Engineering

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Engineering schools recognize that students who come into engineering from a liberal arts background frequently have a broader perspective than the average engineering student. Therefore, engineering schools often look for opportunities to recruit students from liberal arts institutions. In order to provide pathways into engineering for students, Pacific offers dual degree program options. A dual degree program is a 3-2 transfer program in which the student spends three years at Pacific followed by two years at an engineering school. While at Pacific, the student completes the liberal arts core, makes significant progress toward a Pacific major and degree, and completes the prerequisite courses necessary for admission into the engineering school. The student then transfers to the engineering school for two years of further education in science and engineering. An important aspect of a dual degree program is that the completion of the liberal arts core provides breadth in humanities and social sciences, which is desirable for scientists in industry. Upon completion of the dual degree program, the student receives a B.S. in an Arts & Sciences discipline from Pacific and a B.S. in engineering from the engineering school.

Pacific Dual Degree Options

Pacific University offers two dual degree options for students:

1. Formal dual degree programs with partner institutions
2. Approved informal dual degree programs

More details about these options can be found below.

Requirements for Pacific B.S. degrees within a dual degree program

Typically, dual degree students will choose Applied Science as their major from Pacific (see the Applied Science section of the catalog for more information) because of its natural overlap with the prerequisites for many engineering schools. However, students can elect to pursue a major other than Applied Science. Students choosing to do so should be aware that this choice might make it more difficult to complete the necessary coursework during the 5-year duration of the dual degree program. Students who make this choice should work carefully with the engineering dual degree advisor at Pacific, their academic advisor, and the department chair of their major field of study in order to plan their path through the program. Students must complete all requirements for the Pacific B.S. degree within the major of their choice through a combination of courses at Pacific and courses at the engineering school. Any courses from the engineering school that will be substituted for courses required of the Pacific major must be approved by the department chair of that major.

Residency requirements

Students pursuing an approved dual degree engineering program will have different residency requirements at Pacific University. In particular, these students will not be required to take 30 of their last 40 semester credits at Pacific.

Formal Dual Degree Programs

Pacific University has established a formal dual degree program with the School of Engineering at Case Western Reserve University. A complete range of engineering specialties is available at Case including aerospace, biomedical, chemical, civil, computer, electrical, mechanical and systems engineering.

Prerequisites for admission

Students who apply for admission into the dual degree program at Case must complete the following at Pacific University:

- Arts & Sciences Academic Core (except Capstone)
- CHEM 220-230 General Chemistry I-II 8 credits
- CS150* Introduction to Computer Science I 4 credits
- MATH 226-228 Calculus I-III 12 credits
- MATH 311 Differential Equations 4 credits
- PHY 232-242 General Physics I-II 8 credits
- 90 semester credits (including those listed above)

Additionally, students must earn an overall grade point average of 3.0 and a grade point average of 3.0 in Math and Science courses. Students who meet these prerequisite requirements must apply to Case for admission into the School of Engineering. It is likely that those students will be accepted into the program, but it is not guaranteed.

* If interested in Computer Engineering at Case, CS 250: Introduction to Computer Science II is also required.

Informal Dual Degree Programs

It is common for Pacific students to enroll in engineering programs (such as Oregon State or Portland State universities) either through transfer or after completion of their degree at Pacific. If a dual degree program is being pursued at an engineering school that does not have a formal agreement with Pacific, the department chairs in the Pacific School of Natural Sciences must approve the program. Requirements for admission to these programs are unique to each school, but admission is likely for those students who maintain at least a 3.0 grade point average and who are recommended by the Pacific University School of Natural Sciences.

Advising

Students who are interested in engineering should consult with the engineering dual degree advisor at Pacific.