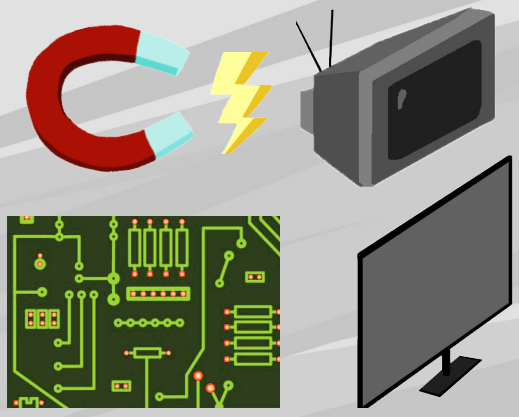
ELECTRICAL ENGINEERING

Stony Brook University
College *of* Engineering
and Applied Sciences

Electrical engineers design systems based on the application of electricity and magnetism. They use their knowledge to build electrical systems and components that are used everywhere in our daily lives. Electrical engineers are very inventive in pushing existing technologies to something better.



Electrical engineers use their knowledge to build the technologies that surround us. Smart phones, tablets, robots, and aircrafts cannot run without components built by electrical engineers. High definition TVs would not be possible without the vision, creativity, and practicality of electrical engineers. So is the case with antennas for sending and receiving communication signals, as well as with the machines that are used in medicine for diagnosis. Electrical grids that bring electrical power to our homes are designed, built and maintained by electrical engineers.

Pre-college preparation

- Physics
- Math

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In our everyday lives, we are surrounded by electromagnetic waves. If these electromagnetic waves hit objects, they turn into heat, and their energy is wasted. Some of our professors want to invent ways of applying the wasted energy to something useful. They work on exploring possibilities of using this energy for powering implanted devices in our brains. The devices will be able to stimulate neurons and record their signals, and eventually be exploited for curing brain diseases like Alzheimer's and Parkinson's.

URL: http://www.stonybrook.edu/commcms/electrical