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.