Specialization Courses for MS&E		
Course Name	**Number**	**Dept. (see codes at bottom)**
Nanotechnology	BSC 5936	Bio
Biomaterials and Biopolymers	BME 5105	CBE
Polymer Science and Engineering	ECH 5828	CBE
Structural Characterization of Materials	ECH 5934	CBE
Colloidal Engineering	ECH 5934	CBE
Electrochemical Engineering	ECH 5937	CBE
Chemical and Physical Characterization of Biopolymers	BCH 5745	Chem
Electrochemistry	CHM 5153	Chem
Measurements and Data Analysis in Chemistry	CHM 5175	Chem
Physical and Chemical Kinetics	CHM 5440	Chem
Polymer Characterization I & II	CHM 5454	Chem
Survey of Physical Chemistry	CHM 5530	Chem
Physical Methods	CHM 5681	Chem
Characterization of Materials II: Magnetism and Magnetic Materials	CHM 5717	Chem
Topics in Materials Chemistry II: Nano-and Biomaterials	CHM 5718	Chem
Electronic Materials and Devices	EEL 5930	ECE
Advanced Composite Engineering Topics	EIN 5930	IME
Polymeric Materials Manufacturing and Processing	EIN 5930	IME
Applied Optimization	ESI 5408	IME
Engineering Data Analysis	ESI 5417	IME
Theory of Elasticity	EGM 5653	ME
Composite Materials Engineering	EMA 5182	ME
Mechanical Metallurgy	EMA 5226	ME
Computational Material Physics	EML 4930/5930	ME
Applied Superconductivity	EML 5072	ME
Design using FEM	EML 5537	ME
Continuum Mechanics	EML 5611	ME
Experimental Methods in Nanoscale Science and Engineering	EML 5930	ME
Introduction to Micro- and Nanoscale Science and Engineering	EML 5930	ME
Materials for Energy Systems	EML 5930	ME
Solid Mechanics and Electromagnetics of Continuous Media	EML 5930	ME
Introduction to Advanced Materials:	EML 5930	ME
Condensed Matter Physics I	PHZ 5491	Phy
Condensed Matter Physics II	PHZ 5492	Phy
Applied Computational Science I	ISC 5315	SC
Applied Computational Science II	ISC 5316	SC
Multiscale Modeling of Materials	ISC 5935	SC
Technology Entrepreneurship and Commercialization.	Currently offered as a directed independent study	
Bio = Biological Science		
CBE = Chemical and Biomedical Engineering		
Chem = Chemistry and Biochemistry		
ECE = Electrical and Computer Engineering		
IME = Industrial and Manufacturing Engineering		
ME = Mechanical Engineering		
Phy = Physics		
SC = Scientific Computing		
Updated Aug. 21, 2014		