

**Master of Science in Mechanical Engineering
(31 units)**

Effective Fall 2020

Required Core Courses (16 units)

ME 501A Seminar in Engineering Analysis I (3)
ME 530 Mechanical Analysis of Solids (3) – Fall
ME 575 Applied Heat and Mass Transfer (3) – Spring
ME 584 Modeling and Simulation of Dynamic Systems (3) – Spring
ME 590 Advanced Fluid Dynamics (3) – Fall
Culminating Experience (1) (ME 697D or ME698D)

Emphasis Areas (9* or 15 units depending on the choice of culminating experience)

Mechanical Systems Design	System Dynamics and Controls	Thermal-Fluid Systems
<p>Suggested Background** AM 410 Vibration Analysis ME 415 Kinematics of Mechanisms ME 430 Machine Design Applications</p> <p>Graduate Electives ME 501B Seminar in Engineering Analysis II (3) ME 515 Dynamics of Machines (3) ME 532 Mechanics of Polymers (3) ME 536 Mechanical Design with Composites (3) ME 595AMM Advanced Mechanical Measurements (3) ME 595SMS Design of Smart Mechanical Systems (3) ME 630 Computer-Aided Machine Design (3)</p>	<p>Suggested Background** AM 410 Vibration Analysis ME 415 Kinematics of Mechanisms ME 484 Control of Mechanical Systems</p> <p>Graduate Electives ME 501B Seminar in Engineering Analysis (3) ME 503 Biomedical Instrumentation (3) (Cross-listed with ECE 503) ME 515 Dynamics of Machines (3) ME 520 Robot Mechanics and Control (3) ME 522 Autonomous Intelligent Vehicle (3) ME 684 Design and Control of Dynamic Systems (3)</p>	<p>Suggested Background** ME 470 Thermodynamics II ME 476 Heat Transfer II ME 490 Fluid Dynamics</p> <p>Graduate Electives ME 501B Seminar in Engineering Analysis (3) ME 583 Thermal-Fluids System Design (3) ME 593 Compressible Flow (3) ME 595AMM Advanced Mechanical 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 692 Computational Fluid Dynamics (3)</p>
<p>*Students who are selecting Thesis Project as their culminating experience must enroll in 6 units of ME 696 Directed Graduate Research and 9 units of graduate electives</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

**Suggested background courses will not count towards MSME degree