BME 532	Biomedical Imaging

Catalog Data	This course is designed to provide students with a working knowledge of the theoretical and experimental principles underlying the major medical imaging systems including CT, MRI, Ultrasound, and X-ray.

Course Total Credit Hours:	3	Lecture:	3	Laboratory:	-	Project	-
Prerequisites:	Graduate Standing and consent of instructor						
Course Coordinator:	Biomedical Engineering Faculty						

Textbooks

1. Class notes
2. Introduction to Biomedical Imaging, Andrew G. Webb. December 2002, Wiley-IEEE press.

References

The Essential Physics of Medical Imaging (2nd Edition), J. T. Bushberg, J.A. Seibert, E.M. Leidholdt Jr., J. M. Boone. November 2001.

Goals	1. To expose students to the world of biomedical imaging with emphasis on principles, approaches and application of modern imaging systems, including modern biomedical imaging modalities of x-ray imaging and computed tomography (CT), ultrasound, and magnetic resonance imaging (MRI) 2. This course will also focus on concept and application of image quality, image reconstruction, and image processing in biomedical imaging fields

Projects

Biomedical image simulation and reconstruction

Major CAD Packages

MATHLAB and Simulation packages

Last Review:	Spring Semester 2008	Signature:	