Preparing for a career in Engineering

Colgate University
COLGATE OFFERS TWO WAYS FOR STUDENTS TO PREPARE FOR CAREERS IN ENGINEERING: Students can major in physics and pursue graduate school in engineering, or students can participate in a joint program between Colgate and an affiliate undergraduate engineering school.

Students may spend three years at Colgate and two at an engineering school (the 3-2 plan) to earn bachelor’s degrees from both institutions. Students may also be eligible to continue study for a master of science (MS) degree, which can sometimes be completed in as little as one additional year after earning the bachelor’s degree in engineering. A pre-engineering adviser works closely with interested students on course selection and career plans.

Colgate has cooperative agreements with Columbia University, Rensselaer Polytechnic Institute, and Washington University (St. Louis).

Prerequisites for admission to engineering schools vary among schools and fields of study; therefore, it is necessary to indicate an interest in pre-engineering to the physics faculty as soon as possible.

RELATED COLGATE COURSES

- Electronics
- Computational Mechanics
- Intro to Electricity and Magnetism
- Quantum Mechanics
- Thermodynamics and Statistical Mechanics
“The pre-engineering program lets the student get the best of both worlds: a broad liberal arts background followed by specific engineering training.

In addition, some of the benefits of a liberal arts education can really put the student ahead once in an engineering job. The ability to write well and think critically, in particular, are skills that are often lacking in young engineers since the training for their disciplines needs to be so extensive.”

— Kenneth Segall, associate professor of physics
CAMERON GILBERT ’11

Major: Physics
Postgraduate education: Mechanical engineering PhD candidate, Columbia University

“My study of physics at Colgate more than prepared me for my transition to engineering at Columbia. I came to the program with a firm grasp of the science behind the engineering — the ‘why’ behind the ‘how.’ Additionally, my study of philosophy, specifically the art of learning, was incredibly useful in understanding what I did and did not know, and how to approach the task of filling the gap. However, the most important skill I brought from Colgate was the ability to write and communicate to others.”

“To be successful, you need to have more than just great ideas — you need to be able to explain those ideas to others.”
— Cameron Gilbert ’11