

# Academic Checksheet



# Optical Engineering 2015/2016 (129 Hours)

Student A#				Student Name (Last, First MI)		Offered:
Semester, Transfer or AP	Grade	Course Number	Cr Hrs	Course Title	Prerequisites, Corequisites and/or Prerequisites with Concurrency	F=Fall S=Spr M=Sum
<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	Plcmt or CH 101, MA 113 or 115, Prereq w/Con: MA 171, Coreq: CH 125	FSM
		CH 125	1	General Chemistry Lab I	Coreq: CH 121	FSM
<b>Physics - 12 hours</b>						
		PH 111	3	General Physics w/Calculus I	MA 171, Coreq: 114	FSM
		PH 114	1	General Physics Lab I	Coreq: PH 111	FSM
		PH 112	3	General Physics w/Calculus II	MA 172, PH 111, Coreq: 115	FSM
		PH 115	1	General Physics Lab II	Coreq: PH 112	FSM
		PH 113	3	General Physics w/Calculus III	MA 201, PH 112, Coreq: 116	FSM
		PH 116	1	General Physics Lab III	Coreq: PH 113	FSM
<b>History, Social &amp; Behavioral Sciences, Humanities &amp; Fine Arts - 18 hours</b>						
			3	History	HY 103, HY 104, HY 221, or HY 222	FSM
			3	Literature	EH 207 or EH 208	FSM
			3	Fine Art	ARH 100, ARH 101, ARH 103, CM 122, MU 100, or ARS 160	FSM
			3	Social & Behavioral Science	For more information on HSBS/HFA Requirements: <a href="http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements_05202014.pdf">http://www.uah.edu/images/colleges/engineering/CUE2%20Files/Forms/HSBS_HFA_Requirements_05202014.pdf</a>	FSM
			3	Sequence Course (HY or EH)		FSM
			3	HSBS/HFA		FSM
			3			FSM
<b>First-Year Engineering - 4 hours</b>						
		FYE 101	1	First-Year Experience for Engineers	None	FS
		ENG 101	3	Computing for Engineers	Prereq w/Con: MA 171	SM
<b>Optical Engineering Option - 61 hours</b>						
**		CPE 211	3	Intro to Computer Programming in Engineering	ENG 101, MA 171	FSM
**		EE 202	3	Intro to Digital Logic Design	ENG 101	FSM
		EE 203	1	Digital Logic Design Lab	EE 202	FSM
		EE 213	3	Electrical Circuit Analysis I	Prereq w/Con: PH 112, MA 201	FSM
		EE 307	3	Electricity and Magnetism	PH 112, MA 201, EE 213	FSM
		EE 308	3	Electromagnetic Engineering	EE 307	FS
		EE 310	3	Solid State Fundamentals	PH 113, Prereq w/Con: MA 238	FS
		EE 313	3	Electrical Circuit Analysis II	EE 213	FSM
		EE 315	3	Introduction to Electronic Analysis and Design	EE 213	FSM
		EE 316	1	Electronic Measurements & Devices Design Lab	Prereq w/Con: EE 315	FS
		ISE 321	3	Engineering Economy	MA 171	FSM
		OPT 341	3	Geometrical Optics	PH 113, Prereq w/Con: (PH 305 or MA 244)	F
		OPT 342	3	Physical Optics	OPT 341	S
		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 385	3	Random Signals and Noise	CPE 381 or EE 382	FSM
		EE 412	1	Independent Research	Senior Standing	FSM
		OPE 451	3	Optoelectronics	Prereq w/Con: EE 307, EE 315	F
		OPE 453	3	Laser Systems	EE 307	F
		OPE 454	3	Optical Fiber Communications	EE 307 or PH 432	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
<b>Optical Engineering Elective - 3 hours</b>						
			3		300+ Level course approved by advisor	

