

El E 414: Biomedical Electronics

Electrical Engineering

This course helps biomedical engineers understand the basic analog electronic circuits used for signal conditioning in biomedical instruments. It explains the function and design of signal conditioning systems using analog ICs — the circuits that enable crucial medical applications. The course demonstrates how op amps are the keystone of modern analog signal conditioning system design and illustrates how they can be used to build instrumentation amplifiers, active filters, and many other biomedical instrumentation systems and subsystems. It introduces the mathematical tools used to describe noise and its propagation through linear systems.

1 Credit

Prerequisites

- [El E 351: Electronics Circuits I](#)
- Pre-Requisite: 24 Earned Hours

Instruction Type(s)

- Lecture/Lab: Lecture/Lab for El E 414

Subject Areas

- [Electrical and Electronics Engineering](#)
- [Bioengineering and Biomedical Engineering](#)

