

Undecided Majors in CSE

Many students enter the College of Science and Engineering (CSE) unsure of their major. To have chosen CSE as their college the students should be interested in math and science and have demonstrated strengths in these subjects throughout high school. Although they do not know exactly what their major will be they will have reviewed the list of programs offered by CSE and know that this is where their interests and talents lie. (See back of this sheet for CSE majors and programs).

Fall Semester Freshman Year - some suggestions for *Undecided* students

1. **Composition:** Comp 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 are expected to take this course as freshmen, either fall or spring semester.
2. **Mathematics:** Because all programs in CSE require mathematics, it is recommended that during fall semester undecided students register for the math course designated by their Math Placement Exam. This 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 CSE 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 more advanced courses.

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 CSE students take one or more of the courses below during fall semester of their freshman year. Taking one of these courses is a way to explore that discipline and to 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 CSE is the right college for you perhaps you would like to explore a subject outside of science. CSE 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 CSE students - both decided and undecided - will delay beginning 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, and 9 of the Liberal Education program. Course 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 Degrees:

Biochemistry and Molecular Biology
Biology
Cell Biology
Chemistry
Computer Science
Geological Sciences
Information Systems and Technology
Mathematics
 Applied Mathematics
 Computational Mathematics
 Mathematics as a Double Major
 Statistics and Actuarial Science
 Traditional Mathematics
Physics
Applied Physics

Engineering Degrees:

Bachelor of Science in Chemical Engineering (B.S.Ch.E.)
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 Civil Engineering
(students must transfer to the UM Twin Cities or elsewhere for last 2 years)

Other transfer program

Pre Fisheries and Wildlife (students must transfer to the UM Twin Cities for last 2 years)

Pre Professional Programs in the Health Sciences:

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

Pre Dentistry
Pre Medicine
Pre Optometry
Pre Pharmacy
Pre Veterinary Medicine