

**Mechanical Engineering Department**  
**Graduate Course List**  
**Spring 2011 – Spring 2013**

**December 16, 2010**

<b>SEMESTER</b>	<b>COURSE # (HOURS)</b>	<b>COURSE NAME</b>	<b>Pre-Requisites</b>
Spring 2011	MECH 6010 (3)	Compressible Fluid Flow (Khodadadi)	Pr: MECH3020, MECH3030
Spring 2011	MECH 6220 (3)	Virtual Prototyping (Beale)	Pr: MECH3220, MECH3230
Spring 2011	MECH 6310 (3)	Mechanics of Electronic Packaging (Suhling)	Pr: MECH3130, ELEC3810
Spring 2011	MECH 6390 (3)	Fundamentals of the Finite Element Method (Lall)	Pr: MECH3040, MECH3130, MATH2660
Spring 2011	MECH 6510 (3)	Engineering Acoustics (Crocker)	Pr: MATH 2650
Spring 2011	MECH 6610 (3)	Mechanical Vibration (Sinha)	Pr: MECH3140, MATH 2650, MATH2660
Spring 2011	MECH 6970-004 (3)	Design of Feedback Control for Dynamic Systems (Choe )	Pr: TBA
Spring 2011	MECH 6970-014 (3)	Renewable Energy Resources & Applications (Mackowski / Bhavnani)	Pr: ENGR2010 or ENGR2200 or inst permission
Spring 2011	MECH 6970-017 (3)	Advanced Manufacturing Concepts (Payton)	Pr: TBA
Spring 2011	MECH 7410 (3)	Optical Methods in Mechanics (Tippur)	Pr: MECH3130
Spring 2011	MECH 7430 (3)	Optical Properties of Advanced Materials (Thakur)	Pr: MECH6430 or PHYS7200
Spring 2011	MECH 7610 (3)	Advanced Dynamics (Flowers)	Pr: MECH3140
Spring 2011	MECH 7710 (3)	Control Systems Analysis and Design (Bevly)	Pr: MECH3140
Spring 2011	MECH 7970-004 (3)	Design of Automatic Systems (Choe)	
Spring 2011	MECH 7970-009 (3)	Multiscale Contact Mechanics (Jackson)	
Spring 2011	MECH 7970-018 (3)	Advanced Topics in Non Destructive Testing (Raju)	
Fall 2011	MECH 6010 (3)	Compressible Fluid Flow (Khodadadi)	Pr: MECH3020, MECH3030
Fall 2011	MECH 6230 (3)	Friction, Wear and Lubrication (Jackson)	Pr: MECH3030, MECH3130, MECH3230
Fall 2011	MECH 6430 (3)	Basics of Sensor Applications (Thakur)	Pr: MECH3130
Fall 2011	MECH 6710 (3)	Kinematics and Dynamics of Robots (Marghitu)	Pr: MECH3140
Fall 2011	MECH 6810 (3)	Mechatronics (Choe)	Pr: MECH2120, ELEC3810
Fall 2011	MECH 6970-004 (3)	Hybrid and Fuel Cell Systems and Components (Choe)	Pr: TBA
Fall 2011	MECH 7110 (3)	Advanced Fluid Mechanics I (Khodadadi)	Pr: MECH3030
Fall 2011	MECH 7310 (3)	Solid Mechanics (Tippur)	Pr: MECH3130
Fall 2011	MECH 7360 (3)	Mechanics of Composite Materials (Suhling)	Pr: MECH3130
Fall 2011	MECH 7390 (3)	Variational Mechanics (Lall)	Pr: MECH3130
Fall 2011	MECH 7620 (3)	Non-Linear Systems (Sinha)	Pr: MECH3140
Spring 2012	MECH 6210 (3)	Electronics Thermal Management (Bhavnani)	Pr: MECH3040, ELEC3810
Spring 2012	MECH 6220 (3)	Virtual Prototyping (Beale)	Pr: MECH3220, MECH3230
Spring 2012	MECH 6390 (3)	Fundamentals of the Finite Element Method (Lall)	Pr: MECH3040, MECH3130, MATH2660
Spring 2012	MECH 6510 (3)	Engineering Acoustics (Crocker)	Pr: MATH 2650
Spring 2012	MECH 6610 (3)	Mechanical Vibration (Sinha)	Pr: MECH3140, MATH 2650, MATH2660
Spring 2012	MECH 6970-004 (3)	Design of Feedback Control for Dynamic Systems (Choe )	Pr: TBA
Spring 2012	MECH 6970-017 (3)	Advanced Manufacturing Concepts (Payton)	Pr: TBA

