



Masters of Science in Mechanical Engineering (MMENG)

First Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites
MENG525	Engineering Thermodynamics II	3		
MENG520	Fluid Mechanics II	3		
MENG501L	Mechanical Engineering Workshop	1		
MENG530	Mechanical Vibrations II	3		
MENG510	Stress Analysis	3		
Total		13		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
MENG555	Introduction To Finite Element Analysis	3		MENG560 - MENG555L
MENG555L	Introduction To Finite Element Analysis Lab	1		MENG555
MENG550	Mechanical Systems II	3		
MENG580	Advanced Heat Transfer	3	MENG520	
MENG560	Machine Design I	3	MENG510	
Total		13		

Second Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites
MENG615	Refrigeration & Air conditioning	3		MENG610 - MENG520 - MENG525 - MENG615L
MENG615L	Refrigeration & Air conditioning Lab.	1		MENG615
MENG660	Mechanical Engineering Graduate Seminar	1		MENG695A
MENG601	Hydraulic and Pneumatic Systems	3		MENG610 - MENG525 - MENG520
MENG610	Machine Design II	3	MENG560	MENG501L
MENG695A	Master Thesis Project(Part I)	3	MENG580 - MENG555 - MENG525 - MENG510 - MENG550 - MENG560 - MENG530 - MENG520	MENG660
Total		14		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
	Elective	3		
MENG695B	Master Thesis Project(Part II)	3	MENG695A	
	Elective	3		
	Elective	3		
Total		12		

Major Elective Courses

Code	Title	Credits	Prerequisites	Corequisites
EENG585	Introduction to Mechatronics	3	MENG601	
ENGG610	Research Methods	3		
MENG585	Solar Energy & Thermal Systems	3	MENG525 - MENG520	
MENG590	Theory of Solid Continua	3		

MENG595	Turbomachinery	3	MENG525 - MENG520	
MENG602	Renewable Energy and Energy Economy	3		
MENG603	Mechanical Engineering Field Visit	1		
MENG604	Energy Networks and Optimization	3		
MENG605	Aerodynamics	3		
MENG611	Vehicle Thermal Management	3		
MENG612	Digitalization and Energy for Smart Cities and Industry	3		
MENG613	Energy Efficiency, Data, and Services	3		
MENG615	Refrigeration & Air conditioning	3		MENG610 - MENG520 - MENG525 - MENG615L
MENG615L	Refrigeration & Air conditioning Lab.	1		MENG615
MENG620	Theory of Elasticity	3		
MENG621	Automotive Body structure	3		
MENG625	Gas & Steam Turbines	3		
MENG630	Theory of Plasticity	3		
MENG631	Finite Element Methods for Crashworthiness and Impact Analysis	3		
MENG631L	Finite Element Methods for Crashworthiness and Impact Analysis Lab	1		
MENG640	Theory of Shells and Plates	3		
MENG641	Vehicle Dynamics	3		
MENG641L	Vehicle Dynamics Lab	1		
MENG645	Advanced Refrigeration Cycle	3		
MENG650	Advanced Finite Methods in Mechanics	3		
MENG650L	Advanced Finite Methods in Mechanics Lab	1		
MENG655	Power Plant Engineering	3	MENG525 - MENG520	