BME 411: Tissue Mechanics

Biomedical Engineering

This course will delve into the fundamental principles of continuum mechanics and gradually progress to advanced concepts, all within the context of tissues and their behavior. From understanding the continuum kinematics and material symmetry to formulating constitutive equations and exploring specific tissue types such as bone, cartilage, and ligaments, this course will equip students with a profound knowledge of how biological tissues respond to mechanical forces. Practical applications, including modeling poroelastic and electrical effects in soft tissues, will prepare students for real-world challenges in fields such as medical engineering and biomechanics.

3 Credits

Prerequisites

- Pre-Requisite: 24 Earned Hours
- Prerequisite: BME 311 or Engr 312

Instruction Type(s)

- Lecture: Lecture for BME 411

Subject Areas

- Bioengineering and Biomedical Engineering