What is the Study of Plastics & Composites Engineering?

Students enrolled in Western’s Plastics & Composites Engineering (PCE) program study the relationship between molecular structure, processing, and properties of polymers and composites. The PCE curriculum prepares graduates who understand and apply established scientific and engineering knowledge to support engineering activities in manufacturing environments. The technical curriculum is built upon a firm base of mathematics, physics, chemistry, and materials science. Practical experience in design, materials, processing, economics, testing, and analysis is a crucial part of the hands-on curriculum that is provided in the program’s extensive and well-equipped laboratory facilities. Western’s PCE program is one of six in the nation and the only one on the west coast.

What kind of job would a Plastics & Composites Engineer have?

A plastics and composites engineer can be involved in the development, design analysis, planning, supervision, or construction of the materials, methods, and equipment for the production of industrial or consumer goods in the plastics or composites industry. The PCE graduate will help to solve the complex problems associated with plastics or composites manufacturing operations. PCE graduates work in teams with engineers, scientists, and technicians to solve manufacturing-related problems.

Students can expect to complete the program in four years by carrying 15-16 credits per quarter in a prescribed...
Plastics & Composites Engineering (PCE) Program Information

Degree Timeline:
The PCE program has a strong prerequisite course sequence. Students unable to successfully complete foundational math and science courses in their first four terms may find they are unable to complete the PCE degree in four years. Additionally, many junior- and senior-level PCE courses are only offered once or twice per year, so if a student gets off-sequence with the prescribed course of study, their time to degree completion may exceed four years. Students are encouraged to seek advising early to help ensure they won’t be delayed.

Transfer Students:
Many of the courses in the first five terms of coursework for the PCE program are standard offerings at community colleges, including Calculus, Physics, Chemistry and some Engineering courses. Transfer students are encouraged seek advising well before attending Western to ensure coursework will transfer and fulfill program requirements. For students transferring from Washington community colleges or public baccalaureate institutions, Western’s online Transfer Equivalency Guide is a useful tool for assessing courses and equivalencies. Students should expect to spend two to three years at WWU after acceptance into the program.

Application Process:
Students must initially declare as a Pre-major in Plastics & Composites Engineering once they begin coursework at WWU. The major application period for the PCE program is in the middle of Winter Quarter. Students who are on track will mostly likely apply during year two at WWU. If space allows, major applications will also be accepted over the summer. Students must have completed eight prerequisite courses and up to two may be in progress at the time of application.

Required Coursework:
CHEM 121, CHEM 122, MATH 124, MATH 125, PHYS 161, ENGR 104, ENGR 170, and ENGR 214

Although the minimum grade for all courses in the major is a C-, acceptance to the major is based primarily on academic performance in the prerequisite courses, so maintaining a high GPA in these courses is advantageous. In addition to academic performance, acceptance is also based on an essay explaining why the student wants a degree in Plastics & Composites Engineering. Twenty four students are typically accepted into the program each year, and the application process is competitive. For more information on the program admissions process, visit the Advising/Admissions link on the PCE webpage:
https://cse.wwu.edu/engineering-design/admissions-0