RADIOLOGY (RADI)

RADI 850 INTRODUCTION TO BIOMEDICAL IMAGING AND IMAGE ANALYSIS 3 Credit Hours

The principles and applications of biomedical imaging and image analysis technologies employed in current biomedical research. The first part of the course will provide the students the underlying principles of biomedical imaging including the basic physics and mathematics associated with each modality including X- ray CT, SPECT, PET, and MRI. The second part of the course provides the descriptions of the methods currently being used for biomedical image processing and analysis. Concepts of digital images and image enhancement are first introduced. Advanced image analysis technologies such as image segmentation, registration and morphological analysis will then be described.
Prerequisite: An undergraduate or graduate level course in physics or mathematics, an undergraduate or graduate level course in mammal anatomy or physiology, and permission of instructor.
Typically Offered: FALL