

Careers for Graduate with a Bachelor of Science in Electrical Engineering

A Bachelor of Science degree in electrical engineering specifically prepares graduates for a career in the electrical engineering field. Electrical engineers are responsible for the creation of electric power, electronic circuits, computers, electromagnetic and optical systems, solid state electronic materials, electronic communication systems, signal processing systems, control systems, and biomedical devices. In power engineering, electrical engineers solve problems associated with the generation, transmission and distribution of electricity as well as the design of related devices. Electrical Engineers that work as electronic engineers are responsible for the design and test of electronic circuits in electronic products such as radios, cell phones, computers and medical equipment. Electrical engineers in solid state electronics design the manufacturing processes that fabricate micro and nano-devices such as the components used in sensors or integrated circuits.

In computer engineering, electrical engineers apply principles from electrical engineering and computer science to the design and analysis of all hardware and software for a computer system. Electrical engineers in electromagnetism design products based on electromagnetic properties which include antennas, high frequency electronics and optical systems lasers and fiber optics. Electronic communication engineers design systems such as radios, televisions, and cell phones, that require the transmission and reception of information across a channel such as a coax cable, optical fiber or free space.

Signal processing engineers develop mathematical algorithms for systems that process and interpret signal information which includes speech recognition systems, noise canceling headphones and GPS systems. Electrical engineers that design automatic control systems such flight controllers, automobile cruise controllers, and robotics use mathematics to model dynamic systems and then use these models to design controllers that control these systems to behave in a desired manner. A Bachelor of Science degree in electrical engineering can also help graduates find work in other careers such as patent law.