Master of Science in Mechanical Engineering
Program of Study
(Revised May, 2006)

Student Name: _____ Student Number: _____
(Last) (M. Initial) (First)

First Matriculating Semester _____, 200_____

1. **Option**:

   ___ Thesis ___ Non-thesis

2. **Concentration (***select one***)**

   ___ Control ___ Dynamics/Design___ Thermal/Fluid

3. **Remedial courses (not for graduate credit):** The following is a list of recommended undergraduate courses that may help the new graduate students to gain a stronger background in mechanical engineering and to be better prepared for the graduate-level courses. *These courses do not earn graduate credit, and they are optional*. Students may choose to register in any number of these courses for audit or credit.

   _____ CE 242 – Mechanics of Solids
   _____ Math 305 – Differential Equations I
   _____ ME 312 – Thermodynamics II
   _____ ME 350 – Mechanisms
   _____ ME 380 – Design of Machine Elements
   _____ ME 262 – Dynamics
   _____ ME 310 – Thermodynamics I
   _____ ME 315 – Fluid Mechanics
   _____ ME 356 – Dynamic Systems Modeling
   _____ ME 410 – Heat Transfer

4. **Courses to be taken:** (Note: 1. ME530 is required for Control, Dynamics/Design concentrations, and ME575 is required for Thermal/Fluid concentration; 2. Some courses may not be offered before your time of graduation; 3.Graduate courses are those that are listed in the graduate catalog.)

   Hours **Course**

   I. 500-Level ME Courses

   _____ ME 530 – Advanced Dynamics (**Required**)
   _____ ME 532 – Advanced Mechanisms and Synthesis
   _____ ME 540 – Continuum Mechanics
   _____ ME 544 – Theory of Elasticity
   _____ ME 546 – Plates and Shells
   _____ ME 547 – Elastic Stability
   _____ ME 548 – Finite Elements
   _____ ME 550 – Modern Control
   _____ ME 560 – Advanced Vibration with Applications
   _____ ME 563 – Optimal Control
   _____ ME 573 – Advanced Thermodynamics
   _____ ME 575 – Advanced Fluid Mechanics (**Required**)
   _____ ME 580 – Computational Fluid Dynamics
   _____ ME 585 – Convective Heat Transfer
   _____ ME 587 – Intelligent Engineering Systems
   _____ ME 588 – Equilibrium Dynamics
   _____ ME 589 – Radiation Heat Transfer
   _____ ME 599 – Thesis (**Required for thesis option, 1 to 6 hours**)
   _____ ME
   _____ ME
   _____ Subtotal of I

II. 400-Level ME Courses

_____ ME 414 – Gas Dynamics
_____ ME 427 – Knowledge-Based Systems
_____ ME 433 – Fuzzy Logic and Applications
_____ ME 450 – Automatic Control
_____ ME 451 – Digital Control
_____ ME 452 – Vibrations
_____ ME 454 – Robotics-Dynamics and Control
_____ ME 458 – Mechatronics
_____ ME 460 – Nondestructive Evaluation Methods
_____ ME 466 – Digital Control
_____ ME 470 – Stress Analysis and Design
_____ ME
_____ ME
_____ **Subtotal of II**

III. Mathematics

_____ Math 501 – Differential Equations and Fourier Analysis
_____ Math 502 – Advanced Calculus for Engineers
_____ Math 462 – Engineering Numerical Analysis
_____ **Subtotal of III**

IV. Other Graduate Courses

_____
_____
_____ **Subtotal of IV**

4. **Course Summary**

Item		**Planned Hrs.**	**Required Hrs**
ME 500 Level Courses (I)		_____	15
ME 400 Level Courses (II)		_____	
ME Courses	(I+II)	_____	21
Math	(III)	_____	6
Other Courses	(IV)	_____	3
TOTAL (I+II+III+IV)		_____	**30**

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5. **Thesis/Project**

Proposed Topics: _____

Student Signature: _____ **Date:** _____

Advisor Signature: _____ **Date:** _____

Graduate Director Signature: _____ **Date:** _____