

ECE - Energy Systems 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
	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>	
	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 211	3
		15 Total	15 Total	14 Total
Senior	ECE 441	2 ECE 442	2 ECE 443	2
	ECE 431	4 ECE 331	4 <i>ECE 433/432/438</i>	4
	ENGR 212	3 <i>DPD/ECE 451/464</i>	3 <i>ECE 433/432/438</i>	4
	<i>DPD/ECE 451/473/530/550</i>	4 ENGR 390	3 CS 391	3
	Perspective	3 Perspective	3 Contemporary Global Issue	3
		16 Total	15 Total	16 Total

Total Credits: 180

Track Description
Energy Systems encompasses the disciplines of power electronics, electric machines and drives, power systems and renewables. These disciplines must work together to generate, deliver, and condition power. Energy Systems covers everything between power generation and the end user, including: power electronic converters (e.g. power supplies); electric motors and generators (e.g. wind, wave, and other renewable energy generators); motor drives (e.g. hybrid and electric vehicles); and transmission systems (e.g. transformers and transmission lines).

MECOP Plan

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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
	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>	
	14 Total	15 Total	14 Total	0
Junior	ECE 375	4 ECE 322	4	
	ECE 351	3 ECE 352	4	
	ENGR 390	3 ECE 353	3 MECOP Internship	MECOP Internship
	ENGR 407	1 ECE 391	4	
		4		
	15 Total	15 Total		
Senior 1	ECE 441	2 ECE 442	2 ECE 443	2
	ECE 323	4 ECE 331	4 <i>ECE 433/432/438</i>	4
	ECE 431	4 ENGR 212	3 <i>ECE 433/432/438</i>	4
	ENGR 211	3 ECE/CS 372	4 DPD	3
	ENGR 407	1 Perspective	3 Perspective	3
		14 Total	16 Total	16 Total
Senior 2		<i>ECE 451/464</i>	4	
		BI + Lab	4	
		Perspective	3	
		CS 391	3	
		Contemporary Global Issue	3	
		17 Total		

Total Credits: 182

Employment
Employment opportunities include companies with power electronics and power management needs; industrial positions for expertise in machines, drives, controllers and components; and electric utilities nationwide and locally.

Track Specific Courses
(#) = number of credits
Required (18)
ENGR 211 F/W/Sp/Su
ENGR 212 F/W/Sp/Su
ECE 331 W
ECE 390 F
ECE 431 F

Restricted Electives (12);
Select at least three courses from:
ECE 432 Sp (alternate)
ECE 433 Sp
ECE 438 Sp (alternate)
ECE 451 F/W
ECE 464 W
ECE 473 F
ECE 530 F (alternate)
ECE 550 F
ME grad control courses

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