

# BME-Technical Elective Course Concentration

## Biomedical Instrumentation and Robotic

- *Artificial Neural Networks*
- *Principles of Medical Device Design*
- *Control Systems*
- *System Modeling and Control*
- *Introduction to Machine Learning*
- *Computer Aided Technical Drawing*
- *Medical Robotics*
- *Introduction to Image Processing*
- *Introduction to Computer Vision*
- *Introduction to Deep Learning*

## Biomaterials and Nanomedicine

- *Introduction to Material Science*
- *Micro and Nanofabrication*
- *Polymeric Biomaterials*
- *Tissue and Genetic Engineering*
- *Cancer*
- *Thermodynamics of Biomolecular Systems*
- *Nanobiotechnology*

## Biophotonics

- *Introduction to Optics*
- *Biomedical Optics*
- *Introduction to Image Processing*
- *Introduction to Machine Learning*

## Computational Biology

- *Protein:Structure and Function*
- *Introduction to Computational Biophysics*
- *Introduction to Omics*
- *Bioinformatics*
- *Cancer*
- *Thermodynamics of Biomolecular Systems*