

Mechanical & Aerospace Engineering Plan C Checklist for Master of Science Degree

Name _____

Student No. _____

This checklist must be completely filled out and signed before the thesis is presented to the Graduate Committee for final signatures. A copy of the checklist must be attached to the Plan C Completion Form when a final signature is requested.

<input type="checkbox"/>	MECHANICAL ENGINEERING FUNDAMENTALS:	MAE 6040	MAE 6410									
<input type="checkbox"/>	Eighteen credits of 6000-level (or above) engineering coursework exclusive of MAE 6930, 6950, 6970, and 6990.											
<input type="checkbox"/>	A minimum of three credits of advanced mathematics selected from: Math 5270, 5410, 5420, 5460, 5760, 6270, 6410, 6420, 6440, 6450, 6470, 6610, 6620, 6640, ECE 6030. (Math 5610,5620,5640,5710 through Spring 07 only)											
<input type="checkbox"/>	Graduate Seminar: 1 credit required, 2 semesters at 0.5 credits											
<input type="checkbox"/>	Fifteen credits selected from one of the following areas or eighteen credits selected from any of two of the areas: Solid Mechanics: MAE 5020,5060,5300,5930,6010,6040,6070,6080,6090,6130,6180, 6550,6800,7040,7050,7080,7380. Dynamics & Control: MAE 5310,5510,5520,5650,6180,6320,6340,6350,6540,7330,7350, 7380,7750, ECE 5320, ECE 5340. Thermal/Fluid Science: MAE 5410,5420,5440,5470,5500,5540,5610,5660,6080,6410,6420, 6430,6440,6450,6460,6480,6490,6500,6530,7580. Aerospace: 5420,5440,5500,5510,5520,5530,5540,5560,5580,6340,6440,6490,6500,6510,6530, 6540,6550,6560,6930, ECE 5230,6240,6650. Manufacturing: 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5680, 5930, 5930, 6620.											
<input type="checkbox"/>	A minimum of 33 credits beyond the BS which may not include a thesis (MAE 6970) but may include up to three credits of Design Project (MAE 6950). MAE 6950 requires a report written to thesis standards.											
<input type="checkbox"/>												
<input type="checkbox"/>	Submission of Program of Study. Date: _____								<i>At least 20 credits must be taken after approval.</i>			
	Submission of Letter of Completion by Department. Date: _____											

=

Semester Graduating: _____ Applicant: _____

Dept. Official: _____ Major Professor: _____

Approved 3/26/07

MAE EMPHASIS REQUIREMENTS:

SOLIDS:

MAE 5020: Finite Element Methods in Solid Mechanics I
MAE 5060: Mechanics of Composite Materials I
MAE 5300: Vibrations
MAE 5930: Fracture Mechanics Solids
MAE 5930: Kinematic/IC Engr
MAE 6010: Finite Element Methods in Solid Mechanics II
MAE 6040: Continuum Mechanics and Elasticity
MAE 6070: Mechanics of Composite Materials II
MAE 6080: Boundary Element Method
MAE 6090: Theory of Plates and Shells
MAE 6130: Structural Dynamics and Seismic Design
MAE 6180: Dynamics and Vibration
MAE 6550: Advanced Structural Analysis
MAE 6800: Advanced Machine Design
MAE 6930: Fundamentals in Elasticity
MAE 7040: Elasticity
MAE 7050: Plasticity
MAE 7080: Advanced Plate and Shell Theory
MAE 7380: Advanced Dynamics and Vibrations

DYNAMICS & CONTROL

MAE 5310: Dynamic Systems and Controls
MAE 5510: Dynamics of Atmospheric Flight
MAE 5520: Elements of Space Flight
MAE 5650: Dynamics of Space Flight
MAE 6180: Dynamics and Vibration
MAE 6320: Linear Multivariable Control
MAE 6340: Spacecraft Attitude Control
MAE 6350: Robotics
MAE 6540: Astrodynamics
MAE 7330: Nonlinear and Adaptive Control
MAE 7350: Intelligent Control Systems
MAE 7380: Advanced Dynamics and Vibrations
MAE 7750: Distributed Control Systems
ECE 5320: Mechatronics
ECE 5340: Mobile Robotics

THERMAL/FLUID SCIENCE

MAE 5410: Design and Optimization of Thermal Systems
MAE 5420: Compressible Fluid Flow
MAE 5440: Computational Fluid Dynamics
MAE 5470: Internal Combustion Engines
MAE 5500: Aerodynamics
MAE 5540: Propulsion Systems
MAE 5610: Hydraulics and Pneumatics
MAE 5660: Transport Phenomena in Manufacturing Processes
MAE 6080: Boundary Element Method
MAE 6410: Fluid Dynamics
MAE 6420: Mechanical Engineering Experiments
MAE 6430: Boundary Layer Theory and Convection Heat
MAE 6440: Advanced Computational Fluid Dynamics
MAE 6450: Thermodynamics
MAE 6460: Conduction Heat Transfer
MAE 6480: Radiation Heat Transfer
MAE 6490: Turbulence
MAE 6500: Potential Flow
MAE 6530: Propulsion Systems
MAE 7580: Advanced Finite Element Anal. in Fluid Mechanics

AEROSPACE

MAE 5420: Compressible Fluid Flow
MAE 5440: Computational Fluid Dynamics
MAE 5500: Aerodynamics
MAE 5510: Dynamics of Atmospheric Flight
MAE 5520: Elements of Space Flight
MAE 5530: Space System Design
MAE 5540: Propulsion System
MAE 5560: Dynamics of Space Flight
MAE 5580: Aircraft Design
MAE 6340: Spacecraft Attitude Control
MAE 6440: Advanced Computational Fluid Dynamics
MAE 6490: Turbulence
MAE 6500: Potential Flow
MAE 6510: Aircraft Dynamics and Flight Simulation
MAE 6530: Propulsion Systems
MAE 6540: Astrodynamics
MAE 6550: Advanced Structural Analysis
MAE 6560: Space Navigation
MAE 6930: Optimal Space Guidance
ECE 5230: Spacecraft Systems Engineering
ECE 6240: Space Environment and Engineering
ECE 6650: Optics I

MANUFACTURING

MAE 5600: Manufacturing Process Planning and Statistical Quality Control
MAE 5610: Hydraulics and Pneumatics
MAE 5620: Manufacturing Automation
MAE 5630: Machining Theory and Applications
MAE 5640: Design for Manufacturability
MAE 5650: Nontraditional and Additive Manufacturing Processes
MAE 5660: Transport Phenomena in Manufacturing Processes
MAE 5680: Manufacturing Planning and Simulation
MAE 5930: Nano Fabrication
MAE 5930: Fracture Mechanics Solids
MAE 6620: Advanced Topics in Metal Cutting