

Advisor \_\_\_\_\_  
Assigned By \_\_\_\_\_



Name \_\_\_\_\_  
Date \_\_\_\_\_

# EDUCATIONAL PLAN

## Associate in Science – Major Related Program

### Mechanical & Civil Engineering

Course Placement Recommendations: English \_\_\_\_\_ Reading \_\_\_\_\_ Math \_\_\_\_\_  
 ENGL 098       READ 099       MATH 095       MATH 098       MATH& 141  
 ENGL 099       MATH 096       MATH 099       MATH& 142

Recommended course schedule

Fall Quarter, First Year Credits

CHEM& 161	General Chemistry w/lab I (S)	6
ENGL& 101	English Composition I (C)	5
ENGR 100	Intro to Engineering	2
Social Science Distribution (SS)**		5
		18

Winter Quarter, First Year Credits

CHEM& 162	General Chemistry w/lab II (S)	6
MATH& 151	Calculus I (M)*	5
Humanities Distribution (H)***		5
		16

Spring Quarter, First Year Credits

ENGR& 214	Statics	5
MATH& 152	Calculus II (M)	5
Health and Fitness Distribution (HF)		3
Humanities Distribution (H) ***		OR
Social Science Distribution (SS)**		5
		18

Fall Quarter, Second Year Credits

ENGR& 225	Mechanic of Materials	5
MATH 118	Linear Algebra (M)	5
PHYS& 221	Engineering Physics I (S)	5
		15

Winter Quarter, Second Year Credits

ENGR& 215	Dynamics	5
MATH& 163	Calculus III	5
PHYS& 222	Engineering Physics II (S)	5
ENGR 203	Applied Numerical Methods	5
		20

Spring Quarter, Second Year Credits

ENGR& 204	Electrical Circuits	5
MATH 212	Elementary Differential Equations (M)	5
MATH 264	Calculus IV	3
PHYS& 223	Engineering Physics III (S)	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 Calculus I (Math& 151), you should take Pre-calculus.

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

\*\*\*Students are required to complete 3-5 credits in a Diversity course (D). A list of courses that satisfy the Diversity Requirement can be found in the college catalog.

QTR/YR \_\_\_\_\_ CREDITS

---

---

---

---

---

---

---

---

QTR/YR \_\_\_\_\_ CREDITS

---

---

---

---

---

---

---

---

QTR/YR \_\_\_\_\_ CREDITS

---

---

---

---

---

---

---

---

QTR/YR \_\_\_\_\_ CREDITS

---

---

---

---

---

---

---

---

QTR/YR \_\_\_\_\_ CREDITS

---

---

---

---

---

---

---

---

QTR/YR \_\_\_\_\_ CREDITS

---

---

---

---

---

---

---

---

NAME \_\_\_\_\_

# Engineering

**EMPHASIS:** Mechanical/Civil/Aeronautical/Industrial/Materials  
Science Pre-Engineering

**DEGREE:** Associate in Science  
(AS-T #2 Other Engineering 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.

## **Program Outcomes:**

Please refer to the Distribution Requirements and their criteria listed in the Centralia College catalog.

## **Learning Themes:**

General education outcomes at Centralia College help students, faculty, and the general public identify learning expected when a student has completed a degree or program. The administration, faculty, and staff have agreed upon the following five Learning Themes which students can expect to encounter in their courses by the completion of any degree.

## **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 methods.

## **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 of persons 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.

Note: Students who plan on transferring to the University of Washington will also need to take one full-year of a foreign language if they have not studied that language for the required amount of time in high school. Also, students going to the University of Washington may wish to take at least one five-credit designated writing course.

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.

## **Centralia College is part of the direct transfer Statewide Engineering AS-T Track 2 Major Related Program (MRP) Agreement with the following colleges:**

Eastern Washington University - Gonzaga University - Saint Martin's University - Seattle Pacific University - Seattle University - University of Washington Seattle - Washington State University - Henry Cogswell University - Walla Walla College

This Educational Plan is intended as a guide for students who wish to emphasize a specific area of study for the Associate in Arts degree. 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.

### **Estimated Quarterly Program Costs (subject to change without notice)**

Resident Tuition (15 credits) and fixed fees*:	\$1427
US Citizen Nonresident Tuition (15 credits) and fixed fees*:	\$1576
Non US Citizen Nonresident Tuition (15 credits) and fixed fees*:	\$3381
*Tuition is subject to change due to State Legislative actions	
Books and supplies (estimate):	\$427
Lab fees:	Refer to quarterly class schedule.

Centralia College does not discriminate against any person on the basis of race, color, national origin, disability, sex, genetic information, or age in admission, treatment, or participation in its programs, services and activities, or in employment. All inquiries regarding compliance with access, equal opportunity and/or grievance procedures should be directed to the Centralia College Vice President of Human Resources and Legal Affairs, 600 Centralia College Blvd., Centralia, WA 98531.