



ENGINEERING

MECHANICAL ▪ CIVIL ▪ INDUSTRIAL AERONAUTICAL ▪ MATERIAL SCIENCE

ASSOCIATE OF SCIENCE DEGREE

Advisors: Rebecca Sliger, 460-4428, Keith King, 566-5297, Brandy Eastman, 460-4355, Jared Abwawo, 460-4373, and David Straayer, 460-4390.

The first two years of a bachelor's degree in **Mechanical, Civil, Industrial, Aeronautical or Material Sci. Engineering** may be completed at Tacoma Community College. Completing the courses in the schedule below will satisfy the Associate of Science Degree. Upon completion of this degree, students will be able to transfer to most four-year colleges and universities as juniors. Entry into many engineering programs is competitive. Completion of this degree does not guarantee admission into a specific engineering program. Although members of the Science and Engineering Department make every effort to consult with various colleges and universities regarding requirements, students are encouraged to consult catalogs, websites and advisors at their chosen four-year institutions during their freshman year.

Preparation: While in high school, students should pursue all of the available courses in mathematics, chemistry, biology, computer programming and physics.

Program Planning: Students should meet with an engineering advisor as soon as they are admitted. Students may also refer to the Associate of Science degree description located in the Tacoma Community College catalog or on the TCC website at <http://www.tacomacc.edu/academics/areasofstudy/engineering/>. Many courses have prerequisites, are offered only once or twice a year and are sequential. Careful selection of classes each quarter is necessary to complete the program without delay. **The following schedule is intended as one possible order of classes and is not the only method or even a preferred method to complete the degree.** Each student's schedule will vary based on his/her level of preparation and intended major and university.

Pre-engineering Year

Fall	Winter	Spring
MATH 96/140 ■▲	MATH& 141 ■	MATH& 142 ■
Humanities ▲	ENGR& 104 ▲	ENGL& 101 ▲
Social Science ▲	CHEM& 110 ■▲	CHEM& 121 ■▲

First Year

Fall	Winter	Spring
CHEM& 161 ♣	CHEM& 162 ♣	PHYS& 221 ♣
MATH& 151	MATH& 152	MATH& 153
CS 142 ♣	ENGR& 114 ▲♣	ENGL& 235 ▲

Second Year

Fall	Winter	Spring
ENGR& 214 ●	ENGR& 215 ●	ENGR& 225 ●
MATH 220 ♣	MATH 238 ●	MATH& 254 ♣
PHYS& 222 ♣	PHYS& 223 ♣	ENGR& 204● or 224●

- Class does not count in the AS in Engineering degree but is a prerequisite for some degree classes.
- ▲ Class requires few prerequisites and may be taken early, during the pre-engineering year.
- Class typically only offered once a year in the quarter shown.
- ♣ Class typically only offered twice a year, one of which is the quarter shown.



Mechanical, Civil, Aeronautical, Industrial and Material Science Engineering (108 credits)

1. Basic Requirements (15 credits)

- ENGL& 101
- MATH& 151, 152

2. Humanities & Social Sciences (15 credits)

- Humanities course from approved list – ENGR& 114* recommended
- Social Science course from approved list – ENGR& 104 recommended
- Humanities or Social Science course

At least one course must be designated a multicultural course.

3. Required Specialization Courses (58 credits)**

- MATH& 153, MATH 220, 238
- PHYS& 221, 222, 223
- CHEM& 161, 162
- ENGR& 214, 215, 225

4. Additional Specialization Courses (20 credits)

Select four of the following classes as appropriate for intended major and bachelor's institution:

CS 142
MATH& 254
ENGR& 114*, 204, 224
ENGL& 235

*Engr& 114 may be taken as either a Humanities Course or an Additional Specialization Course, not both.

Note: Most classes on this list have prerequisites. Students who are not ready for MATH& 151 and ENGL& 101, and those who have not taken high school chemistry will require additional classes.

This degree requires 108 credit hours (longer degree implemented on a state-wide level.) Some students may need to take additional prerequisite courses. See catalog for prerequisite information. The Humanities and Social Science courses must total 15 credits taken from the distribution course lists including at least one course from the multicultural list. While more than one class may be acceptable for the Associate of Science degree, four-year institutions may require a specific class for a specific engineering major. Financial aid recipients can receive aid for up to 125% of the required college level credits to complete the program. This includes college level pre-requisites. Detailed information is available from the Financial Aid Office.