



BS Degree in Mechanical Engineering

(For students entering the program Fall 2011)

FALL

First Year

EGME110	Manufacturing Processes I	3
EGME141	Solid Modeling	3
EGNR101	Introduction to Engineering	2
ENGL110	First-Year Composition I	3
MATH151	Calculus I	4
		<u>15</u>

Second Year

EGNR265	"C" Programming	3
EGEM220	Statics	3
MATH251	Calculus III	4
PHYS231	Applied Physics for Engineers and Scientists I Social Science	4 <u>3</u>
		<u>17</u>

Third Year

COMM101	Fundamentals of Speech Communication	3
EGEE210	Circuit Analysis	4
EGEM320	Dynamics	3
EGME350	Mechanical Engineering Design	4
EGNR340	Advanced Numerical Methods for Engineers	1
		<u>15</u>

Fourth Year

EGNR4xx	Senior Sequence I	3
EGME431	Heat Transfer	3
EGME432	Thermal-Fluids Lab	1
EGRS460	Control Systems	4
EGXX	Technical Option Elective(s)	3-5
		<u>14-16</u>

SPRING

CHEM115	General Chemistry I	5
EGNR140	Linear Algebra and Numerical Methods for Engineers	2
ENGL111	First-Year Composition II	3
MATH152	Calculus II	4
	Social Science Diversity	<u>3</u>
		<u>17</u>

EGME225	Mechanics of Materials	3
EGME275	Engineering Materials	3
EGME276	Strength of Materials Lab	1
MATH310	Differential Equations	3
PHYS232	Applied Physics for Engineers and Scientists II	4
EGXX	Technical Option Elective	<u>3</u>
		<u>17</u>

EGME337	Thermodynamics	4
EGME338	Fluid Mechanics	2
EGME339	Fundamental of Fluid Mechanics	1
MATH308	Probability and Mathematical Statistics	3
EGXX	Technical Option Electives	6-7
		<u>16-17</u>

EGNR4xx	Senior Sequence II	3
HUMN251	Humanities I	4
	Humanities	3
	Social Science	3
EGXX	Technical Option Elective	4
		<u>17</u>

Minimum Total credits required to complete BS degree = 129-130

Vehicle Systems Option required technical electives: 18 credits

EGEE280	Introduction to Signal Processing	3	fall
EGEE365	Vehicle Instrumentation	4	fall / even yrs
EGME240	Assembly Modeling and GD&T	3	spring
EGME310	Vehicle Development & Testing	2	fall
EGME415	Vehicle Dynamics	2	spring / odd yrs
EGME425	Vibrations & Noise Control	4	spring / even yrs

Robotics & Automation Option required tech. electives: 17 credits

EGRS365	Programmable Logic Controllers	3	spring
EGRS385	Robotics Engineering	4	spring
EGRS430	Systems Integration and Machine Vision	4	fall
EGRS435	Automated Manufacturing Systems	3	spring

And **one** of the following:

EGEE280	Introduction to Signal Processing	3	fall
EGME312	CNC Manufacturing Processes	3	fall
EGNR310	Advanced Quality Engineering	3	fall / odd yrs

General Option required technical electives: 17 credits

EGME240	Assembly Modeling and GD&T	3	spring
	or		
EGRS365	Programmable Logic Controllers	3	spring

Choose **9 credits** from the following:

300/400-level Vehicle Systems or Robotics & Automation technical option courses fall & spring

EGEE280	Introduction to Signal Processing	3	fall
EGME312	CNC Manufacturing Processes	3	fall
EGNR310	Advanced Quality Engineering	3	fall / odd yrs

Choose **5 credits** from:

400-level Vehicle Systems or Robotics & Automation technical option courses

SELECT A SENIOR SEQUENCE:

Industrial Project	6 credits	Co-op Project	9 credits	Research Project	8 credits
EGNR491	Engineering Design Project I	3	EGNR250	Cooperative Education I	2
EGNR495	Engineering Design Project II	3	EGNR450	Coop. Education Project I	2
			EGNR451	Coop. Education Project II	2
			EGRN491	Engineering Design Project I	3
			EGNR260	Engineering Research Methods	2
			EGNR460	Engineering Research Project I	4
			EGNR461	Engineering Research Project II	2