural Science

- PHYS 110 Physics: Non Science major w/lab
- DET 400 Material Science of Fuels d Lubes w/lab

Foundation Coursework from Associate Degree

Diesel Core Coursework

- DET 300 Survey of Business Management
- DET 310 Electrical III Advanced Circuits
- DET 320 Exhaust After Treatment/ Regulations
- DET 330 Hydraulics II-Advanced Fluid Systems
- DET 340 Combustion Engine Fuels
- DET 350 Applied Failure Analysis
- DET 360 Power Generation and Maintenance
- DET 410 Regulatory Issues
- DET 420 Metallurgy and Fabrication
- DET 430 Shop/Fleet Management
- DET 440 Hybrid Drives Electric/Hydraulic
- DET 450 Internship

DIESEL (BAS-D) PROGRAM OF STUDY

Emphasis: ***Diesel Technology***

Degree: ***Bachelor of Applied Science***

PROGRAM OUTCOMES: Students who successfully complete this program should be able to:

Technical

(A) Analysis and evaluation of data - Analyze and evaluate data collected from component failures, hydraulic systems, and complex electrical circuits.

(B) Professional interactions - Interact appropriately and professionally with customers and employees.

(C) Complex system operations - Explain the operation of complex systems including: computerized engine and transmission controls used for fuel efficiency and emissions control; regenerative hybrid technologies used to capture energy; multi-fuel technologies to save fuel costs.

(D) Theory application - Apply theories and skills taught in the classroom in a shop environment.

(E) Shop procedures - Create shop procedures that reflect industry standards and maintain compliance with regulations set by governing agencies.

(F) Fluids analyses - Apply the principles of tribology in the analysis of engine efficiency, life, and maintenance costs.

(G) Analysis of failure modes - Analyze test results from oil, coolant, fuel, or emissions analysis systems.

Managerial

(H) Policies and practices - Implement the practices, policies, and leadership to efficiently operate a fleet or repair facility.

(I) HR management and ethical principles - Apply fundamental principles of human resource management and ethics.

(J) Communications - Employ effective oral, written, and analytical communication appropriate to organizational settings including personnel situations and in large and small group discussions.

(K) Leadership styles - Distinguish between management and leadership, and differentiate among the varieties of styles and roles of management and be able to identify the most appropriate in a given situation.

(L) Use of teams - Create, manage and participative effectively in teams.

Fall Quarter, First Year			Credits
DET	300	Surney of Business Managmemt	5
DET	430	Shop/Fleet Management.	5
GER Prerequisite		ENGL 101 or college level MATH	5
			15

Winter Quarter, First Year			Credits
DET	330	Hydraulics II-Adv Fluid Systems	5
DET	340	Combustion Engine Fuels	5
PHYS&	110	Physics: Non-Science Major w /lab	5
PSYC&	100	General Psychology	5
			20

Spring Quarter, First Year			Credits
DET	310	ELectrical III- Adv Circuits & T/S	5
DET	360	Power Generation & Mainten.	5
BAS	315	Ethics*	5
			15

Summer Quarter, Second			Credits
DET	450	Internship	5

Fall Quarter, Second Year			Credits
DET	320	Exhaust Treatment Regulations	5
DET	400	Material Science w/lab*	5
ECON&	201/202	Micro OR Macroeconomics	5
			15

Winter Quarter, Second Year			Credits
DET	350	Applied Failure Analysis	5
DET	420	Metallurgy & Fabrication	5
ENGL&	235	Technical Writing*	5
			15

Spring Quarter, Second Year			Credits
DET	410	Regulatory Issues	5
DET	440	Hybid Drives	5
BAS	350	Managerial Statistics	5
Humanities Elective			5
			20

* Meets General Education Requirements (GER)

BAS DIESEL TECHNOLOGY COURSE DESCRIPTIONS

DET 300

Applied Management (5)

Introduces the principles and concepts of effective management including human resource management, quality control, social responsibility, decision-making, communication, conflict resolution and customer service. Prerequisite: enrollment in BASD or by permission.

DET 310

Electrical III (5)

Course content will focus on the theory and application of advanced electrical circuits, schematic reading, and proper troubleshooting techniques. Prerequisite: enrollment in BASD or by permission.

DET 320

Emissions Control (5)

Course content will focus on the theory and application of diesel exhaust emissions reduction technology. Prerequisite: enrollment in BASD or by permission.

DET 330

Hydraulics II (5)

Studies the application of complex hydraulics systems with an emphasis on troubleshooting and system design. Prerequisite: DET 300.

DET 340

Combustion Engine Fuels (5)

Examines a variety of alternative power sources used in internal combustion engines including diesel fuel, bio-diesel, gasoline, ethanol, propane, and CNG fueled engines. Prerequisite: DET 300.

DET 350

Applied Failure Analysis (5)

Identifies initial failures, progressive damage and appropriate documentation with a focus on root cause analysis and correction actions. Prerequisite: DET 300.

DET 360

Power Generation/Maintenance (5)

Examines the theory, application, and maintenance of equipment and controls used in on-site power generation. Content will cover power generation systems that run in a variety of commercial, industrial, and personal applications. Prerequisite: DET 300.

DET 400

Science of Fuels & Lubes (5)

Studies the tribology of automotive and industrial equipment fuels, coolants, lubricants and additives. Samples of each will be taken and examined to comprehend the chemical breakdown processes, the contaminants that are involved and the consequences for engines and transmissions. Prerequisite: DET 300.

DET 410

Regulatory Issues (5)

Studies the requirements set forth by OSHA, MSHA, and the EPA relating to diesel fueled automotive and industrial equipment. Content to include current laws, preferred practices and case studies of industrial accidents. Prerequisite: DET 300.

DET 420

Metallurgy & Fabrication (5)

Focuses on various types of steel and non-ferrous metals respective strengths and other key attributes regarding how those materials are repaired and components using those metals are designed and fabricated.

DET 430

Shop/Fleet Management (5)

Addresses the relationships between the repair facility and customers as well as internal shop relationships and the development of a strong customer service culture. Topics will include work flow and methods, shop layout, work ethics, effective communications and skills needed by effective supervisors and foremen. Prerequisite: DET 300.

DET 440

Hybrid Drives (5)

Reviews current and emerging propulsion technologies including electric forklifts, diesel- electric propulsion and hydraulic accumulator drive systems. Prerequisite: DET 300.

DET 450

Internship (5)

Consists of work completed on the site of a maintenance/repair facility based upon a contractual agreement requiring specific attention to a project or problem that directly addresses BASD program outcomes. Prerequisite: DET 300.