

BIOMEDICAL ENGINEERING (BME)

BME 505 Intro to Biphy Measurements **3 Credit hours**

Biomedical Engineering involves measurement of physiological processes in living organisms. An understanding of the variety of instruments used and the limitations are introduced.

Grade Mode: Normal Grading Mode

BME 510 Modeling & Simul of Biosystems **3 Credit hours**

Modeling and simulation and statistical analysis of physiological systems and their interactions with artificial implants, such as Lynch coil.

Grade Mode: Normal Grading Mode

BME 605 Mech & Performance Bio Mtrls **3 Credit hours**

Application of biomaterials to live cells and animal models. Biocompatibility failure modes of applied biomaterials in live cells, animal models and organoid platforms.

Grade Mode: Normal Grading Mode

BME 610 Biomedical imaging **3 Credit hours**

Analysis of RNA-seq datasets and application of fluorescent and bright-field microscopy using postmortem tissues and specimens from live patients

Grade Mode: Normal Grading Mode

BME 620 Nanomedicine **3 Credit hours**

This course focuses on the fundamentals properties, synthesis and characterization of nanomaterials, coupled with their applications in nanomedicine.

Grade Mode: Normal Grading Mode

BME 660 Mechanics of Biofluids **3 Credit hours**

Introduction to the fundamentals of fluid mechanics and their application to biological, cardiovascular, respiratory and bio-fluid systems.

Grade Mode: Normal Grading Mode

BME 680 Nanofab with Soft Materials **3 Credit hours**

Fabrication of soft materials. Nanofabrication processes and nano-system product. Fundamentals associated with chip fabrications

Grade Mode: Normal Grading Mode

BME 682 Special Topics **1-4 Credit hours**

This course will cover a specific area with in MSE/BME. Area will depend on the faculty expertise and student's interest.

Grade Mode: Normal Grading Mode

BME 683 Special Topics **1-4 Credit hours**

This course will cover a specific area of interest within MSE/BME. Area will depend on faculty expertise and student's interest

Grade Mode: Normal Grading Mode