

ECE 601: FOUNDATIONS OF BIOLOGY IN ENGINEERING

Fall 2019

Course Description and Aims

This biomedical engineering core course focuses on equipping students with the foundational knowledge in human biology through a problem-solving oriented treatment of biological phenomena at the human physiology level. The major aim of this course is to develop students' literacy in human biology and to show them how various physiological phenomena can be analytically explained and justified with numbers.

Teaching Staff

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Course Learning Outcomes

By the end of this course students should be able to demonstrate a threshold level of mastery of the following learning outcomes:

1. Describe foundational biology principles at the human physiology level
2. Identify various factors that regulate physiological operations
3. Describe biology knowledge from a quantitative analysis perspective

Course Prerequisites

Background in undergraduate-level circuit analysis (ECE 140 and 240, or equivalent) is preferred.

Grade Breakdown

Assessments & Interim Assessments (50%), Final Exam (50%)

Textbook

Costanzo. *Physiology*. 6th Ed. Elsevier, 2018.