

MS in Engineering – Mechanical Engineering Emphasis (Thesis)

Curriculum Checklist

Please refer to the program of study website below as your reference for course selection.

<https://engineering.uga.edu/degree/ms-engineering-mechanical-engineering-emphasis/>

Student Name: _____

Student ID (810/811): _____ First term of enrollment: _____

The MS in Engineering (Mechanical Engineering) under a thesis option requires a minimum of 33 credit hours in the Program of Study.

Subject/ Number		Hours	Title	Semester	Emphasis Course (Y/N)	Graduate only course (Y/N)	Course Sub. (Y/N)
Required Courses	ENGR 8950	1	Graduate Seminar*			Y	
	GRSC 7001	1	GradFIRST Seminar (UGA required)			Y	
Mechanical Area of Emphasis (at least 9 credit hours)							
Elective Graduate only (at least 12 credit hours)							
Research Courses	ENGR 7000	6 (at least)	Master’s Research	List Semesters and Credit Hours:			
	ENGR 7010		Project-Focused Master’s Research	List Semesters and Credit Hours:			
	ENGR 7300	3	Thesis Preparation and Writing	List Semesters and Credit Hours:			
Total Credit Hours (by adding all taken courses above – at least 33 hours+ GradFIRST)			Credit Hours Requirement Guideline				
			1. <u>A minimum of 24 semester hours of coursework</u> , which must include: <ul style="list-style-type: none"> at least 21 hours of graduate-level coursework, including at least 9 hours selected from one of the Mechanical Engineering Emphasis course lists. at least 12 hours from UGA courses open only to graduate students and exclusive of thesis (ENGR 7300, Master’s Thesis) and research (ENGR 7000, Master’s Research, and ENGR 7010, Project-Focused Masters Research) 1 hour of ENGR 8950 Graduate Seminar (*Only up to 1 hours of ENGR 8950 may apply on the Program of Study if the student takes it more than once) 2. A minimum of 6 hours of research (ENGR 7000 Doctoral Research or ENGR 7010 Project-focused Master’s Research). 3. 3 hours of ENGR 7300 Thesis Preparation and Writing.				

	If you need course substitution, please complete and attach course substitution form. Course substitute form can be found at: https://engineering.uga.edu/students/graduate/ms-student-program-milestones/
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Comments:

Major Professor (sign and date): _____ Date

ECAM (Mech, Ag) Graduate Coordinator (sign and date): _____ Date

UGA CENGR M.S. Mechanical Engineering

MECHANICAL ENGINEERING EMPHASIS COURSE LIST

Design, Optimization, and Manufacturing

- BIOE 6720 Human Factors & Ergonomics in Biomedical Device Design
- CHEM 8880 Nanomaterials: Engineering and Characterization
- CVLE(MCHE)(LAND) 6660 Sustainable Building Design
- CVLE(MCHE) 8350 Nonlinear Finite Element Analysis
- CVLE(MCHE) 8640 Advanced Strength of Materials
- ELEE 6210 Linear Systems
- ELEE 6220 Feedback Control Systems
- ELEE 6230 Sensors and Transducers
- ELEE 6235 Industrial Control Systems
- ELEE 6260 Introduction to Nanoelectronics
- ELEE 6540 Applied Machine Vision
- ELEE 8220 Nonlinear Control Systems
- ELEE 8310 MEMS Design
- ENGR 6350 Introduction to Finite Element Analysis
- ENGR 6670 Quality Engineering
- ENGR 6920 Theory of Design
- ENGR 8103 Computational Engineering
- ENGR 8130 Statistical Learning and Data Mining in Engineering
- ENGR 8910 Foundations for Engineering Research
- ENVE 6550 Environmental Life Cycle Analysis
- ENVE 8450 Design for Rapid Change: Food, Energy, and Water
- INFO 6150 Engineering Informatics
- INFO 8750 Advance Programming for Data Mining
- MCHE 6360 Robotic Manipulators
- MCHE 6390 Advanced Mechanical Vibration
- MCHE 6430 Introduction to Tribology
- MCHE 6650 HVAC Systems for Buildings and Industry
- MCHE 6850 Advanced Manufacturing Processes
- MCHE 8380 Continuum Mechanics
- STAT 6315 Statistical Methods for Researchers

Energy, Fluid, and Thermal Systems

- CVLE(MCHE)(LAND) 6660 Sustainable Building Design
- CVLE(MCHE) 8160 Advanced Fluid Mechanics
- CVLE(MCHE) 8350 Nonlinear Finite Element Analysis
- CVLE(MCHE) 8640 Advanced Strength of Materials
- ENGR 6350 Introduction to Finite Element Analysis
- ENGR 6490 Renewable Energy Engineering
- ENGR 8103 Computational Engineering
- ENGR 8130 Statistical Learning and Data Mining in Engineering
- ENGR 8180 Advanced Mass Transfer
- ENGR 8220 Microfluidic Transport Phenomena

- ENGR 8910 Foundations for Engineering Research
- ENVE 6230 Energy in Nature, Civilization & Engineering
- ENVE 6250 Energy Systems & the Environment
- ENVE 6530 Energy & Environmental Policy Analysis
- ENVE 6550 Environmental Life Cycle Analysis
- ENVE 8450 Design for Rapid Change: Food, Energy, and Water
- MCHE 6500 Advanced Thermal Fluid Systems
- MCHE 6530 Combustion and Flames
- MCHE 6580 Computational Fluid Dynamics
- MCHE 6650 HVAC Systems for Buildings and Industry
- MCHE 6590 Fluid Mechanics II
- MCHE 8170 Advanced Heat Transfer
- MCHE 8250 Combustion Science
- MCHE 8380 Continuum Mechanics
- MCHE 8500 Technical Foundations of Energy for Policy Practitioners
- MCHE 8650 Aerosol Science and Engineering
- MCHE 8850 Gas Dynamics
- MIST 6550 Energy Informatics
- PHYS 6300 Thermodynamics and Kinetic Theory
- PHYS 8301 Statistical Mechanics I
- STAT 6315 Statistical Methods for Researchers

Mechanics and Materials

- BIOE 6740 Biomaterials
- BIOE 6760 Biomechanics
- BIOE 8210 Multiscale Biomechanics
- BIOE 8490 Advanced Biomaterials
- CVLE(MCHE)(LAND) 6660 Sustainable Building Design
- CVLE(MCHE) 8160 Advanced Fluid Mechanics
- CVLE(MCHE) 8350 Nonlinear Finite Element Analysis
- CVLE(MCHE) 8640 Advanced Strength of Materials
- ENGR 6350 Introduction to Finite Element Analysis
- ENGR 8103 Computational Engineering
- ENGR 8130 Statistical Learning and Data Mining in Engineering
- ENGR 8270 Computational Nanomechanics
- MCHE 6380 Solid Mechanics
- MCHE 6390 Advanced Mechanical Vibrations
- MCHE 6430 Introduction to Tribology
- MCHE 6590 Fluid Mechanics II
- MCHE 6850 Advanced Manufacturing Processes
- MCHE 8380 Continuum Mechanics
- MCHE 8710 Engineering Properties of Animal and Plant Materials: Form and Function
- PHYS 8301 Statistical Mechanics I
- PHYS 8601 Computer Simulation Methods in Physics
- PHYS 8602 Computer Simulations of Materials
- STAT 6315 Statistical Methods for Researchers