

# MECHANICAL ENGINEERING TRANSFER, AS OSU ADVISING GUIDE

Prerequisites and Course Availability per Term  
(for complete information, see 2016-2017 UCC Catalog)

REVISED 12/04/16

	UCC Course No. and Course Name	Term Offered				Credits	Prerequisites/Notes		OSU Course No.	Credits
		F	W	S	S					
Term 1	CH 221 <sup>E</sup>	General Chemistry I /Lec/Lab/Rec	x				5	MTH 111	CH 201 / CH 231 Lec & CH 261 Lab	4
	ENGR 111	Engineering Orientation I	x				3	MTH 65	MIME 101	2
	MTH 251 <sup>E</sup>	Calculus I	x	x			5	MTH 112	MTH 251	4
	WR 121 <sup>E</sup>	English Composition: Intro to Argument	x	x	x	x	4	WR 115 or Placement Test	WR 121	3
	DRF 111	CAD I (See Note 2)	x							
Term 2	CH 222	General Chemistry II		x			5	CH 221	CH 202+CH 205 Lab / CH 232 Lec & CH 262 Lab	4
	ENGR 112 <sup>E</sup>	Engineering Orientation II		x			3	ENGR 111	ENGR 112	3
	MTH 252 <sup>E</sup>	Calculus II		x	x		4	MTH 251	MTH 252	4
	HPE 295	Wellness & Health	x	x	x	x	3		HHS 231 & HHS 241	3
	Perspectives	General Ed Req - See Advisor	x	x	x	x	3		Perspectives Elective - See Advisor	3
Term 3	Perspectives	Biological Science With Lab			x		4		Biological Science Elective	4
	ENGR 245	Engineering Graphics			x		3		ENGR 248	3
	MTH 253 <sup>E</sup>	Calculus III			x		4		UCC MTH 253 & MTH 261 = OSU MTH 306	4
	MTH 261 <sup>E</sup>	Linear Algebra			x		2	MTH 111 Algebra	See note above for MTH 306	
	SP 111 <sup>E</sup> or SP 112 <sup>E</sup>	Fundamentals of Public Speaking or Persuasive Speech	x	x	x		4	WR 095	COMM 111 or COMM 114	3
Summer										
Term 4	ENGR 201	Electrical Fundamentals I	x				4	MTH 251 Co-requisite	ENGR 201	3
	ENGR 211 <sup>E</sup>	Statics	x				4	MTH 112	ENGR 211	3
	MTH 254 <sup>E</sup>	Vector Calculus I	x				4	MTH 252	MTH 254	4
	PH 211 <sup>E</sup>	Physics I w/Calculus	x				5	MTH 251 Co-requisite	PH 211 & PH 221 Rec	4
	ECON 201 or ECON 202	Economics	x	x	x		3	WR 121-123 & MTH 111	ECON 201 or ECON 202 - SP&I	3
Term 5	ENGR 202	Electrical Fundamentals II		x			4	ENGR 201	ENGR 202	4
	ENGR 212 <sup>E</sup>	Dynamics		x			4	ENGR 211	ENGR 212	4
	MTH 256 <sup>E</sup>	Differential Equations		x			4	MTH 252	MTH 256	4
	PH 212 <sup>E</sup>	Physics II w/Calculus		x			5	PH 211	PH 212 & PH 222 Rec	4
Term 6	ENGR 213	Strength of Materials			x		4	ENGR 211	ENGR 213	4
	MTH 265	Statistics for Engineers & Scientists			x		4	MTH 251	ST 314 - See Note 3	4
	PH 213 <sup>E</sup>	Physics III w/Calculus			x		5	PH 212	PH 213 & PH 223 Rec	4
	WR 227	Technical Report Writing	x	x	x	x	4	WR 122	WR 327	3
<b>TOTAL DEGREE CREDITS</b>							106			92

\*A grade of "C" or better is required for all courses.

