

Engineering

COORDINATOR: STEPHEN L. TUFTE

See also Mathematical Sciences, Chemistry, and Physics.

For students seeking a traditional engineering background leading to certification, Lewis & Clark has joined several nationally recognized engineering schools to offer a cooperative program that provides students with the advantages of a liberal arts education as a complement to rigorous studies in engineering. This engineering program, commonly referred to as the “3-2 Program,” enables a student to complete three years of study at Lewis & Clark, followed by two years at the engineering school. The student earns a degree from each school. Lewis & Clark cooperates in this program with four institutions: Columbia University in New York, Washington University in St. Louis, the University of Southern California in Los Angeles, and the OGI School of Science & Engineering in Beaverton, Oregon.

In the 3-2 programs with Columbia, Washington University, and USC, the student earns one bachelor's degree from Lewis & Clark and one from the engineering school. Some of these schools also provide 4-2 options in which the student may complete a four-year degree at Lewis & Clark and then enter a two-year program toward either the bachelor's or the master's degree in engineering. OGI offers graduate degrees in select fields. Lewis & Clark's 3-2 agreement with OGI provides for a bachelor-master program in computer science and engineering.

The existence of a formal 3-2 or 4-2 agreement between Lewis & Clark and these four institutions essentially assures students admission to engineering schools upon completing a required set of courses with a satisfactory GPA, typically 3.000, and the recommendation of the Lewis & Clark faculty. In addition, Lewis & Clark students sometimes enroll in engineering schools at other institutions upon graduation or by transfer. The preengineering advisor (the coordinator of the engineering program) works with students individually, helping them evaluate the relative merits of various options. Students are kept informed about the program through regular mailings and annual visits from representatives of the engineering schools.

Students interested in these programs should meet with the preengineering advisor as soon as they enroll at Lewis & Clark. Preengineering students generally take mathematics (through differential equations), chemistry, physics, and computer science. Students are strongly encouraged to take full advantage of Lewis & Clark's diverse course offerings in the arts, humanities, and social sciences during their studies.

Note: Because Lewis & Clark does not offer a “preengineering” major, students must choose a standard Lewis & Clark major such as mathematics, chemistry, physics, or economics. They must plan a course of study that will enable them to meet the requirements of the engineering school and complete all but two or three courses of those required for the Lewis & Clark major. Preengineering students must also meet all of Lewis & Clark's General Education requirements.

Students in the 3-2 program must spend a minimum of four full-time semesters at Lewis & Clark (excluding summer session) and complete 93 semester credits, 60 of which must be taken in residence at Lewis & Clark, before proceeding to the engineering school. For these students, Lewis & Clark waives its senior-year academic residency requirement. The chair of the student's major department evaluates courses at the engineering school as substitutes for completing the student's Lewis & Clark major requirements.

PROGRAM REQUIREMENTS

Although students may graduate with any Lewis & Clark major, they should plan their schedules so as to complete the following courses by the end of the junior year. Since each school has different requirements, students should consult with the preengineering advisor as early as possible to plan the most effective and profitable course of study at Lewis & Clark.

- Chemistry 110 and 120 (some programs require only one semester of chemistry).
- Computer Science 171.
- Mathematics 131, 132, 233, and 235.
- Physics 141 and 142, or Physics 151, 152, 251, and 252. Physics 201 is also recommended.
- All programs require four or five courses in the arts, humanities, and social sciences. Washington University requires at least two courses in the humanities and two in the social sciences, and one of these must be at the junior or senior level.
- Columbia University requires one course in economics.

Students planning a career in chemical engineering should add Chemistry 210, 220, 310, and 320. Students planning a career in computer science should add Computer Science 172, 373, and 383, as well as Mathematics 215. Students planning a career in electrical and electronic engineering should add Physics 331 and 332.

English

CHAIR: KURT FOSSO

The Department of English acquaints students with a wide range of English and American literature from a variety of perspectives. The department teaches students to read literary texts and to write effectively and persuasively about literature and its relation to human experience. English courses also share the goal of helping students read, think, speak, and write critically.

The department has a strong commitment to the teaching of writing in its literature courses. In addition, courses in creative writing provide an opportunity for majors interested in writing poetry and fiction to develop their skills to an advanced level. Some of the creative writing courses also satisfy Lewis & Clark's creative arts requirement.

THE MAJOR PROGRAM

Students are encouraged to declare the major in the sophomore year. The department requires that students interested in an English major take the two-semester sequence Major Periods and Issues (English 205, 206) in the sophomore year, if possible, and no later than the junior year. During this course and in close consultation with an advisor, the students should chart a program of courses that will satisfy major requirements.

During their senior year, usually in the fall semester, majors take the senior seminar. Though seminars vary in focus and content, each addresses its subject in the context of current critical discourse and requires students to write a long research-based paper. Each seminar gives students the experience of engaging in advanced research, developing independent critical perspectives, and sharing ideas with a small number of students in a seminar setting.

Within the major itself, students may shape their program in a number of ways. A concentration in writing and literature incorporates both creative writing courses and literature courses appropriate to a particular student's interest. A concentration in British and American literature combines courses calculated to strengthen the student's understanding of literary history and the major