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

# Academic Flowchart

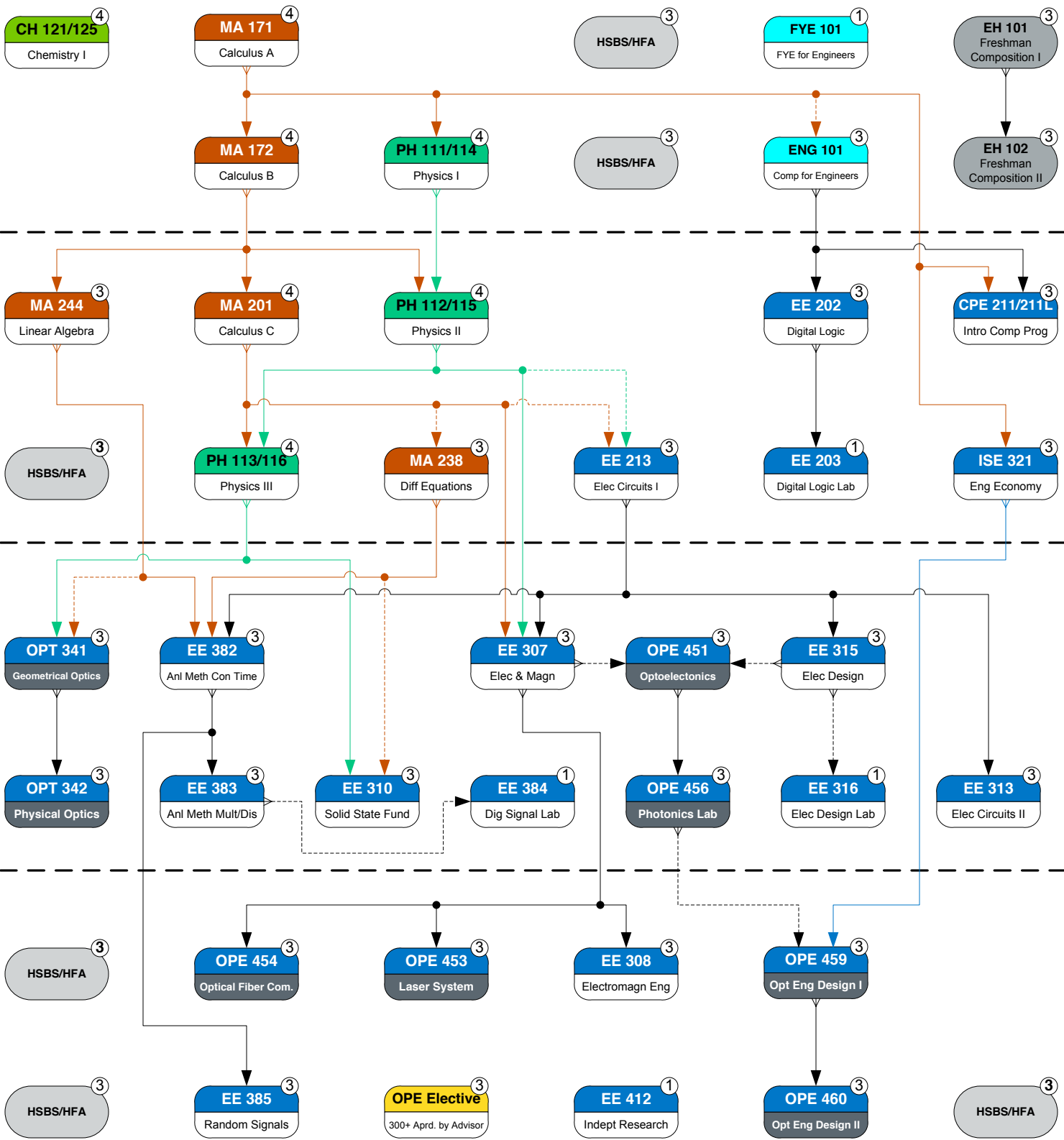
# Optical Engineering 2015/2016 (129 Hours)

First Year

Second Year

Third Year

Fourth Year



<b>Legend</b> Updated: 5/6/15	Mathematics	First Year Engineering	Freshman Composition	Credit Hours
	Physics	Optical Engineering Option	History, Social & Behavioral Science	Prerequisite
	Chemistry / Biology	Engineering Elective	Offered only in semester listed	Prereq w/concurrency

