

## Aerospace 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			FSM
			1		Choose from CH 123/126 or PH 113/116	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		FSM
			3	Fine Arts	See History, Social & Behavioral Sciences list at	FSM
		PHL 202	3	Introduction to Ethics	<a href="http://www.uah.edu/engineering/StudentAffairs/forms.php">http://www.uah.edu/engineering/StudentAffairs/forms.php</a> .	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>** Class has required lab section Aerospace Engineering Option - 62 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 200	1	Principles of Aeronautics & Astronautics	MAE 100	FS
		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 370	4	Mechanics of Materials	MAE 271 & (MAE 285 or CPE 112 or CHE 197), Coreq: MAE 370L	FSM
		MAE 371	3	Aerospace Structures	MAE 110, MAE/CE 272, MAE/CE 370	FM
		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 420	3	Compressible Aerodynamics	MAE 200, MAE 310, MAE 341	SM
		MAE 430	3	Fundamentals of Aerodynamics	MAE 420	FM
Select One		MAE 440	3	Rocket Propulsion I	MAE 342 & (MAE 410 or MAE 420), Prereq w/Con: MAE 450	FM*
		MAE 441	3	Airbreathing Propulsion	MAE 342 & (MAE 410 or MAE 420), Prereq w/Con: MAE 450	FM*
**		MAE 449	2	Aerospace Lab	MAE 311, Coreq: MAE 449L, Prereq w/Con: MAE 371 or 430 or 440 or 441	FS
**		MAE 450	4	Intro to Heat and Mass Transfer	MAE 310, MAE 385, Coreq: MAE 450L	FSM
		MAE 468	3	Elements of Spacecraft Design	MAE/CE 272, MAE 370, MAE 420, MA 238, Prereq w/Con: MAE 450	SM*
		MAE 480	3	Aircraft Stability & Control	MAE 430, MAE 488	SM*
		MAE 488	3	Analysis of Engineering Systems	EE 213, MAE/CE 272, MAE 310, MAE 385	FSM
		MAE 490	2	Intro to Engineering Design	EE 213, ISE 321, MAE/CE 272	FSM
		MAE 492	3	Aerospace Design	MAE 378, MAE 490, Senior Standing, Instructor Permission	FS
<b>Technical Elective - 3 hours</b>						
			3		MAE course 300 level or above approved by the Department	

\* These courses are offered in alternating summers. Please consult the MAE 5 year plan.

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

Updated  
May 11, 2009

**ENGINEERING**

**APPROVALS:**

Advisor	Date	Department Chair	Date
		Dean of Engineering	Date