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