



BUFFALO STATE
The State University of New York

ENGINEERING TECHNOLOGY

FOR PROSPECTIVE STUDENTS



The **DEGREE** is **ENGINEERING TECHNOLOGY**;
The **CAREER** is **ENGINEERING**.™

ENGINEERING TECHNOLOGY: THE VALUE OF PRACTICE-ORIENTED ENGINEERING EDUCATION

Engineering Technology (ET) education as a pathway to an engineering career:
What does it offer?

THE VALUE TO STUDENTS

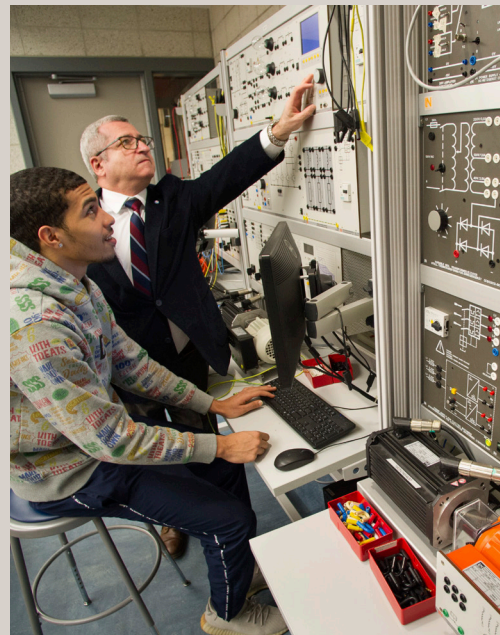
- An emphasis on practice-based learning via hands-on laboratories using state-of-the-art equipment
- Examining and solving “real-world” problems in the process of learning engineering
- Learning from faculty who are actively engaged with local, cutting-edge technology industries
- Internships opportunities with local industry via faculty connections
- Recognition of and accepting workforce experience as a component of the educational curriculum

THE VALUE TO INDUSTRY

- Engineers that understand the key facets of problem solving in a “real world” environment
- Engineers familiar with the capabilities AND limitations of state-of-the-art technology
- Engineers that can identify and implement practical solutions using available technology
- ET programs can easily adapt curricula to support specialized needs of local industry
- ET faculty involvement with local industry opens opportunities for specialized university support to those industries

THE VALUE TO ACADEMIC INSTITUTIONS

- ET faculty involvement with local industry enhances the institution’s reputation in the community
- ET faculty involvement with industry can lead to development support for the institution
- The ability to credit workforce experience increases enrollments by non-traditional students
- Articulations with community colleges and technical schools increases enrollments





ENGINEERING TECHNOLOGY EDUCATION AS A PATHWAY TO AN ENGINEERING CAREER

What does an Engineering Technology degree offer you as a prospective student?

Before answering that question it is informative to consider the career opportunities that dominate the job market in the USA today. One cannot watch the news, read a newspaper, or scan a current events publication without learning that industry's demand for talent today is concentrated in what are termed STEM fields, where STEM means science, technology, engineering, or math. While STEM-related fields encompass a wide range of studies, central among those is the study of engineering, where in broad terms engineering can be defined as the practice of applying math, science, and technology to address issues important to the society and environment in which we live.

If that kind of career is what interests you, a 4-year degree in engineering technology is one of the two major avenues to a career in engineering, the other being a 4-year degree in traditional engineering. Both are appropriate paths to the engineering profession, but the key question is..."which is the better choice for you?" To help you answer that question, here are some things to consider:

Which of these better describes you as you study and learn:

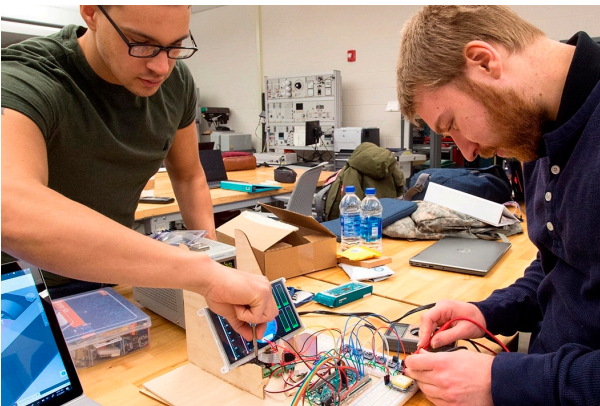
- Are you most comfortable reading a text or reference document, reflecting on its meaning, using mathematical models to represent what you read, and projecting how that information can be projected to other situations?
- Conversely, do you routinely wonder how things work, like to take things apart to see how they work, do experiments to see what happens, work on your car, or just in general tinker with things?

If the first describes you, a traditional engineering program may suit you best. If the latter is you, engineering technology may be your better choice. Here's why:

- A key facet of engineering technology programs is laboratory explorations. Essentially all technical studies are accompanied by lab exercises in which students learn to operate state-of-the-art scientific and technical equipment and to appreciate its capabilities and limitations. In comparison, engineering programs put much less emphasis on laboratory work.
- In lieu of laboratory work, engineering programs emphasize study of the more theoretical concepts in math and science, as appropriate to intense, detailed analytical modeling of machines and the world. Engineering technology, on the other hand, focuses on how math and science methods and tools can be used to identify practical uses of available technology to solve real-world problems, i.e., to help answer why things work and to identify ways to make them work better.

Finally, engineering technology's emphasis on lab work creates an additional advantage to those who may have work experience in a technical area or have had technical training in other institutions such as the military. Because much of that type of experience can substitute for lab work in the educational context, students entering with that background can often accelerate their time to graduation.

Clearly, these explanations cannot answer all the questions you may have about the advantages of an engineering technology course of study, but hopefully it is sufficient to encourage you to pursue the question further. To that end, the best course of action is contact us (our information is below).



Buffalo State University
Engineering Technology
1300 Elmwood Avenue
Technology Building 124
Buffalo, NY 14222
716.878.4411

Visit us on the web: engineeringtechnology.buffalostate.edu