

**Selecting Your Career Path in the School of Engineering and Engineering Technology
at
Penn State Behrend**

The School of Engineering and Engineering Technology at Penn State Behrend is unique in its breadth of degree programs in engineering and engineering technology. This means that our degree programs accommodate a broad range of student learning styles and provide a wide range of career choices. Furthermore, we have a collaborative environment where faculty and students from different programs frequently work together on multi-disciplinary design and research projects. Finally, graduates of all of our programs have excellent career opportunities.

As a prospective student, you will need to ultimately select a major field of study. When selecting your academic major you need to consider three important facets:

- *Your interests.* What do you like to do and find interesting?
- *Your skills.* What are you good at doing?
- *The career opportunities.* Are there interesting job opportunities available to you that match your skills and interests? Resources for exploring engineering career opportunities are the Alumni Success Stories on the School of Engineering and Engineering Technology website (www.pserie.psu.edu/engineering) and the Sloan Career Cornerstone Center (www.careercornerstone.org).

If you can find a good intersection of these three facets, it will increase the likelihood of your long-term success. The following table provides a general overview of the distinctions of the engineering and engineering technology degrees at Penn State Behrend.

	Penn State Behrend Engineering	Penn State Behrend Engineering Technology
Student Profile	Students tend to consider themselves as problem-solving innovators who would like to design and develop new products and systems. Appeals to students who like to deal with the theoretical and abstract issues necessary for planning, designing, and creating new products and systems.	Students tend to consider themselves as problem solvers and implementers who would like to be involved in product design and the application of new technologies. Appeals to students who like to deal with the practical issues necessary for implementing, producing, and realizing new products and systems.
Classroom and Laboratory Experience	Engineering courses occur throughout curriculum, but are concentrated later in the curriculum. These courses build on the base of mathematics and science. Design and applications are integrated into lecture and laboratory course work. The curriculum has an emphasis on engineering design and theoretical issues that are applicable to a broad range of problems. The programs culminate in a senior design experience.	Engineering technology courses occur in every semester of the program with a higher concentration of technical courses in the first two years than in an engineering program. There is an intensive laboratory and application focus, with moderate emphasis on theory and the design process. The design focus is on complex problems utilizing state of the art technologies and solution methods. The programs culminate in a research, senior design, or industrial project experience.
Mathematics Component of the Curriculum	Students typically start in a traditional calculus course, culminating in vector calculus and differential equations. Other courses may include matrices, probability and statistics, and discrete mathematics depending upon the major selected.	Students typically start in algebra- and trigonometry- based technical mathematics. The math sequence takes students through intermediate calculus and differential equations with an emphasis on engineering technology applications.
Science Component of the Curriculum	Requires two or three physics courses (8-10 credits) that are calculus-based and four credits of college chemistry.	Requires one or two physics courses (4-8 credits) that are algebra- and trigonometry-based and four credits of college chemistry.

Career Paths	Engineers and engineering technologists often work side-by-side to develop new products, processes, services, and systems. Their career paths can overlap as there are a wide variety of opportunities available in business and industry for both. Please visit www.pserie.psu.edu/engineering to obtain more information on success stories of Behrend alumni and their careers.	
	<p>Example engineering career paths include, but are not limited to:</p> <ul style="list-style-type: none"> • Complex technical analyses Design and development Research • Test and evaluation • Manufacturing • Management and supervision 	<p>Example engineering technology career paths include, but are not limited to:</p> <ul style="list-style-type: none"> • Design and development • Manufacturing • Test and evaluation • Field service engineering • Technical Sales • Management and supervision
Graduate School Opportunities	<p>Graduate school opportunities include science-based programs such as Master of Science (M.S.) and doctoral (Ph.D.) degree programs. Graduates also pursue professional graduate program opportunities such as Masters of Engineering and Masters of Business Administration (MBA) programs.</p> <p>Graduate school opportunities include professional graduate program opportunities such as Masters of Engineering and Masters of Business Administration (MBA) programs. Science-based programs, such as Master of Science (M.S.) and doctoral (Ph.D.) degree, are possible, but students may need to take additional courses depending on the graduate school and program they anticipate entering.</p>	
Professional Registration	<p>Graduates are eligible for registration in all states.</p> <p>Graduates are eligible for registration in many states, including Pennsylvania</p> <p>The process typically requires successful completion of the Fundamentals of Engineering and the Professional Engineers examination. A certain number of years of professional experience are required before taking the Professional Engineers exam.</p>	