

ECE - High Frequency Systems & Applied Electromagnetics Track

Revised: 03/10/2009

Non-MECOP Plan

This guide is for planning purposes only. Course offerings subject to change.

	Fall	Winter	Spring	Summer	
Freshman	MTH 251*	4 MTH 252*	4 MTH 254*	4	
	ECE 111	3 ECE 112*	3 CS 161	4	
	CH 201*	3 MTH 231	4 ECE 271	3	
	WR 121*	3 Perspective	3 ECE 272	1	
		3 Lifetime Fitness	3 PH 211*	4	
	Total 13	Total 17	Total 16	Total 0	
Sophomore	MTH 256*	4 MTH 306*	4 MTH 255	4	
	PH 212*	4 PH 213*	4 WR 327	3	
	ENGR 201*	3 ENGR 202*	3 ENGR 203	3	
	COMM 111/114*	3 CS 162	4 CS 261	4	
			<i>Apply to Pro</i>		
	Total 14	Total 15	Total 14	Total 0	
Junior	ECE 375	4 ECE 322	4 ECE 323	4	
	ECE 351	3 ECE 352	4 ECE 353	3	
	ECE 390	4 ECE 391	4 CS 372	4	
	Bio+Lab	4 Perspective	3 ENGR 390	3	
		Total 15	Total 15	Total 14	Total 0
Senior	ECE 441	2 ECE 442	2 ECE 443	2	
	ECE 416	3 ECE331/423/462/464/499-M	4 ECE 483/484* or 418/499	3	
	ECE 482*	4 ECE331/423/462/464/499-M	4 ECE 485 (not offered)	4	
	ECE 422/PH314	4 DPD	3 CS 391	3	
	Perspective	3 Perspective	3 Contemporary Global Issue	3	
		Total 16	Total 16	Total 15	Total 0

Total Credits: 180

MECOP Plan

	Fall	Winter	Spring	Summer
Freshman	MTH 251*	4 MTH 252*	4 MTH 254*	4
	ECE 111	3 ECE 112*	3 CS 161	4
	CH 201*	3 MTH 231	4 ECE 271	3
	WR 121*	3 Perspective	3 ECE 272	1
		3 Lifetime Fitness	3 PH 211*	4
	Total 13	Total 17	Total 16	Total 0
Sophomore	MTH 256*	4 MTH 306*	4 MTH 255	4
	PH 212*	4 PH 213*	4 WR 327	3
	ENGR 201*	3 ENGR 202*	3 ENGR 203	3
	COMM 111/114*	3 CS 162	4 CS 261	4
			<i>Apply to Pro & MECOP</i>	
	Total 14	Total 15	Total 14	Total 0
Junior	ECE 375	4 ECE 322	4	
	ECE 351	3 ECE 352	4	
	ECE 416	3 ECE 353	3 MECOP Internship	MECOP Internship
	ENGR 407	1 ECE 391	4	
	ECE 390	4		
	Total 15	Total 15		
Senior 1	ECE 441	2 ECE 442	2 ECE 443	2
	ECE 323	4 ECE/CS 372	4 ECE 483/484* or 418/499	4
	ECE 422/PH314	4 ECE331/464/499-M	4 ECE 485 (not offered)	4
	ECE 482*	4 ECE331/464/499-M	3 Perspective	3
	ENGR 407	1 Perspective	3 Perspective	3
	Total 15	Total 17	Total 16	MECOP Internship
Senior 2		ENGR 390	3	
		Bi+Lab	4	
		CS 391	3	
		Contemporary Global Issue	3	
		DPD	3	
	Total 16	Total 16	Total 0	

Total Credits: 183

Track Description

High Frequency Systems and Applied Electromagnetics pertains to the creation and propagation of radio frequency (RF), microwave and optical signals. This field covers antennas, microwave and optical waveguides, how electromagnetic fields propagate through space, and very high frequency electronic devices. As computer processing speeds (clock rates) get faster and faster, every electrical path on a chip begins to act like an antenna, causing loss and cross-talk between lines and components. These problems are addressed in this field.

Employment

Employment opportunities include companies dealing with high frequency signals and simulation software at these frequencies, and companies making or designing high-speed electronic devices and circuits.

Track Specific Courses

(#) = number of credits

Required (15)

ECE 390 F

ECE 317/416 F

ECE 485 N/A

*ECE 482/ECE 483/ECE 484

Restricted Electives (15);

Select at least three

courses from:

ECE 331 W

ECE 418 Sp

ECE 422 F

ECE 423 W

ECE 461 W

ECE 462 Sp

ECE 464 W

ECE 474 Sp

ECE 482 F

ECE 483 Sp

ECE 484 N/A

ECE 499-Engr Magnetics W

ECE 499-Sensors Sp

PH 314 F/Sp

* One of the following courses is required (ECE 482, ECE 483, or ECE 484)

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

Bolded and Italicized courses should be completed prior to first MECOP internship