

The Engineering Physics Major

The Department of Engineering Sciences and the Department of Physics and Astronomy offer a major in Engineering Physics. This unique major features a 5/5 split in courses, unlike a modified major which requires six courses from one field and four from the other.

Prerequisites: Math 3, 8, 13, 23; Phys 13, 14; Chem 5; and CoSc 1 and 10 or Engs 20.

Major: Engs 22, 23, 24 and Phys 19, 40 and 43. (Students taking Phys 15 and 16 substitute a third physics elective for Phys 19.)

In addition, four electives are required--two from each department. Two electives must be selected from the following list: Engs 25, Engs 33, Engs 34, Phys 50, Phys 68, Phys 90, Phys 73 or Engs 131, Phys 66 or Engs 120, Phys 44 or Engs 72. The other two electives can be any engineering science course numbered 21 and higher, excluding Engs 80 and 87, or any physics or astronomy course which fulfills the straight physics major.

A culminating experience is required in the major, which can be taken instead of one of the electives above. It must be one of the following: Phys 68, Phys 72, Phys 73, Phys 74, Phys 76, Phys 82, Phys 87, Engs 86, Engs 88, Engs 89, or an advanced engineering sciences course with a significant design or research project, chosen from an approved list. (Consult the Engineering Sciences Department for the most recent list.)

If Engs 89 is taken, it must be taken as part of the two-course design sequence 89/90. Prior to enrollment in Engs 89 at least six engineering sciences courses must be completed: Engs 21 plus five additional courses numbered 22-76.

For further information, please contact: Professor Mary Hudson, Physics and Astronomy or Professor William Lotko, Engineering Sciences

Mathematical Physics Minor

This minor may be combined with majors in either mathematics and physics or any other department. Students majoring in both physics and math cannot take this minor.

Prerequisites: Physics 13, 14, 19 (or Physics 15 and 16), and Physics 40, Mathematics 3, 8, 13, and 22 or 24.

Minor: A total of four additional courses, which must include Math 23 and Math 46. Math majors must choose two physics courses from Physics 30, 31, 41, 43, 44, 47, 50, 66, 72, 75, 77, and 91. Physics majors must choose two math courses from Math 31 or 71, 42, 43, 53, 54, 63, 66, 73, and 76. Students majoring in a department other than math or physics must choose one math and one physics course. An advanced undergraduate or graduate level physics or math course may be substituted for any of these courses, with permission from the physics or math department undergraduate advisor. No course may count towards both the major and minor.

