



## Academy Overview: Industry and Engineering

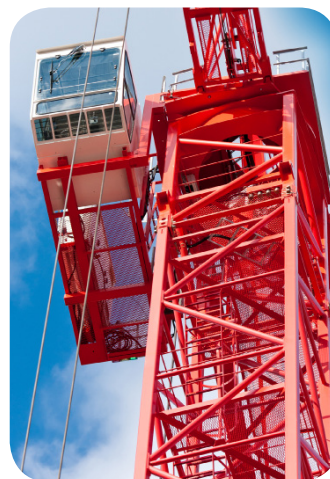
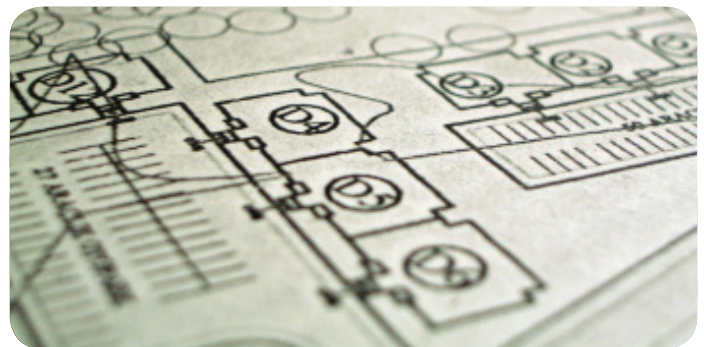
In this academy the students may choose between pre-engineering and drafting on campus or the industrial pathway which includes thirteen programs all held on the Bryant Career campus. Major units of instruction at Bryant Career Technical Center include personal safety, construction skills in carpentry, plumbing, wiring, welding, engine performance, horticulture and cosmetology. Industry and Engineering Academy students learn engineering or drafting applications or a trade from a choice of thirteen programs. Completers in this academy can be certified in NCCER which will help them when seeking a job in their field.

Students choosing to enter the engineering pathway should realize the close relationship of mathematics and science to the engineering and technology disciplines and expect to regularly apply mathematics and scientific principles throughout the courses. They enjoy challenging curricula involving practical applications of engineering principles and technological literacy.

Knowledge gained by students in this pathway includes science and mathematics principles applicable to engineering and engineering-related careers.

In the Industrial pathway students enjoy technical, challenging curricula and attention to detail in daily work tasks. This pathway provides a safe and appropriate setting for student exploration and achievement. Students gain knowledge and skills through an active, structured, and stimulating environment coordinated with simulated workplace learning experiences.

The Academy of Industry has 13 programs all held at the Bryant Career Technical Center. Buses take the students to and from their two hour classes daily. This pathway provides a wide range of opportunities in a variety of occupational areas blending academic, occupational and life skills. Leadership activities, co-curricular opportunities and employability skills are emphasized.



## Course Sequences

Grade	Engineering	Drafting	Bryant Center
10th	Foundation of Engineering	Introduction to Drafting	Any Industry Course
11th	Applications of Engineering	Intermediate Drafting	Any Industry Course
12th	Engineering Systems; Research and Design	Adv. Drafting; Advanced Architectural Design	Any Industry Course

## Course Descriptions

---

### Foundations of Engineering

This course is designed to offer an overview of engineering profession and fundamental skills utilized in general engineering. Students investigate various engineering disciplines and related career paths.

### Engineering Research and Design

This course enables student to make informed career choices through study and application of mechanical, electrical, and other engineering systems. Students conduct research and design engineering projects to enhance their abilities and expand their interest in the field of engineering.

### Engineering Systems

This course is designed to explore systems involved in the engineering research and design process. Algebra 2 and trigonometry are required for entrance into this course. Topics include fluid, thermal, mechanical, and electrical systems.

### Introduction, Intermediate and Advanced Drafting

These courses introduce then develop the students' knowledge regarding the use of drafting design practices and procedures. Students expand their ability to illustrate more complex objects as they progress. The advanced class is for students who are interesting in engineering and related drafting areas and a more in-depth study of mechanical design.

### Introduction to Architectural Design

This course introduces students to the basic terminology, concepts, and principles of the architectural design field. Students are introduced to various careers involving architecture and principles of architectural design.