**Program Advisor:**

**NOTES:**

1. <sup>E</sup>Required by OSU College of Engineering for entry into the Pro Program
2. Recommend student take DRF 112 CAD I (AutoCAD) during all fall quarter of Year 1 and potentially take DRF 112 CAD II (AutoCAD). Autocad courses will increase opportunities for paid summer internship and acceptance into MECOP, and help with ENGR 245 (SolidWorks).
3. Students can take 5 Perspective Electives for Humanities/Social Science that transfer to OSU as General Ed requirements. See Advisor.  
Link to OSU/UCC General Ed Transfer for Bac Core Courses is <http://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-umpqua-community-college>
4. ENGR 390 Engineering Economics is not required for Pro-School. Can either be taken during Pro-School at OSU or online through OSU
5. Consider SOILS 205/206 as the Biological Elective

# Mechanical Engineering (ME) - MECOP Program Guide

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

	Fall	Winter	Spring	Summer
Freshman	<b>MIME 101</b> Intro to MIME	<b>ENGR 248</b> Engr Graphics - 3D Modeling	<b>ENGR 112</b> Intro Engr Computing	
	<b>CH 201</b> <b>Chem for Engineers</b>	<b>CH 202</b> Chem for Engineers	<b>CH 205</b> Chem for Engineers Lab	
	<b>MTH 251</b> <b>Differential Calculus</b>	<b>MTH 252</b> <b>Integral Calculus</b>	<b>MTH 254</b> <b>Vector Calculus</b>	
	<b>WR 121</b> <b>English Comp</b>	<b>HHS 231 + PAC</b> Lifetime Fitness & PAC	<b>COMM 111 or 114</b> <b>Communication</b>	
	<b>Perspective (WC)</b>	<b>Perspective (CD)</b>	<b>PH 211</b> <b>Physics w/Calculus I</b>	
	Total	Total	Total	Total
Sophomore	<b>ENGR 211</b> <b>Statics</b>	<b>ENGR 212</b> <b>Dynamics</b>	<b>ENGR 213</b> Strength of Materials	
	<b>ECON 201 or ECON 202</b> Micro or Maco Econ	<b>ENGR 201</b> Electrical Fundamentals I	<b>ENGR 202</b> Electrical Fundamentals II	
	<b>MTH 256</b> <b>Applied Differential Equations</b>	<b>MTH 306</b> <b>Matrix &amp; Power Series</b>	<b>ST 314</b> <b>Statistics for Engineers</b>	
	<b>PH 212</b> <b>Physics w/Calculus II</b>	<b>PH 213</b> <b>Physics w/Calculus III</b>	<b>WR 327</b> <i>Technical Writing</i>	
		<b>Perspective (LA)</b>	<b>ENGR 391</b> <b>Engr Econ &amp; Proj Mgt</b>	
	Total	Total	Total	Total
Junior	<i>ENGR 407</i> <i>MECOP Seminar</i>	<i>MATS 321</i> <i>Intro to Material Sci</i>	<b>MECOP Internship</b>	
	<i>ME 250</i> <i>Intro to Mfg Processes</i>	<i>ME 317</i> <i>Intermediate Dynamics</i>		
	<i>ME 311</i> <i>Intro to Thermal-Fluids</i>	<i>ME 331</i> <i>Intro to Fluid Mechanics</i>		
	<i>ME 316</i> <i>Mechanics of Materials</i>	<i>ME 383</i> <i>Mechanical Component Design</i>		
	<i>ME 373</i> <i>Mechanical Engr Methods</i>			
	<i>ME 382</i> <i>Intro to Design</i>			
Total	Total			
Senior	<b>ME 332</b> <u>Heat Transfer</u>	Difference, Power & Discrimination	<b>MECOP Internship</b>	
	<b>ME 430</b> <u>Systems Dynamics &amp; Control</u>	<b>MATS 322</b> <u>Mechanical Properties of Materials</u>		
	ME Restricted Elective	<b>ME 312</b> <u>Thermodynamics</u>		
	<b>Perspective (Bio + Lab)</b>	ME Restricted Elective		
Total	Total			
Senior	<i>ME 451</i> <i>Intro to Instrumentation &amp; Measurement Systems</i>	<i>ME 498</i> <i>MIME Capstone Design</i>	<b>Bold Courses</b> in gray cells are used in the pre-core GPA calculation and must be completed prior to taking Pro courses.  <i>Italic Courses</i> in blue cells must be completed prior to FIRST MECOP internship  <u>Underlined Courses</u> in orange cells must be completed prior to SECOND MECOP Internship	
	<i>ME 497</i> <i>MIME Capstone Design</i>	ME Restricted Elective		
	<i>Synthesis (CGI)</i>	ME Restricted Elective		
	<i>Synthesis (STS)</i>			
Total	Total			

