



Mechanical Engineering 2012 Undergraduate Curriculum - Robotics and Industrial Automation



Term 1-1

Number	Name	Crds.	Pre-Requisites	Co-req
MATH 1350	Calculus I	4	MATH 1340 or equivalent	
ME 1210	Computer Aided Drafting & Design	3	NONE	
ENGL 1010	The Study of the Essay as a Literary Genre	3	ENGL 0110 or equivalent	
SPAN 1010	Linguistic Analysis of Literary Genres	3	SPAN 0110 or equivalent	

Term 1-2

MATH 1360	Calculus II	4	MATH 1350	
SCIE 1430	Physics I	4	MATH 1350	SCIE 1431
SCIE 1431	Physics I Lab.	1	MATH 1350	SCIE 1430
ME 1211	Conventional Manufacturing Lab.	1	ME 1210	
SOHU 2010	Socio-Humanistic Studies	3	NONE	

Term 1-3

MATH 1370	Calculus III	4	MATH 1360	
SCIE 1210	Principles of Chemistry	3	MATH 1330 or equivalent	SCIE 1211
SCIE 1211	Principles of Chemistry Lab.	1	MATH 1330 or equivalent	SCIE 1210
SCIE 1440	Physics II	4	MATH 1360, SCIE 1430, SCIE 1431	SCIE 1441
SCIE 1441	Physics II Lab.	1	MATH 1360, SCIE 1430, SCIE 1431	SCIE 1440

Term 2-1

ENGI 2270	Engineering Probability and Statistics	3	MATH 1350	
ENGI 2110	Engineering Mechanics, Statics	3	MATH 1350, SCIE 1430, SCIE 1431	MATH 1370
ME 2032	Measurement and Programming	3	SCIE 1440	
ME 2010	Computer Programming for ME	3	MATH 1350	
MATH 2350	Differential Equations	3	MATH 1370, SCIE 1440	

Term 2-2

ENGI 2410	Engineering Mechanics, Dynamics	3	ENGI 2110	
ME 2210	Engineering Materials	3	SCIE 1210, SCIE 1211	ENGI 2110
ME 2020	Applied Numerical Analysis	3	ME 2010	
ME 2033	Measurement and Programming Lab.	1	ME 2032	
EE 2000	Circuits Analysis I	3	MATH 1370, SCIE 1441, ME 2010	MATH 2350

Term 2-3

ENGI 2420	Fluid Mechanics	3	ENGI 2410 or ENGI 2910	
ME 2220	Mechanism Design	3	ENGI 2410, ME 1211, ME 2020	
ME 2230	Solid Mechanics I	3	ENGI 2110, ME 2020, ME 2210	
ENGI 2260	Engineering Economics	3	MATH 1360	
ME 2211	Engineering Materials Lab.	1	ENGI 2270, ME 2210	

Term 3-1

Number	Name	Crds.	Pre-Requisites	Co-req
ME 3230	Solid Mechanics II	3	ME 2230	
ME 3140	Intermediate Fluid Mechanics	3	ENGI 2420, ME 2020	ENGI 2421
ME 3110	Thermodynamics I	3	ENGI 2420	
ME 3030	System Dynamics and Controls	3	ENGI 2420, EE 2000	
ENGI 2421	Fluid Mechanics Lab.	1	ENGI 2270 (or CEE 2210), ENGI 2420	

Term 3-2

ME 3120	Thermodynamics II	3	ME 3110, ME 2020	
ME 3150	Heat Transfer I	3	ME 3110, ME 3140	
SOHU 2040	Ethics, Global, and Contemporary Issues	3	SOHU 2010-Socio-Humanistic Studies	
ME 3011	Engineering Measurements Lab.	1	EE 2000	
ME 3240	Design of Machine Elements I	3	ME 3230	
ME 3080	Introduction to Robotics	3	ME 2220, ME 2033, ME 3030	

Term 3-3

ME 3160	Heat Transfer II	3	ME 3150, ENGI 2421	
ME 3040	Mechatronics	3	ME 3030, ME 3011	
ME 3260	Manufacturing Engineering	3	ME 3230	
ME 3250	Design of Machine Elements II	3	ME 2220, ME 3240	
ME 3082	Automated Systems and Robotic I	3	ME 3080	

Term 4-1

ME 3083	Aut. Syst. and Robotic I Lab.	1	ME 3082	ME 3040
SPAN 2020	Business Spanish	3	SPAN 1010	
ME 4042	Aut. Systems and Robotic II	3	ME 3082,	ME 3083
ME 4044	Ind. Automation with PLC Prog.	3	ME 3040, ME 3082	
ME 4011	Mechatronics Lab.	1	ME 3040	

Term 4-2

ME 4992	ME Capstone Design I	3	ME 3083, ME 4042, ME 4044, ME 3250	ENGI 2260
ME 4045	Ind. Aut. with PLC Prog. Lab	1	ME 4044	
*****	Socio-Humanistic Studies or Language Elect	3	Pre-requisites vary according to selected course	
ME 4251	Modeling and Product Realization Lab.	1	ME 3260, ME 2220	

Term 4-3

ME 4994	ME Capstone Design II	3	ME 4992	
ME 4045	Aut. Systems and Rob. II lab	1	ME 4042	
ENGL 2020	Business English and Communication	3	ENGL 1010	