BME 511: Computational Biomechanics

Biomedical Engineering

This course will explore the integration between computational methodologies and biomechanical principles. Topics covered include solid mechanics, fluid dynamics, finite element method, biomedical imaging and image processing. Through this course, students will develop a comprehensive understanding of how computational techniques can be applied to analyze and model biological tissues, under both normal and disease conditions. Both theoretical foundations and practical applications will be emphasized to equip students with a solid grasp of the role of computation in biomechanics.

3 Credits

Prerequisites

- Prerequiste: Junior standing (60 hr).
- Prerequisite: Engr 312 or graduate standing

Instruction Type(s)

- Lecture: Lecture for BME 511

Subject Areas

- Bioengineering and Biomedical Engineering