

(TR if Transferred) **OPTICAL ENGINEERING PROGRAM 2003/2005 Catalog (134 Hours)**

Taken or Planned	Grade	Course Number	Cr. Hrs.	Course Title	Prerequisites	Offered
English - 6 hours						
		EH 101	3	Freshman Composition	Placement	FSM
		EH 102	3	Freshman Composition II	EH 101	FSM
Mathematics - 18 hours						
		MA 171	4	Calculus A	MA 113, MA 115, or Level III placement	FSM
		MA 172	4	Calculus B	MA 171	FSM
		MA 201	4	Calculus C	MA 172	FSM
		MA 244	3	Intro to Linear Algebra	MA 172	FSM
		MA	3	Differential Equations	MA 201, MA 244 or co-requisite	FSM
Chemistry - 4 hours						
		CH 121	3	Gen & Inorganic Chemistry	CH 101 or placement, Co-requisite CH 125, MA 112	FSM
		CH 125	1	Gen & Inorganic Chem Lab I	Co-requisite CH 121	FSM
Physics - 12 hours						
		PH 111	3	Gen Physics w/Calculus I	MA 171, co-requisite PH 114	FSM
		PH 114	1	Gen Physics Lab I	Co-requisite PH 111	FSM
		PH 112	3	Gen Physics w/Calculus II	PH 111, MA 172	FSM
		PH 115	1	Gen Physics Lab II	Co-requisite PH 112	FSM
		PH 113	3	Gen Physics w/Calculus III	PH 112, MA 201	FSM
		PH 116	1	Gen Physics Lab III	Co-requisite PH 113	FSM
History, Social & Behavioral Sciences - 9 hrs (Must take a six hour sequence in a discipline.)						
		HY	3	History	See History, Social & Behavioral Sciences List at http://coeweb.eb.uah.edu/coesa/Content/forms.htm or available from Engineering Student Affairs	FSM
			3			FSM
			3			FSM
Humanities & Fine Arts - 9 hrs						
		EH	3	Literature	See Humanities & Fine Arts List at http://coeweb.eb.uah.edu/coesa/Content/forms.htm or available from Engineering Student Affairs	FSM
			3	Fine Arts		FSM
		PHL 202	3	Intro To Ethics		FSM
Engineering Core - 12 hours						
		MAE 271	3	Statics	PH 111, Co-requisite MA 201	FSM
		EE 300	3	Electrical Circuits I	PH 112, Pre- or co-requisite: 200 or 300 lvl Diff. Eqns. crse	FSM
		EE 310	3	Solid State Fundamentals	PH 113, Pre- or co-requisite 200 or 300 lvl Diff. Eqns. crse	FS
		ISE 321	3	Engineering Economy	MA 172, Sophomore standing	FSM
Optical Engineering Core - 28 hours						
		CPE 112	3	Intro To Computer Programming	MA 113, MA 115, or Level III placement	FSM
		EE 307	3	Electricity and Magnetism	EE 300	FSM
		EE 313	3	Electrical Circuits II	Pre- or co-requisite: EE 307	FSM
		EE 447	3	Electromagnetic Waves	EE 313	S
		OPE 453	3	Laser Systems	EE 307	F
		OPE 455	2	Optical Engineering Laboratory	PH 113, OPT 342, EE 382 or OPT 442	S
		OPE 459	3	Optical Engineering Design	ISE 321, Senior standing	S
		OPT 341	3	Geometrical Optics	PH 113	F
		OPT 342	3	Physical Optics	OPT 341	S
		OPT 411	2	Geometrical Optics Laboratory	PH 116, OPT 341, OPE 441 suggested co-requisite	F
Electrical Engineering Requirements - 30 hours						
		EE 201	1	Digital Logic Design Lab	Pre- or co-requisite: EE 202	FSM
		EE 202	3	Intro to Digital Logic Design	CPE 112	FSM
		EE 301	1	Electronic Measurement Lab	EE 300	FSM
		EE 305	1	Electronic Devices & Design Lab	EE 301, Pre- or co-requisite EE 315	FSM
		EE 315	3	Intro to Electronic Analysis & Design	EE 301	FSM
		EE 382	3	Analytical Methods for Cont. Time Sys	EE 300	FSM
		EE 383	3	Anal Meth for Multivar & Discr Time Sys	EE 382	FSM
		EE 384	1	Digital Signal Processing Laboratory	CPE 381 or Pre- or co-requisite: EE 383	FSM
		EE 420	3	Random Signals & Noise	EE 382	FSM
		EE 426	3	Communication Theory	EE 382 or permission of instructor	FSM
		OPE 451	3	Optoelectronics	EE 307	F
		OPE 454	3	Optical Fiber Communications	EE 307 or PH 432	F
		OPE 456	2	Photonics Laboratory	OPE 453, OPE 454	S
Optical Engineering Electives* - 6 hours						
			3		See the 2003/2005 Catalog under Optical Engineering.	
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Approvals:				Key: F=Fall, S=Spring, M=Summer	
Advisor	Date	Department Chair	Date	Dean	Date