

Energy Systems Engineering (ESE)

Revised 03/24/2014

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

	Fall	Winter	Spring	Summer
Freshman	MIME 101	ENGR 112 (Pre-Core)	DPD	
	CH 201 (Pre-Core)	CH 202	PH 211 (Pre-Core)	
	MTH 251 (Pre-Core)	MTH 252 (Pre-Core)	MTH 254 (Pre-Core)	
	WR 121 (Pre-Core)	HHS 231 + PAC	COMM 111 or 114 (Pre-Core)	
		ECON 201 (Pers - SPI)	CH 205	
Total	13	Total	17	Total
Sophomore	ENGR 211	ENGR 201 (Pre-Core)	ENGR 212 (Pre-Core)	
	BA 215	IE 212 (Before Pro)	ENGR 202	Apply to Pro by July 1
	MTH 256 (Pre-Core)	MTH 306 (Pre-Core)	ST 314	
	PH 212 (Pre-Core)	PH 213 (Pre-Core)	WR 327	
			Restricted Elective (3xx)	
Total	15	Total	15	Total

Total Credits: 90

Students admitted into the Energy Systems Engineering Professional Program must relocate to the Cascades Campus (Bend, Oregon) in order to complete their professional program requirements.

OSU Cascades - Bend, Oregon (Non-MECOP)

	Fall	Winter	Spring	Summer
Junior	SUS 350 (Synthesis - CGI)	ESE 355	ESE 360	
	ME 311	ME 312	Restricted Elective (3xx)	
	IE 425	IE 415	BA 352	
	BA 360	BA 357	Perspective (Bio)	
	Total	16	Total	15
Senior	ESE 470	ESE 4xx/Storage	ESE 450	
	ME 331	ME 332	Perspective (CD)	
	Perspective (LA)	MGMT 364	Perspective (WC)	
	ESE 497	ESE 497	Synthesis (STS)	
	Total	15	Total	12

Total Credits: 180

Major Description

Energy engineers oversee complex energy conversion and distribution systems, work to improve energy storage systems, and manage energy efficiency in building, manufacturing, and processing systems. They assess the secondary effects of energy use looking at local environmental impact, regional and national economic impact, and global climate change.

Restricted Electives

6 Total Required
 3 cr can be at 2xx:
 ENGR 248 (3)
 ENGR 213 (3)
 ENGR 203 (3)

Electives 3xx or higher:
 ME 382 (4)
 ENGR 321 (3)

Pre-Core - Courses used to calculate pre-core GPA. These courses MUST be complete prior to admission to the pro-program.

Before Pro - Courses STRONGLY RECOMMENDED before starting pro-program. Usually pre-requisites for pro-courses.

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

Bolded and Italized courses should be completed prior to second MECOP internship

Energy Systems Engineering (ESE) 2-Year Program Guides for MTH 103, MTH 111, and MTH 112

Revised 03/24/2014

These 2-year program guides show the typical curriculum for students starting in Math 103, MTH 111, or MTH 112. Following these guides will keep you on track for applying to the Professional and MECOP programs. Please contact your academic advisor if you have any questions.

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If Starting in MTH 103

	Fall	Winter	Spring	Summer	
Freshman	WR 121 (Pre-Core)	3 HHS 231 + PAC	3 COMM 111 or 114 (Pre-Core)	3	
	MTH 103	4 MTH 111	4 MTH 112	4	
	Perspective (WC)	3 Bio + Lab	4 ECON 201 (Pers - SPI)	4	
	Perspective (CD)	3 PAC	1 Difference, Power, Disc	3	
Total	13	Total	12	Total	14
Sophomore	ENGR 111	3 ENGR 112 (Pre-Core)	3 BA 215	4	
	CH 201 (Pre-Core)	3 CH 202 (Before Pro)	3 CH 205	1	
	MTH 251 (Pre-Core)	4 MTH 252 (Pre-Core)	4 MTH 254 (Pre-Core)	4	
	Unrestricted Electives	4 Perspective (LA)	3 PH 211 (Pre-Core)	4	
	Total	14	Total	13	Total
Second Sophomore	ENGR 211	3 ENGR 201 (Pre-Core)	3 ENGR 212 (Pre-Core)	3	
	Unrestricted Electives	3 IE 212 (Before Pro)	4 ENGR 202	3	
	MTH 256 (Pre-Core)	4 MTH 306 (Pre-Core)	4 ST 314	3	Apply to Pro by July 1
	PH 212 (Pre-Core)	4 PH 213 (Pre-Core)	4 WR 327	3	
			Restricted Elective	3	
	Total	14	Total	15	Total
			Apply to MECOP by April 10		
Total	14	Total	15	Total	15

Major Description

Energy engineers oversee complex energy conversion and distribution systems, work to improve energy storage systems, and manage energy efficiency in building, manufacturing, and processing systems. They assess the secondary effects of energy use looking at local environmental impact, regional and national economic impact, and global climate change.

If Starting in MTH 111

	Fall	Winter	Spring	Summer	
Freshman	ENGR 111	3 ENGR 112 (Pre-Core)	3 DPD	3 MTH 252 - (Pre-Core)	4
	CH 201 (Pre-Core)	3 CH 202	3 CH 205	1 PH 211 - (Pre-Core)	4
	MTH 111	4 MTH 112	4 MTH 251 (Pre-Core)	4	
	WR 121 (Pre-Core)	3 HHS 231 + PAC	3 COMM 111 or 114 (Pre-Core)	3	
	Total	13	Total	17	Total
Sophomore	ENGR 211	3 ENGR 201 (Pre-Core)	3 ENGR 212 (Pre-Core)	3	
	BA 215	4 IE 212 (Before Pro)	4 ENGR 202	3	
	MTH 254 (Pre-Core)	4 MTH 256 (Pre-Core)	4 ST 314	3	Apply to Pro by July 1
	PH 212 (Pre-Core)	4 PH 213 (Pre-Core)	4 WR 327	3	
			MTH 306 (Pre-Core)	4	
	Total	15	Total	15	Total
			Apply to MECOP by April 10		
Total	15	Total	15	Total	16

If Starting in MTH 112

	Fall	Winter	Spring	Summer	
Freshman	ENGR 111	3 ENGR 112 (Pre-Core)	3 DPD	3 MTH 254 - (Pre-Core)	4
	CH 201 (Pre-Core)	3 CH 202	3 CH 205	1	
	MTH 112	4 MTH 251 (Pre-Core)	4 MTH 252 (Pre-Core)	4	
	WR 121 (Pre-Core)	3 HHS 231 + PAC	3 COMM 111 or 114 (Pre-Core)	3	
	Total	13	Total	17	Total
Sophomore	ENGR 211	3 ENGR 201 (Pre-Core)	3 ENGR 212 (Pre-Core)	3	
	BA 215	4 IE 212 (Before Pro)	4 ENGR 202	3	
	MTH 256 (Pre-Core)	4 MTH 306 (Pre-Core)	4 ST 314	3	Apply to Pro by July 1
	PH 212 (Pre-Core)	4 PH 213 (Pre-Core)	4 WR 327	3	
			Restricted Elective	3	
	Total	15	Total	15	Total
			Apply to MECOP by April 10		
Total	15	Total	15	Total	15

Pre-Core - Courses used to calculate pre-core GPA. These courses MUST be complete prior to admission to the pro-program.
Before Pro - Courses STRONGLY RECOMMENDED before starting pro-program. Usually pre-requisites for pro-courses.