

# BME 555 : BioMEMS and Tissue Microengineering

This course covers microscale biological and physical phenomena and state-of-the-art techniques to measure and manipulate these processes. Topics include scaling laws, microfabrication, machining three-dimensional microstructures, patterning biomolecules, and designing and building microfluidic devices. We will cover various biomedical problems that can be addressed with microfabrication technology and their associated engineering challenges, with special emphasis on applications related to quantitative biology, tissue microengineering, controlling the cellular microenvironment, and clinical/diagnostic lab-on-a-chip devices.

**Department**

Biomedical Engineering

**Credits** 3.0