ENGINEERING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE

Program Information

If you enjoy working on a project from initial plans to completion and want to work in a growing field, then our Engineering Technology degree might be a great fit for you.

San Jacinto College's Associate of Applied Science (AAS) in Engineering Technology purpose is to provide students with a fundamental, insightful, and practical-based education centered around the knowledge, skills, and abilities of existing and new developments emphasizing the application of specific engineering techniques. Graduates will develop the theoretical and practical understanding of the safety, processes, systems, tools, and techniques necessary to construct, refine, operate, and maintain an engineering design.

The differences between engineering and engineering technology are not always obvious. Engineering technicians apply basic engineering principles and technical skills to support engineers engaged in various projects. This field includes multiple engineering support functions for research, production, operations, and applications to specific engineering specialties calling for the practical application of science, math, and engineering to many problems. Engineering technicians and technologists work in partnership with engineers or scientists to bring humanity-benefitting designs from the realm of pure theory into reality, developing improvements to existing processes or creating entirely new technologies.

Though engineering technicians work alongside engineers, they have markedly different responsibilities. An engineering technician works alongside a qualified team of engineers and technologists to ensure all equipment used to bring a design to life remains functional and working. Specific duties include collecting materials, running tests, recording data, providing all available equipment, and working throughout the development process. Engineers tend to focus on the theoretical aspects of mathematics, science, and engineering principles. Their process revolves around identifying solutions to real-world problems and conducting the analysis needed to confirm it is a viable idea. Engineers must obtain a bachelor's degree or higher for employability and may require additional licenses and certifications to advance. In contrast, engineering technicians must obtain a certificate, associate degree, and industry certifications to advance.

At San Jacinto College, the engineering technology curriculum will cover topics in:

- General Engineering
- Safety and Tools
- Electricity/Electronics
- Material Science/Composites
- Computer Aided Design
- Additive and Subtractive Manufacturing
- Quality Assurance/Reliability

Career Opportunities

Graduates are prepared to become engineering technicians working in a wide range of fields such as aerospace, aviation, phones, highway and bridge construction, manufacturing systems, piping systems for chemical plants, computers, and even toy making.

The need for qualified engineering technicians is greater than ever. As various types of engineering projects get off the ground, the demand grows more every year. According to the Bureau of Labor Statistics (BLS) and JobsEQ, mechanical engineering technologists and technicians will enjoy a national job growth of 6% between 2020 and 2030.

Earning Potential

Aerospace Engineering and Operations Technologists and Technicians: $139,463[1] per year

Electrical and Electronic Engineering Technologists and Technicians: $71,436[1] per year

Industrial Engineering Technologists and Technicians: $83,998[1] per year

Mechanical Engineering Technologists and Technicians: $65,459[1] per year

[1] Source: texaswages.com (http://texaswages.com/), median salary Gulf Coast region, 2023

For more information, students may contact Department Chair Roger Watkins, at roger.watkins@sjcd.edu or 281-929-4603.

Campus

South Campus