

MECHANICAL ENGINEERING CURRICULUM

4 – Year Program (Effective September 2014)

Student ID Advisor:

	FALL	Grade		SPRING	Grade
ENG 101	College Composition	_____		COS 215 Computer Programming or COS 220; ECE 177	_____
MAT 126	Calculus I	_____		MAT 127 Calculus II	_____
MEE 101	Intro. to Mech. Eng.	_____		MEE 150 Statics	_____
MEE 120	Eng Graphics & CAD	_____		PHY 122 General Physics II	_____
PHY 121	General Physics	_____		Elective (2) HVSC Elective	_____
Elective (1)	HVSC Elective	_____			_____
CHY 121/3	Intro to Chemistry/Lab	___/___		ECE 209 Fund of Electric Circuits	_____
	or CHY 131/3 Chemistry for Engineer/Lab	_____			_____
MAT 228	Calculus III	_____		MAT 258 Differential Equations	_____
MEE 230	Thermodynamics I	_____		MEE 231 Thermodynamics II	_____
MEE 251	Strength of Materials	_____		MEE 270 Dynamics	_____
Elective (3)	HVSC Elective	_____		Elective (4) Basic Science Elective	_____
STS 332	Statistics for Engineers	_____		MEE 320 Materials	_____
MEE 360	Fluid Mechanics	_____		MEE 341 Mechanical Lab I	_____
MEE 370	Controls	_____		ECP 341 Technical Writing I	_____
MEE 380	Design I	_____		MEE 381 Design II	_____
Elective (5)	HVSC Elective	_____		MEE 456 Intro to Finite Elements	_____
				MEE 471 Mechanical Vibrations	_____
MEE 432	Heat Transfer	_____		MEE 443 Mech. Lab. III	_____
MEE 442	Mech. Lab II	_____		MEE 488 Design IV	_____
ECP 487	Technical Writing II	_____		ECP 488 Technical Writing III	_____
MEE 487	Design III	_____		Elective (8) Technical Elective	_____
Elective (6)	Technical Elective	_____		Elective (9) HVSC Elective	_____
Elective (7)	Technical Elective	_____		Elective (10) HVSC Elective	_____

Basic Science _____

Technical Electives

(See the other side of this sheet for listings of appropriate technical electives).

Course	Grade	Mechanics of solids & structures	Thermal science & fluid mechanics	Dynamics & Control	Engineering Science Credits	Design Credits

Students are required to complete a minimum of **3 design credits** from the list of approved technical electives. A maximum of 2 courses can be used from a subject area to satisfy the technical electives requirements.

Human Values and Social Context

(18 credit hours required)

Course	Grade	Western Cultural Tradition	Social Contexts & Institutions	Cultural Diversity & International Perspectives	Population & Environment	Artistic & Creative Expression	Ethics

Students are required to complete **18 credit hours** in human values and social context, selected from lists of approved courses to satisfy each of the six sub-categories listed. Each sub-category must be satisfied, although a single course can be applied in each appropriate sub-category

MECHANICAL ENGINEERING DEPARTMENT TECHNICAL ELECTIVES

Basic Science Electives (one required – 4 cr)

AST 109/110 or AST215/Lab	General Astronomy I with Laboratory
BIO 100	Basic Biology
BIO 208	Anatomy and Physiology
BIO 326	General Entomology
BMB 300/305	General Microbiology with Laboratory
CHY 122/124	The Molecular Basis of Chemical Change
ERS 101	Introduction to Geology (<i>formerly GES 101</i>)
ERS 102*	Environmental Geology of Maine
ERS XXX	Geology for Engineers
PHY 223/PHY 236	Special Relativity/Introductory Quantum Physics

* Satisfied the population and the Environment requirement. It can not be counted as both a basic Science Elective and a HVSC Elective.

Mechanics of Solids and Structures

		<i>Engineering Science Credits</i>	<i>Design Credits</i>
MEE 450	Introduction to the Mech. of Composite Bodies	2	1
MEE 453	Experimental Mechanics	2	1
MEE 455	Advanced Strength of Materials	3	0

Thermal Sciences and Fluid Mechanics

		<i>Engineering Science Credits</i>	<i>Design Credits</i>
MEE 433	Solar-Thermal Engineering	1	2
MEE 434	Thermodynamic Design of Engines	1	2
MEE 462	Fluid Mechanics II	3	0
MEE 475	Fuel Cell Science and Technology	1	2
MEE 480	Wind Energy Engineering	1	2
MEE 483	Turbomachine Design	1	2
MEE 484	Power Plant Design and Engineering	1	2
MEE 486	Refrigeration & Air Conditioning System Design	1	2
MEE 489	Offshore Floating Systems Design	1	2

Dynamics & Controls

		<i>Engineering Science Credits</i>	<i>Design Credits</i>
MEE 444	Robot Dynamics and Control	2	1
MEE 445*	Aeronautics	2	1
MEE 446*	Astronautics	2	1
MEE 547*	Flight Dynamics and Control of Aircraft	2	1

* Only one of the aerospace courses MEE 445, MEE 446 and MEE 547 may be used to satisfy part of the technical electives requirement. 400 level (and higher) engineering science courses offered by other engineering programs may, with advisor approval, be used to satisfy the engineering science elective requirement.