

ECE - Optoelectronics Track

Non-MECOP Plan

Revised: 07/08/2008

	Fall	Winter	Spring	Summer
Freshman	MTH 251*	MTH 252*	MTH 254*	
	ECE 111	ECE 112*	CS 161	
	CH 201*	MTH 231	ECE 271	
	WR 121*	Perspective	ECE 272	
		Lifetime Fitness	PH 211*	
Total	13	17	16	0
Sophomore	MTH 256*	MTH 306*	MTH 255	
	PH 212*	PH 213*	WR 327	
	ENGR 201*	ENGR 202*	ENGR 203	
	COMM 111/114*	CS 162	CS 261	
			<i>Apply to Pro</i>	
Total	14	15	14	0
Junior	ECE 375	ECE 322	ECE 323	
	ECE 351	ECE 352	ECE 353	
	ECE 390	ECE 391	CS 372	
	Bio+Lab	Perspective	PH 314	
	Total	15	15	15
Senior	ECE 441	ECE 442	ECE 443	
	ECE 482	<i>PH 481/ECE417/423/499-M/ChE44</i>	ECE 483	
	ECE 416	ENGR 390	<i>ECE 418/499-S/IE432/PH475</i>	
	<i>ECE 422/CH411</i>	DPD	Synthesis	
	Perspective	Perspective	Synthesis	
	Total	16	15	15

Total Credits: 180

Track Description
 Optoelectronics is the study and design of electronic devices that interact with light. Examples of such devices include the semiconductor lasers used in CD players and fiber optic communications as well as lasers used in medicine and micromachining and the image sensors found in digital cameras. Students in this track will learn the basics of semiconductor electronic devices as well as optics, lasers, guided-wave optics, and circuit design.

MECOP Plan

	Fall	Winter	Spring	Summer
Freshman	MTH 251*	MTH 252*	MTH 254*	
	ECE 111	ECE 112*	CS 161	
	CH 201*	MTH 231	ECE 271	
	WR 121*	Perspective	ECE 272	
		Lifetime Fitness	PH 211*	
Total	13	17	16	0
Sophomore	MTH 256*	MTH 306*	MTH 255	
	PH 212*	PH 213*	WR 327	
	ENGR 201*	ENGR 202*	ENGR 203	
	COMM 111/114*	CS 162	CS 261	
			<i>Apply to Pro & MECOP</i>	
Total	14	15	14	0
Junior	ECE 375	ECE 322	MECOP Internship	MECOP Internship
	ECE 351	ECE 352		
	ECE 416	ECE 353		
	ENGR 407	ECE 391		
	ECE 390			
Total	15	15		
Senior 1	ECE 441	ECE 442	ECE 443	
	ECE 323	ECE/CS 372	ECE 483	
	ECE 482	<i>PH 481/ECE417/423/499-M/ChE44</i>	<i>ECE 418/499-S/IE432/PH475</i>	
	ENGR 390	<i>PH 481/ECE417/423/499-M/ChE44</i>	DPD	
	ENGR 407	Perspective	PH 314	
Total	14	17	16	0
Senior 2		Bi+Lab		
		Perspective		
		Perspective		
		Synthesis		
		Synthesis		
	Total	16		

Total Credits: 182

Employment
 Career opportunities include large consumer electronics companies (DVD players, digital cameras, digital projects, displays, etc.), telecom fiber companies (fiber to and within the home), and many small companies specializing in optical devices (sensors, sources, modulators) for diverse applications in civilian and military technology.

Track Specific Courses
 (#) = number of credits
Required (19)
ECE 390
PH 314
ECE 317/416
ECE 482
ECE 483

Restricted Electives (11);
Select at least three courses from:
PH 481 *CHE 444*
ECE 417 *PH 475*
ECE 418
ECE 422
ECE 423
ECE 499-Sensors
ECE 499-Engr Magnetics
CH 411
IE 432

Bolded courses in Freshman and Sophomore years should be completed prior to beginning the professional program
Bolded and Italized courses should be completed prior to first MECOP internship