

# Physics: Engineering Track

## Major

The Department of Physics offers a program in dual degree engineering through cooperative agreements with larger universities. Other names for this type of program include pre-engineering programs and 3-2 engineering (reflects the number of years spent at each institution). Dual degree refers to the fact that the student will receive degrees from two institutions. Students typically spend three years at Illinois College taking courses in physics, math, computer science and chemistry along with courses in the humanities, social sciences, and arts. Two years are then spent at the partner university concentrating on a specific engineering discipline. Upon completion of the program, the student receives a Bachelor of Science degree in physics with engineering from Illinois College and a Bachelor of Science Engineering from the partner university.

## Required Courses

The major requires a minimum of 24 hours in classroom and laboratory physics courses at Illinois College of which 16 hours must be at the 300-level. MA 332 and three additional courses chosen from the major requirements for the chemistry, biology, or computer science major are also required. These three should be chosen in consultation with the student's Physics advisor to best meet the needs of the particular engineering program that the student wishes to pursue. The most commonly selected courses are CH 110, CS 160 and CS 170.

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Sub-Total Credits

24

## Additional Requirements

PY 202 and MA 223 are prerequisite to all upper division courses unless waived by the department chair. Prerequisites must be completed with a grade of 'C' or above. The students must complete at least 88 hours of academic credit (senior standing) at Illinois College before approval will be given for continuation of the program at the engineering institution. The Illinois College senior residency requirement is waived for participants in this program. The completion of a degree program in mechanical, civil, or electrical engineering or related discipline at an approved institution is required for the award of the Illinois College bachelor's degree. A student who elects not to continue the dual degree program will need to complete all [BLUEprint requirements](#) for graduation from Illinois College. Faculty approval to be in a 3-2 program is given if a 2.75 average (on a 4.0 scale) is achieved in courses in Division II (Biology, Chemistry, Computer Science, Mathematics, and Physics). Students are strongly encouraged to work closely with their advisors to verify that the general education requirements of the engineering institution are also fulfilled by their Illinois College studies. Students need to complete their graduation application and degree audit with the Illinois College Office of the Registrar prior to leaving campus to attend the transfer institution.

Since students participating in the 3-2 Program in Engineering receive degrees from both Illinois College and the college or university at which they complete their degree, these students need to fulfill the general education requirements of both. In acknowledgement of the curricular constraints posed by this situation, the following accommodations will be made. They will be allowed only for those students in the 3-2 Program in Engineering who successfully complete the engineering program at the institution to which they transfer.

1. Students in the 3-2 Program in Engineering whose level of language participation necessitates their enrollment in a world language course at the 101 level will have successfully completed the world language requirement upon completion of this course.
2. Since participants in the 3-2 Program in Engineering attend Illinois College for only three years, they are not required to have a senior capstone course or experience.

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Total Credits

24