# Mechanical Engineering (ME) - Non-MECOP Program Guide

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

	Fall	Winter	Spring	Summer			
Freshman	MIME 101 Intro to MIME	3	ENGR 248 Engr Graphics - 3D Modeling	3	<b>ENGR 112</b> <b>Intro Engr Computing</b>	3	
	<b>CH 201</b> <b>Chem for Engineers</b>	3	CH 202 Chem for Engineers	3	CH 205 Chem for Engineers Lab	1	
	<b>MTH 251</b> <b>Differential Calculus</b>	4	<b>MTH 252</b> <b>Integral Calculus</b>	4	<b>MTH 254</b> <b>Vector Calculus</b>	4	
	<b>WR 121</b> <b>English Comp</b>	3	HHS 231 + PAC Lifetime Fitness & PAC	3	<b>COMM 111 or 114</b> <b>Communication</b>	3	
	Perspective (WC)	3	Perspective (CD)	3	<b>PH 211</b> <b>Physics w/Calculus I</b>	4	
Total	16	Total	16	Total	15	Total	0
Sophomore	<b>ENGR 211</b> <b>Statics</b>	3	<b>ENGR 212</b> <b>Dynamics</b>	3	ENGR 213 Strength of Materials	3	
	ECON 201 or ECON 202 Micro or Maco Econ	4	ENGR 201 Electrical Fundamentals I	3	ENGR 202 Electrical Fundamentals II	3	
	<b>MTH 256</b> <b>Applied Differential Equations</b>	4	<b>MTH 306</b> <b>Matrix &amp; Power Series</b>	4	ST 314 Statistics for Engineers	3	
	<b>PH 212</b> <b>Physics w/Calculus II</b>	4	<b>PH 213</b> <b>Physics w/Calculus III</b>	4	WR 327 Technical Writing	3	
			Perspective (LA)	3	ENGR 391 Engr Econ & Proj Mgt	3	
Total	15	Total	17	Total	15	Total	0
Junior	MATS 321 Intro to Material Sci	4	Difference, Power & Discrimination	3	MATS 322 Mechanical Properties of Materials	3	
	ME 311 Intro to Thermal-Fluids	4	ME 250 Intro to Mfg Processes	1	ME 312 Thermodynamics	4	
	ME 317 Intermediate Dynamics	4	ME 316 Mechanics of Materials	3	ME 331 Intro to Fluid Mechanics	4	
	Synthesis (CGI)	3	ME 373 Mechanical Engr Methods	3	ME 383 Mechanical Component Design	4	
			ME 382 Intro to Design	4			
Total	15	Total	14	Total	15	Total	0
Senior	ME 332 Heat Transfer	4	ME 497 MIME Capstone Design	4	ME 498 MIME Capstone Design	4	
	ME 430 Systems Dynamics & Control	4	ME Restricted Elective	4	ME Restricted Elective	3	
	ME 451 Intro to Instrumentation & Measurement Systems	4	ME Restricted Elective	4	Synthesis (STS)	3	
	ME Restricted Elective	4	Perspective (Bio + Lab)	4			
Total	16	Total	16	Total	10	Total	0

**Bold Courses** in gray cells are used in the pre-core GPA calculation and must be completed prior to taking Pro courses.

