

## Mechanical Engineering Program 2009/2011 (132 Hours)

Offered:  
F=Fall  
S=Spring  
M=Summer

Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	
<b>English - 6 hours</b>						
		EH 101	3	Freshman Composition I	Placement	FSM
		EH 102	3	Freshman Composition II	EH 101	FSM
<b>Mathematics - 15 hours</b>						
		MA 171	4	Calculus A	MA 113 or MA 115 or Level III Placement	FSM
		MA 172	4	Calculus B	MA 171	FSM
		MA 201	4	Calculus C	MA 172	FSM
		MA 238	3	Applied Differential Equations	Prereq w/Con: MA 201	FSM
<b>Chemistry - 4 hours</b>						
		CH 121	3	General Chemistry I	CH 101 or Plcmt, MA 112, Prereq w/Con: MA 113 or 115, Coreq: CH 125	FSM
		CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
<b>Physics - 8 hours</b>						
		PH 111	3	General Physics w/Calculus I	MA 171	FSM
		PH 114	1	General Physics Lab I	Prereq w/Con: PH 111	FSM
		PH 112	3	General Physics w/Calculus II	MA 172, PH 111	FSM
		PH 115	1	General Physics Lab II	Prereq w/Con: PH 112	FSM
<b>Chemistry/Physics Elective - 4 hours</b>						
			3		Choose from BYS 119, CH 123/126 or PH 113/116	FSM
			1			FSM
<b>History, Social &amp; Behavioral Sciences - 9 hours</b>						
		HY	3	History	Must take a six hour sequence in a discipline.	FSM
			3		See Humanities & Fine Arts List at	FSM
			3		<a href="http://www.uah.edu/engineering/StudentAffairs/forms.php">http://www.uah.edu/engineering/StudentAffairs/forms.php</a> .	FSM
<b>Humanities &amp; Fine Arts - 9 hours</b>						
		EH	3	Literature	See History, Social & Behavioral Sciences list at <a href="http://www.uah.edu/engineering/StudentAffairs/forms.php">http://www.uah.edu/engineering/StudentAffairs/forms.php</a> .	FSM
			3	Fine Arts		FSM
		PHL 202	3	Introduction to Ethics		FSM
<b>Engineering Core - 12 hours</b>						
		MAE 271	3	Statics	PH 111, Prereq w/Con: MA 201	FSM
		MAE 341	3	Thermodynamics I	MA 201, CH 121, CH 125, PH 112	FSM
		EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & (MA 244 or CHE 244 or MAE 285)	FSM
		ISE 321	3	Engineering Economy	MA 172, Sophomore Standing	FSM
<b>Mechanical Engineering Option - 57 hours</b>						
**		MAE 100	2	Introduction to Mechanical & Aerospace Eng	Prereq w/Con: MA 112 or Level II Placement, Coreq: MAE 100L	FS
**		MAE 110	3	Intro to Engineering Computer Aided Design	Prereq w/Con: MA 112 or Level II Placement	FSM
		MAE 272	3	Dynamics	MAE/CE 271 & (MAE 285 or CPE 112)	FSM
**		MAE 285	3	Numerical Methods & Computation I	MA 171, Coreq: MAE 285L	FSM
**		MAE 310	3	Fluid Mechanics I	MA 238, MAE/CE 271 & (MAE 285 or CPE 112 or CHE 197)	FSM
**		MAE 311	3	Principles of Measurement & Instrumentation	EE 213, Coreq: MAE 311L	FSM
		MAE 342	3	Thermodynamics II	MAE 341	FSM
**		MAE 364	4	Kinematics & Dynamics of Machines	MAE 110, MAE/CE 272, Coreq: MAE 364L	SM
**		MAE 370	4	Mechanics of Materials	MAE 271 & (MAE 285 or CPE 112 or CHE 197), Coreq: MAE 370L	FSM
		MAE 378	3	Materials & Manufacturing Processes	MAE/CE 370	FSM
		MAE 385	2	Numerical Methods & Computation II	(MAE 285 or CPE 112 or CHE 197), Prereq w/Con: MA 238	FSM
		MAE 410	2	Fluid Mechanics II	MAE 310, Prereq w/Con: MAE 311	FM
		MAE 411	1	Fluid Mechanics Lab	MAE 310	FM
**		MAE 450	4	Intro to Heat and Mass Transfer	MAE 310, MAE 385, Coreq: MAE 450L	FSM
		MAE 455	3	Design of Thermal Systems	MAE 342, MAE 450, Recommended: MAE 490	FSM
		MAE 466	3	Mechanics & Design of Machine Elements	MAE 364, MAE/CE 370	FM
		MAE 488	3	Analysis of Engineering Systems	EE 213, MAE/CE 272, MAE 310, MAE 385	FSM
		MAE 489	3	Computer-Aided Engineering Analysis	MAE/CE 370, Prereq w/Con: MAE 385	SM
		MAE 490	2	Intro to Engineering Design	EE 213, ISE 321, MAE/CE 272	FSM
		MAE 491	3	Mechanical Engineering Design	MAE 378, MAE 490, Senior Standing, Instructor Permission	FS
<b>Technical Elective - 8 hours</b>						
			3		MAE courses 300 level or above approved by the Department	
			3			
			2			

All prerequisite classes must be completed with a "C" or higher grade.  
The Catalog is the final authority for all degree requirements.

Updated  
May 4, 2009

**ENGINEERING APPROVALS:**

Advisor	Date	Department Chair	Date
		Dean of Engineering	Date