

Master of Science in Mechanical Engineering (31 units)

Required Core Courses (16 units)

ME 501A Seminar in Engineering Analysis I (3)
 ME 575 Applied Heat and Mass Transfer (3) - Spring
 ME 584 Modeling and Simulation of Dynamic Systems (3) - Fall
 ME 590 Advanced Fluid Dynamics (3) - Fall
 AM 509 Methods of Applied Mechanics (3) - Spring
 Culminating Experience (1) (ME 697D or ME698D)

Emphasis Areas (15 units)

Aerospace	Mechanical Systems Design	System Dynamics & Controls	Thermofluid Systems
<p>Prerequisites: ME 309, 370, 375, 390</p> <p>Suggested Background: ME 470 Thermodynamics II (3) AE 472 Aeropropulsion Systems (3) AE 480 Fundamentals of Aerospace Engineering (3)</p> <p>Graduate Electives: ME 501B Seminar in Engineering Analysis II (3) AE 572 Rocket Propulsion (3) AE 586 Aircraft Design (3) AE 589 Aerodynamics (3) AE 672 Advanced Topics in Aero-Propulsion (3) AE 680 Flight Vehicle Performance (3) AE 689 Advanced Aerodynamics (3)</p>	<p>Prerequisites: ME 309, 330, 370, 375, 384, 390</p> <p>Suggested Background: AM 410 Vibration Analysis (3) ME 415 Kinematics of Mechanisms (3) ME 430 Machine Design Applications (3) ME 460 Automotive Engineering (3)</p> <p>Graduate Electives: ME 501B Seminar in Engineering Analysis (3) ME 515 Dynamics of Machines (3) ME 531 Mechanical Design with Composites (3) ME 532 Mechanical Design with Polymers (3) ME 630 Computer-Aided Machine Design (3) ME 686A Advanced Modeling, Analysis and Optimization I (3) ME 686B Advanced Modeling, Analysis and Optimization II (3)</p>	<p>Prerequisites: ME 309, 330, 370, 375, 384, 390</p> <p>Suggested Background: AM 410 Vibration Analysis (3) ME 415 Kinematics of Mechanisms (3) ME 484 Control of Mechanical Systems (3)</p> <p>Graduate Electives: ME 501B Seminar in Engineering Analysis (3) ME 503 Biomedical Instrumentation (3) (Cross-listed with ECE 503) ME 520 Robot Mechanics and Control (3) ME 522 Autonomous Intelligent Vehicle (3) ME 684 Design and Control of Dynamic Systems (3)</p>	<p>Prerequisites: ME 309, 370, 375, 390</p> <p>Suggested Background: ME 470 Thermodynamics II (3) ME 490 Fluid Dynamics (3)</p> <p>Graduate Electives: ME 501B Seminar in Engineering Analysis (3) ME 583 Thermal-Fluids System Design (3) ME 593 Compressible Flow (3) ME 595 Advanced Measurements (3) ME 670 Advanced Topics in Thermodynamics (3) ME 675A Conductive and Radiative Heat Transfer (3) ME 675B Convective Heat and Mass Transfer (3) ME 678 Transport Phenomena (3) ME 683 Energy Processes (3) ME 692 Computational Fluid Dynamics (3)</p>
<p>Students who are selecting the thesis or graduate project as their culminating experience must enroll in 6 units of ME 696 Directed Graduate Research (6)</p>			
Culminating Experience (1)		Culminating Experience (1)	
ME 697D Directed Comprehensive Studies/Exam (1) CR/NC		ME 698D Thesis or Graduate Project (1) CR/NC	

Total Units = 31