**Electrical and Computer Engineering Department: 4-Year Rolling Class Schedule, Fall 2015 - Spring 2019\***

	Fall 2015	Anticipated Sections	Spring 2016	Anticipated Sections	Fall 2016	Spring 2017	Fall 2017	Spring 2018	Fall 2018	Spring 2019
<b>CPE 112**</b> Intro to Comp Prog in Eng	Y	1	Y	1	N	N	N	N	N	N
<b>CPE 211**</b> Intro to Comp Prog in Eng	N	0	N	0	Y	Y	Y	Y	Y	Y
<b>CPE 212</b> Fund of Software Eng	Y	1	Y	1	Y	Y	Y	Y	Y	Y
<b>CPE 221</b> Computer Organization	Y	1	Y	1	Y	Y	Y	Y	Y	Y
<b>CPE 322</b> Digital Hardware Design	N	0	Y	1	N	Y	N	Y	N	Y
<b>CPE 323</b> Intro Embedded Comp Sys	Y	1	E	1	Y	E	Y	E	Y	E
<b>CPE 324</b> Digital Hardware Des Lab	N	0	Y	4	N	Y	N	Y	N	Y
<b>CPE 325</b> Embedded Comp Sys Lab	Y	5	E	6	Y	E	Y	E	Y	E
<b>CPE 353</b> Software Design/Eng	Y	2	N	0	Y	N	Y	N	Y	N
<b>CPE 381</b> Fund of Signals/Systems	Y	1	Y	1	E	Y	E	Y	E	Y
<b>CPE 412</b> Intro to Parallel Prog	Y	1	N	0	Y	N	Y	N	Y	N



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<b>CPE 423</b> Hardwr/Softwr Co-Design	Y	1	N	0	N	N	Y	N	N	N
<b>CPE 426</b> Modeling/Synthesis	N	0	D	1	D	D	D	D	D	D
<b>CPE 427**</b> VLSI Design I	N	0	N	0	Y	N	N	N	Y	N
<b>CPE 428**</b> VLSI Design II	N	0	D	0	D	D	D	D	D	D
<b>CPE 431</b> Intro to Comp Architecture	Y	2	N	0	Y	N	Y	N	Y	N
<b>CPE 434</b> Operating Systems	Y	1	Y	0	N	Y	N	Y	N	Y
<b>CPE 435</b> Operating Systems Lab	Y	2	Y	0	N	Y	N	Y	N	Y
<b>CPE 436</b> Internals of Mod Oper Sys	N	0	N	0	N	Y	N	N	N	Y
<b>CPE 438</b> Real Time/Embedded Sys	N	0	D	0	D	D	D	D	D	D
<b>CPE 448</b> Intro to Comp Networks	Y	1	Y	1	E	Y	E	Y	E	Y
<b>CPE 449**</b> Intro to Info Assurance Eng	Y	1	N	0	Y	N	Y	N	Y	N
<b>CPE 453</b> Senior Software Studio	N	0	Y	1	N	Y	N	Y	N	Y
<b>CPE 495</b> Comp Eng Design I	Y	1	N	0	Y	N	Y	N	Y	N



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<b>CPE 496</b> Comp Eng Design II	N	0	Y	2	N	Y	N	Y	N	Y
<b>EE 100**</b> Fund Elec/Comp/Opt Eng	Y	1	Y	1	N	N	N	N	N	N
<b>EE 202</b> Intro to Digital Logic Des	Y	2	Y	2	Y	Y	Y	Y	Y	Y
<b>EE 203</b> Digital Logic Design Lab	Y	3	Y	4	Y	Y	Y	Y	Y	Y
<b>EE 213</b> Electrical Circuit Analysis I	Y	4	Y	4	Y	Y	Y	Y	Y	Y
<b>EE 223</b> Design/Analysis using Comp	N	0	N	0	N	Y	Y	Y	Y	Y
<b>EE 307</b> Electricity/Magnetism	Y	1	E	1	Y	E	Y	E	Y	E
<b>EE 308</b> Electromagnetic Eng	Y	1	Y	1	E	Y	E	Y	E	Y
<b>EE 310</b> Solid State Fundamentals	Y	1	E	1	Y	E	Y	E	Y	E
<b>EE 313</b> Electrical Circuit Analysis II	Y	1	E	1	Y	E	D	D	D	D
<b>EE 315</b> Intro Elec Analysis/Design	Y	1	E	1	Y	E	Y	E	Y	E
<b>EE 316</b> Electronic Meas/Devices Design Lab	Y	5	Y	5	E	Y	E	Y	E	Y
<b>EE 382</b> Analytical Meth Contin Time Sys	Y	1	E	1	Y	E	Y	E	Y	E



