
Undecided Majors in CSE

Many students enter college unsure of their major; however, undecided students who apply to the Swenson College of Science and Engineering (SCSE) know that they are interested in math and science and they usually performed well in these subjects in high school. Review the back of this sheet for information about majors and programs offered by SCSE. Detailed program sheets are available to help you determine the courses required for any majors of interest to you.

Here are some course suggestions for *Undecided* students:

1. **Writing:** WRIT 1120 is required of all students to graduate from UMD. No matter what your major is, you will need this course (or its equivalent) to meet UMD degree requirements. Students typically take this course during the fall or spring semester of their first year in college.
2. **Mathematics:** Because all programs in SCSE require mathematics, it is recommended that during fall semester undecided students register for the math course designated by their Math Placement Exam. The first math course is usually one of the following:
 - Math 1005 College Algebra (5 credits)
 - Math 1250 Pre-Calculus Analysis (4 credits)
 - Math 1296 Calculus I (5 credits)

Staying "on-track" in math is very important for SCSE majors. Undecided students can begin their math sequence and know that their math will apply to any major in the college.

Students who have already earned college credit for Calculus I may take math courses that are more advanced.

Students with less math background may begin studies with SSP 0103 Basic Math & Introduction to Algebra their first semester, followed by Math 1005, then Math 1250, then Math 1296 in subsequent semesters. Summer school can help students who take review courses their first year catch up in math.

3. **Science:** Most SCSE students take one or more of the courses below during the fall semester of their first year of college. Taking one of these courses is a way to explore that discipline and learn whether you want to go further in that field. All of these courses also apply to the UMD Liberal Education program, so even if you decide not to continue in the subject, you know that the course "counts" towards a degree requirement.

Biol 1011	General Biology I, 5 cr	Cat 4 Lib Ed	(prereq: one year high school chemistry)
Chem 1151	General Chemistry I, 5 cr	Cat 4 Lib Ed	(prereq: one year high school chemistry)
CS 1511	Computer Science I, 5 cr	Cat 3 Lib Ed	(prereq: 3 ½ years high school math)
Geol 1110	Geology & Earth Systems, 4 cr	Cat 4 Lib Ed	

However, if you are not sure that a math or science major is the right for you, you may want to explore a subject outside of science. SCSE freshmen are not required to take one of the above subjects. These courses are very demanding and students do well in them only if they are prepared to dedicate many hours of study to the subject. Some SCSE students - both decided and undecided - delay the beginning of their science sequences until spring semester or later.

4. **Liberal Education:** Students who wish to explore many subjects, or who want a mix of liberal arts subjects with their math and science, should look at Categories 6, 7, 8, 9 and 10 of the Liberal Education program. Courses from these categories are required of all students to graduate from UMD and they offer a good variety of courses in the social sciences, behavioral sciences, humanities, arts, and letters.
5. **Freshman Seminars:** Many courses in the Liberal Education program are taught as "Freshman Seminars." These courses have a maximum enrollment of 20 and are restricted to first year students. A Freshman Seminar offers a good opportunity to meet other students and to get to know one professor. These courses are listed on the Liberal Education program sheet.

College of Science and Engineering Programs

Bachelor of Science (B.S.) Degrees:

Biochemistry & Molecular Biology
Biology
Cell & Molecular Biology
Chemistry
Computer Science
Computer Information Systems
Environmental Science
Geological Sciences
Mathematics
Statistics & Actuarial Science
Physics
Applied Physics

Engineering Degrees:

Bachelor of Science in Chemical Engineering (B.S.Ch.E.)
Bachelor of Science in Civil Engineering (*coming Fall 2008*)
Bachelor of Science in Electrical and Computer Engineering (B.S.E.C.E.)
Bachelor of Science in Industrial Engineering (B.S.I.E.)
Bachelor of Science in Mechanical Engineering (B.S.M.E.)

Pre Engineering Programs

Pre-Engineering
(For students who wish to pursue engineering at UMD but have not chosen the specific field)

Pre-Aerospace Engineering
(Students must transfer to the UM Twin Cities or elsewhere for last 2 years)

Pre-Professional Programs:

(These programs prepare students to apply for admission to professional schools.)

Pre-Dentistry
Pre-Medicine
Pre-Optometry
Pre-Pharmacy
Pre-Veterinary Medicine

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