

Pre-Engineering

HARTWICK COLLEGE
Know the Facts.



The Hartwick Difference

“I think I want to be an engineer when I graduate from college, but I’m not really sure.” Does that sound like you? If so, Hartwick’s pre-engineering program may be the best choice for you. It allows you to try out other majors, such as physics, chemistry, computer science, even English or history, while still remaining on track for an engineering degree.

What is the difference between an engineer and a scientist?

One way to explain the difference between engineers and scientists in a few words is that an engineer asks “How does it work?” while a scientist asks “Why does it work?” That is, a scientist is more concerned with understanding nature at a fundamental level, while an engineer is more interested in applying that knowledge to design a better machine. Of course, that’s an oversimplification, but it captures the basic difference. Quite often, in industry, scientists and engineers work together in a team.

Why should I choose to enroll in Hartwick’s pre-engineering program?

Our pre-engineering program is meant for students who aren’t quite sure they want commit to a major in engineering at an engineering college. If you’re absolutely sure of a career in engineering, an engineering college is probably the best choice for you now. For others, our pre-engineering program will prepare you for an engineering degree while allowing you to try out other Hartwick programs. That way, you’ll stay on track for an engineering degree, while also having a Hartwick major as another option. Students planning to take part in the pre-engineering program must sign up for the appropriate courses as soon as possible. Missing a course may prevent you from completing the program in four years.

www.hartwick.edu/catalog

What exactly is the pre-engineering program at Hartwick?

Students in the pre-engineering program study at Hartwick for four years before applying to cooperative programs at Clarkson University or Columbia University. Students choose a Hartwick major and fulfill all requirements for that degree, as well as Hartwick’s general-education requirements (with a few minor exceptions). To prepare for an engineering college, you’ll need to take specific courses in basic math and physics, as well as others geared toward the type of engineering you decide to pursue. If you decide not to continue the pre-engineering program, you will graduate with your Hartwick major in three (three-year degree program) or four years.

You will have a pre-engineering advisor and a major advisor who will help you with your academic and career paths. You should review your program with both advisors. You will graduate from Hartwick with the education necessary to continue toward a master of science in engineering in an additional two years.



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preengineering](http://www.hartwick.edu/preengineering)

For more information, contact
the Office of Admissions
at 607-431-4150 or
888-HARTWICK (888-427-8942).

For specific inquiries, contact
Larry Nienart, Professor of Physics
at 607-431-4737 or
nienartl@hartwick.edu.

What courses must I take at Hartwick?

Students must take the same Liberal Arts in Practice courses required of every other Hartwick student. Most students in the program choose to major in physics, chemistry, mathematics, or computer science, providing the best preparation for later studies in engineering. All students must take three terms of calculus and a course in differential equations, two terms of general chemistry, and two terms of physics. In addition students must take a course in computer science and a course in economics. Certain engineering programs require additional courses.

What about grades?

Students must maintain at least a B average (3.00) while at Hartwick. You should earn grades of A or B in most or all of your math and science courses. In addition, you must have good work habits, as judged by the pre-engineering advisor.