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<b>EE 383</b> Analytical Meth Multi/Discr Time Sys	Y	1	Y	1	E	Y	E	Y	E	Y
<b>EE 384</b> Digital Signal Processing Lab	Y	3	Y	2	E	Y	E	Y	E	Y
<b>EE 385</b> Random Signals/Noise	Y	1	Y	1	E	Y	E	Y	E	Y
<b>EE 386</b> Intro to Control/Robotic Systems	Y	1	Y	1	E	Y	E	Y	E	Y
<b>EE 401</b> Digital Signal Proc Architectures	N	0	D	0	D	D	D	D	D	D
<b>EE 411</b> Electric Power Systems	Y	1	Y	1	N	Y	N	Y	N	Y
<b>EE 414</b> Analog and Digital Filter Design	N	0	Y	1	N	Y	N	Y	N	Y
<b>EE 416</b> Electronics II	N	0	Y	1	N	Y	N	Y	N	Y
<b>EE 423</b> Communication Sys/Simulation	Y	1	N	0	N	N	Y	N	N	N
<b>EE 424</b> Intro to Data Comm Networks	Y	1	N	0	Y	N	Y	N	Y	N
<b>EE 426</b> Communication Theory	N	0	Y	1	N	Y	N	Y	N	Y
<b>EE 427**</b> VLSI Design I	N	0	D	0	D	D	D	D	D	D
<b>EE 428**</b> VLSI Design II	N	0	D	0	D	D	D	D	D	D



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<b>EE 436</b> Digital Electronics	Y	1	N	0	Y	N	Y	N	Y	N
<b>EE 437</b> Electr Manufacturing Processes	N	0	N	0	N	N	N	N	N	N
<b>EE 451</b> Optoelectronics	Y	1	N	0	Y	N	Y	N	Y	N
<b>EE 453</b> Laser Systems	Y	1	N	0	Y	N	Y	N	Y	N
<b>EE 454</b> Optical Fiber Communications	N	0	Y	1	N	Y	N	Y	N	Y
<b>EE 486</b> Intro to Modern Control Systems	N	0	D	0	D	D	D	D	D	D
<b>EE 494</b> EE Design Projects	Y	2	Y	2	E	Y	E	Y	E	Y
<b>OPE 441</b> Optical Systems Design	N	0	D	0	D	D	D	D	D	D
<b>OPE 442</b> Interference and Diffraction	N	0	D	0	D	D	D	D	D	D
<b>OPE 451</b> Optoelectronics	Y	1	N	0	Y	N	Y	N	Y	N
<b>OPE 453</b> Laser Systems	Y	1	N	0	Y	N	Y	N	Y	N
<b>OPE 454</b> Optical Fiber Communications	N	0	Y	1	N	Y	N	Y	N	Y
<b>OPE 456</b> Photonics Lab	N	0	Y	1	N	Y	N	Y	N	Y



<b>OPE 459</b> Optical Engineering Design I	Y	1	N	0	Y	N	Y	N	Y	N
<b>OPE 460</b> Optical Engineering Design II	Y	1	Y	1	N	Y	N	Y	N	Y

**Legend**

Y	Course will be offered in designated term.
E	Course will likely be offered in designated term, but availability will be determined by faculty availability and budget.
N	Course will not be offered in designated term.
D	Course may be made available given appropriate demand or interest.

\* UAH College of Engineering will make every effort to adhere to the class plan schedule, but it reserves the right to make necessary adjustments based on budget and faculty availability.

\*\* Course has a required lab section.