BIEN 200. INTRODUCTION TO BIOENGINEERING.

Credits: 2

Offered by: Bioengineering (Faculty of Engineering)

Terms offered: Fall 2025

View offerings for Fall 2025 in Visual Schedule Builder.

Description

Introduction to bioengineering. Introduction to engineering calculations. Physical foundations of bioengineering. Introduction to conservation laws. Fundamentals of conservation principles. Conservation of mass, energy, charge and momentum. Mechanical, chemical, electrical, and thermodynamic driving forces in biological systems. Design principles of biological systems. Computational foundations of bioengineering. Multi-scale modeling of cells and organs. Bioinformatics. Bioengineering applications in life sciences, health sciences, and material sciences. Ethical and regulatory considerations in bioengineering.