Electrical Engineering: Biomedical Applications of Electrical Engineering

**EEBM 6373 (BMEN 6373)** Physiology and Immunology for Engineers (3 semester credit hours)
This course provides an introduction to human physiology for engineers. Topics include antibodies, antigen-antibody interactions, HLA 1 & 2, complement, T and B cells, immunoregulation, tumor Immunobiology, basic and applied neuroscience, sensory systems, and neural interfaces. (3-0) Y

**EEBM 6374 (BMEN 6374)** Genes, Proteins and Cell Biology for Engineers (3 semester credit hours)
This course provides an introduction to principles of modern molecular and cellular biology for engineers and other non-life scientists. Topics include genes, protein structure and function, organization of cells and cellular trafficking. (3-0) Y

**EEBM 6380 (BMEN 6380)** Introduction to Cellular Microscopy (3 semester credit hours)
Image formation, diffraction, labeling techniques, fluorescence and image processing techniques will be introduced. (3-0) R

**EEBM 6381 (BMEN 6381)** Advanced Concepts in Microscopy (3 semester credit hours)
Continuation of **EEBM 6380**, with emphasis on advanced approaches such as vectorial diffraction, stochastic aspects of image formation and analysis. Prerequisite: **BMEN 6380** or **EEBM 6380** or instructor consent required. (3-0) R

**EEBM 7V87** Special Topics in Biomedical Applications of Electrical Engineering (1-6 semester credit hours)
May be repeated for credit as topics vary (9 semester credit hours maximum). ([1-6]-0) R