

## Courses available to make the necessary 18 imaging credits

<b><i>Imaging Methods (Required: at least 1 course, up to 8 credits)</i></b>		
Principles of Magnetic Resonance Imaging	BME 7710	4
Optics Lecture	PHY 5340	3
Optics Lab	PHY 5341	2
Introduction to Radiological Physics	ROC 5010	4
Physics in Medicine	ROC 6710	3
Imaging Physics I	ROC 7000	4
Imaging Physics II: Nuclear Medicine	ROC 7010	2
Diagnostic Imaging Lab	ROC 7050	2
Advanced Imaging	ROC 7160	2
<b><i>Neuroscience and Imaging (Recommended: 1 course)</i></b>		
MR Imaging of Neurovascular Disease	BME 7720/ PYC 7320	3
Medical Imaging Systems	BME 7730 / ECE7740	3
Fundamentals of Neuroimaging	PYC 7140	3
Imaging and Neurodevelopment	PYC 7515	3
<b><i>Image/Signal Processing (Required: at least 1 course, up to 12 credits)</i></b>		
Introduction to Pattern Recognition	CSC 5860	3
Digital Image Processing and Analysis	CSC 6860	3
Computer Graphics	CSC 5870	3
Computer Graphics II	CSC 6870	3
Artificial Intelligence	CSC 6800	3
Computer Vision	CSC 7860	3
Seminar Topics in Computer Vision and Pattern Recognition	CSC 8860	3
Digital Image Processing	ECE 5690	4
Digital Signal Processing	ECE 5770	4
Pattern Recognition	ECE 7670	4
Advanced Digital Image Processing	ECE 7680	4
<b><i>Math/Physics Background (Required: at least 1 course, up to 12 credits)</i></b>		
Matrix Computation I	ECE 5020/ CSC 6620	4
Mathematical Methods in Engineering	ECE 7030	4
Mathematical Modeling in Impact Biomechanics	ECE/ IE/ ME 7100	4
Statistical Computing and Data Analysis	MAT 5030	3
Numerical Methods	MAT 5100	3
Computer and Mathematical Applications in Biomedical Engineering	BME 5020	4
Partial Differential Equations and Boundary Value Problems	MAT 5220	4
Introduction to Probability Theory	MAT 5700	4
Introduction to Mathematical Statistics	MAT 5800	4
Methods of Theoretical Physics I	PHY 5100	3
Methods of Theoretical Physics II	PHY 7110	3
Electromagnetic Fields I	PHY 6600	3
Electromagnetic Fields II	PHY 6610	3
Electromagnetic Theory I	PHY 7600	3
<b><i>Imaging Seminars (0 or 1 credit accepted)</i></b>		
Seminars in Biomedical Imaging	BME 8710	1
<b><i>Lab Rotations (Required: at least 2 credits, up to 3 credits)</i></b>		
Lab Rotations/Directed Study	BME 7990	2-3