

## Optical Engineering Program 2007/2009 (128 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	Offered
<b>English - 6 hours</b>						
		EH 101	3	Freshman Composition I	Placement	FSM
		EH 102	3	Freshman Composition II	EH 101	FSM
<b>Mathematics - 18 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
		MA 244	3	Introduction to Linear Algebra	MA 172	FSM
<b>Chemistry - 4 hours</b>						
		CH 121	3	General Chemistry I	CH 101 or Placement, MA 113, Co-req: CH 125	FSM
		CH 125	1	General Chemistry Lab I	Prereq w/Con: CH 121	FSM
<b>Physics - 12 hours</b>						
		PH 111	3	General Physics w/Calculus I	MA 171, Coreq: PH 114	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, Coreq: PH 115	FSM
		PH 115	1	General Physics Lab II	Prereq w/Con: PH 112	FSM
		PH 113	3	General Physics w/Calculus III	MA 201, PH 112, Coreq: PH 116	FSM
		PH 116	1	General Physics Lab III	Prereq w/Con: PH 113	FSM
<b>History, Social &amp; Behavioral Sciences - 9 hours</b>						
		HY	3	History	Must take a six hour sequence in a discipline. See Humanities & Fine Arts List at <a href="http://www.eng.uah.edu/StudentAffairs/forms.php">http://www.eng.uah.edu/StudentAffairs/forms.php</a> . Also available at the Engineering Student Affairs office, EB 157.	FSM
			3			FSM
			3			FSM
<b>Humanities &amp; Fine Arts - 9 hours</b>						
		EH	3	Literature	See History, Social & Behavioral Sciences list at <a href="http://www.eng.uah.edu/StudentAffairs/forms.php">http://www.eng.uah.edu/StudentAffairs/forms.php</a> . Also available at the Engineering Student Affairs office, EB 157.	FSM
			3	Fine Arts		FSM
		PHL 202	3	Intro to Ethics		FSM
<b>Engineering Core - 12 hours</b>						
**		CPE 112	3	Intro to Computer Programming in Engineering	MA 113, MA 115 or Level III Placement, Coreq: CPE 112L	FSM
**		EE 213	3	Electrical Circuit Analysis I	PH 112, Prereq w/Con: MA 238 & MA 244 or CHE 244 or MAE 285	FSM
		EE 310	3	Solid State Fundamentals	PH 112, Prereq w/Con: MA 238	FS
		ISE 321	3	Engineering Economy	MA 172, Sophomore Standing	FSM
<b>Optical Engineering Option - 30 hours</b>						
		EE 307	3	Electricity and Magnetism	EE 213, MA 238, MA 244	FSM
		EE 313	3	Electrical Circuit Analysis II	EE 213	FSM
		EE 447	3	Electromagnetic Engineering	EE 307	FS
		OPE 451	3	Optoelectronics	EE 307, EE315	F
		OPE 453	3	Laser Systems	EE 307	F
		OPE 456	3	Photonics Lab	OPE 451	S
		OPE 459	3	Optical Engineering Design I	ISE 321, Prereq w/Con: OPE 456	F
		OPE 460	3	Optical Engineering Design II	OPE 459	S
		OPT 341	3	Geometrical Optics	Prereq w/Con: PH 113	F
		OPT 342	3	Physical Optics	OPT 341	S
<b>Electrical Engineering Requirements - 25 hours</b>						
**		EE 100	3	Fund of Computer, Electrical & Optical Eng	Coreq: EE 100L	FSM
		EE 202	3	Intro to Digital Logic Design	CPE 112, EE 100	FSM
		EE 203	1	Digital Logic Design Lab	EE 202	FSM
		EE 214	1	Electronic Measurement Lab	Prereq w/Con: EE 213	FSM
		EE 305	1	Electronic Devices & Design Lab	EE 213, EE 214, Prereq w/Con: EE 315	FSM
		EE 315	3	Introduction to Electronic Analysis and Design	EE 213, EE 214	FSM
		EE 382	3	Analytical Meth for Continuous Time Sys	EE 213, MA 238, MA 244	FSM
		EE 383	3	Analytical Meth for Mult and Discr Time Sys	EE 382	FSM
		EE 384	1	Digital Signal Processing Laboratory	CPE 381 or Prereq w/Con: EE 383	FS
		EE 420	3	Random Signals and Noise	CPE 381 or EE 382	FSM
		OPE 454	3	Optical Fiber Communications	EE 307 or PH 432	F
<b>Optical Engineering Elective - 3 hours</b>						
			3		Courses at 300-level or above. Must be approved by OPE advisor	

**ENGINEERING**

**APPROVALS:**

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

Version 1  
September 17, 2007

Advisor	Date	Department Chair	Date
		Dean of Engineering	Date