What’s the Difference Between Engineering and Engineering Technology?

**Engineering** is a profession in which knowledge of mathematics and science is applied with judgment to solve practical problems for the benefit of society. Engineers are involved in such diverse work functions as research and development, design of new products and processes, construction and operation of facilities, and management.¹

**Engineering technologists** must have knowledge of the materials and equipment needed to design, construct, operate and maintain technical products. They often estimate project costs, prepare work schedules and suggest ways to improve productivity. For instance they may perform computer analysis, provide measurements, and collect data. They identify safety and environmental concerns, and they specify ways to eliminate or reduce potential problems. Because they often coordinate people and assist with managing projects, technologists must understand decision-making strategies and problem-solving methods.²

### The Engineering/Technology Spectrum

![Diagram showing the spectrum of engineering and engineering technology disciplines]

Engineering and engineering technology majors are concerned with the full range of technical issues from design, development & theory through construction & operation. However, the engineering majors place more emphasis on the advanced design, development, technical management and theoretical end of this spectrum; while engineering technology majors focus on the manufacturing, routine design, construction and operation end.

Because of this difference the engineering majors requires a significantly higher level of training in mathematics. IPFW electrical and computer engineers earn a minor in mathematics automatically. IPFW civil and mechanical engineering majors can earn a minor in mathematics by taking one additional mathematics course.

### Engineering and Engineering Technology Careers

**Two Different (but overlapping) Paths**

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¹ Purdue University Freshman Engineering Brochure
² Junior Engineering Technology Society