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Spring 2012	MECH 7120 (3)	Advanced Fluid Mechanics II	(Khodadadi)	Pr: MECH7110
Spring 2012	MECH 7220 (3)	Convection Heat Transfer	(Knight)	Pr: MECH3040
Spring 2012	MECH 7300 (3)	Fracture Mechanics	(Tippur)	Pr: MECH3230
Spring 2012	MECH 7340 (3)	Inelastic Stress Analysis	(Suhling)	Pr: MECH6300
Spring 2012	MECH 7430 (3)	Optical Properties of Advanced Materials	(Thakur)	Pr: MECH6430 or PHYS7200
Spring 2012	MECH 7610 (3)	Advanced Dynamics	(Flowers)	Pr: MECH3140
Spring 2012	MECH 7710 (3)	Control Systems Analysis and Design	(Bevly)	Pr: MECH3140
Spring 2012	MECH 7970-009 (3)	Multiscale Contact Mechanics	(Jackson)	
Fall 2012	MECH 6230 (3)	Friction, Wear and Lubrication	(Jackson)	Pr: MECH3030, MECH3130, MECH3230
Fall 2012	MECH 6300 (3)	Advanced Mechanics of Materials	(Tippur)	Pr: MECH3130
Fall 2012	MECH 6430 (3)	Basics of Sensor Applications	(Thakur)	Pr: MECH3130
Fall 2012	MECH 6710 (3)	Kinematics and Dynamics of Robots	(Marghitu)	Pr: MECH3140
Fall 2012	MECH 6810 (3)	Mechatronics	(Choe)	Pr: MECH2120, ELEC3810
Fall 2012	MECH 6970-003 (3)	Renewable Energy Resources & Applications	(Mackowski / Bhavnani)	Pr: ENGR2010 or ENGR2200 or inst permission
Fall 2012	MECH 6970-004 (3)	Hybrid and Fuel Cell Systems and Components	(Choe)	Pr: TBA
Fall 2012	MECH 7010 (3)	Advanced Thermodynamics	(Harris)	Pr: MECH3040
Fall 2012	MECH 7130 (3)	Boundary Layer Theory	(Khodadadi)	Pr: MECH7110
Fall 2012	MECH 7240 (3)	Numerical Methods in Heat Transfer	(Knight)	Pr: MATH2662, MECH3040
Fall 2012	MECH 7320 (3)	Continuum Mechanics and Tensor Analysis	(Lall)	Pr: MECH6300
Fall 2012	MECH 7330 (3)	Experimental Mechanics	(Suhling)	Pr: MECH3130
Fall 2012	MECH 7620 (3)	Non-Linear Systems	(Sinha)	Pr: MECH3140
Spring 2013	MECH 6010 (3)	Compressible Fluid Flow	(Khodadadi)	Pr: MECH3020, MECH3030
Spring 2013	MECH 6220 (3)	Virtual Prototyping	(Beale)	Pr: MECH3220, MECH3230
Spring 2013	MECH 6310 (3)	Mechanics of Electronic Packaging	(Suhling)	Pr: MECH3130, ELEC3810
Spring 2013	MECH 6390 (3)	Fundamentals of the Finite Element Method	(Lall)	Pr: MECH3040, MECH3130, MATH2660
Spring 2013	MECH 6510 (3)	Engineering Acoustics	(Crocker)	Pr: MATH 2650
Spring 2013	MECH 6610 (3)	Mechanical Vibration	(Sinha)	Pr: MECH3140, MATH 2650, MATH2660
Spring 2013	MECH 6970-004 (3)	Design of Feedback Control for Dynamic Systems	(Choe )	Pr: TBA
Spring 2013	MECH 6970-017 (3)	Advanced Manufacturing Concepts	(Payton)	Pr: TBA
Spring 2013	MECH 7330 (3)	Experimental Mechanics	(Tippur)	Pr: MECH3130
Spring 2013	MECH 7430 (3)	Optical Properties of Advanced Materials	(Thakur)	Pr: MECH6430 or PHYS7200
Spring 2013	MECH 7610 (3)	Advanced Dynamics	(Flowers)	Pr: MECH3140
Spring 2013	MECH 7710 (3)	Control Systems Analysis and Design	(Bevly)	Pr: MECH3140
Spring 2013	MECH 7970-009 (3)	Multiscale Contact Mechanics	(Jackson)	
Spring 2013	MECH 7970-014 (3)	Conduction and Radiation	(Mackowski)	

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