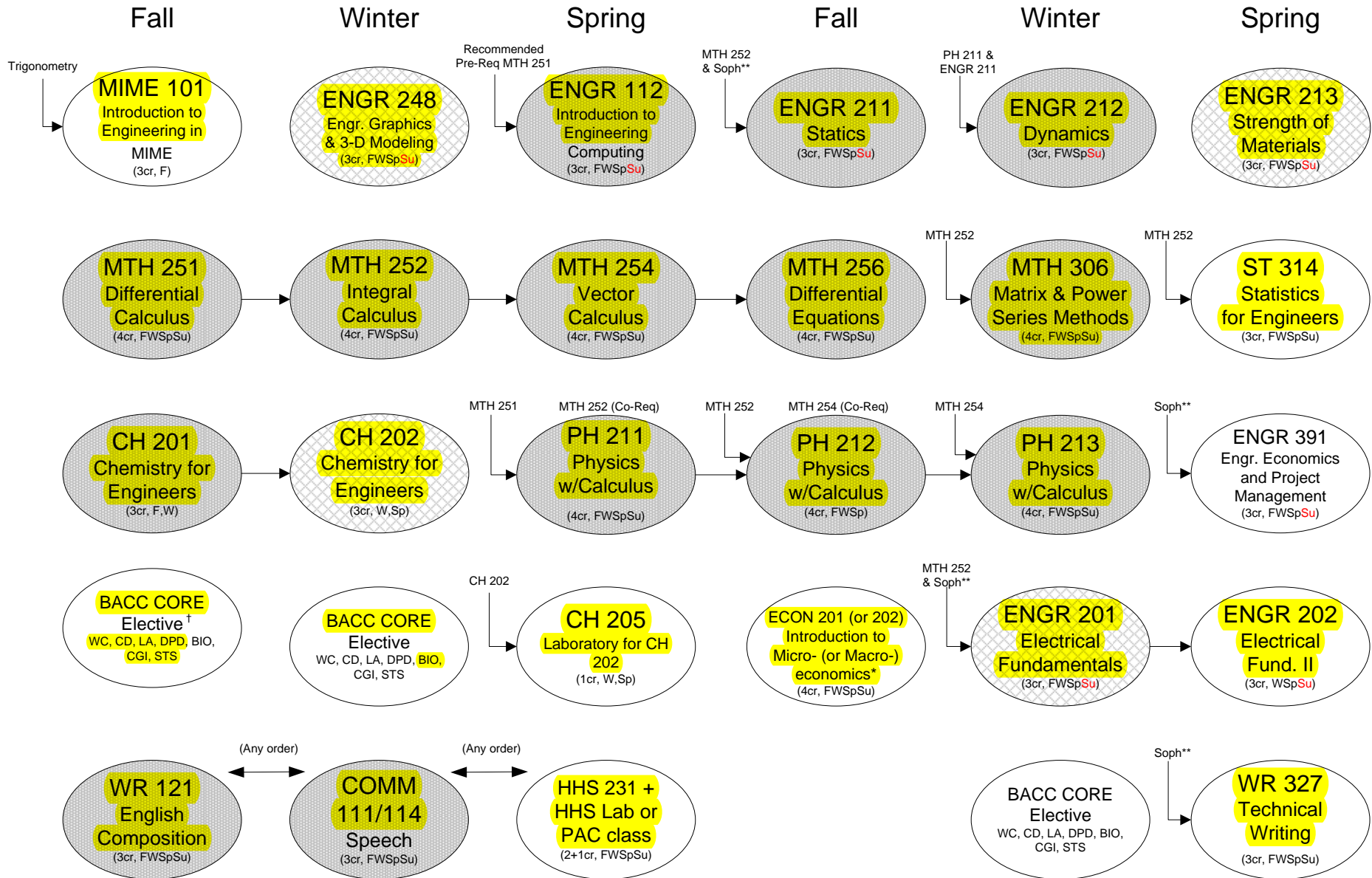
# Mechanical Engineering (ME) - Non-MECOP Winter Pro-Admit Guide

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

	Fall	Winter	Spring	Summer			
Freshman	MIME 101 Intro to MIME	3	ENGR 248 Engr Graphics - 3D Modeling	3	<b>ENGR 112</b> <b>Intro Engr Computing</b>	3	
	<b>CH 201</b> <b>Chem for Engineers</b>	3	CH 202 Chem for Engineers	3	CH 205 Chem for Engineers Lab	1	
	<b>MTH 251</b> <b>Differential Calculus</b>	4	<b>MTH 252</b> <b>Integral Calculus</b>	4	<b>MTH 254</b> <b>Vector Calculus</b>	4	
	<b>WR 121</b> <b>English Comp</b>	3	HHS 231 + PAC Lifetime Fitness & PAC	3	<b>COMM 111 or 114</b> <b>Communication</b>	3	
	Perspective (WC)	3	Perspective (CD)	3	<b>PH 211</b> <b>Physics w/Calculus I</b>	4	
Total	16	Total	16	Total	15	Total	0
Sophomore	<b>ENGR 211</b> <b>Statics</b>	3	<b>ENGR 212</b> <b>Dynamics</b>	3	ENGR 213 Strength of Materials	3	
	ECON 201 or ECON 202 Micro or Maco Econ	4	ENGR 201 Electrical Fundamentals I	3	ENGR 202 Electrical Fundamentals II	3	
	<b>MTH 256</b> <b>Applied Differential Equations</b>	4	<b>MTH 306</b> <b>Matrix &amp; Power Series</b>	4	ST 314 Statistics for Engineers	3	
	<b>PH 212</b> <b>Physics w/Calculus II</b>	4	<b>PH 213</b> <b>Physics w/Calculus III</b>	4	WR 327 Technical Writing	3	
			Perspective (LA)	3	ENGR 391 Engr Econ & Proj Mgt	3	
Total	15	Total	17	Total	15	Total	0
Junior	Perspective (Bio + Lab)	4	ME 250 Intro to Mfg Processes	1	MATS 321 Intro to Material Sci	4	
	Difference, Power & Discrimination	3	ME 311 Intro to Thermal-Fluids	4	ME 312 Thermodynamics	4	
	Synthesis (CGI)	3	ME 316 Mechanics of Materials	3	ME 331 Intro to Fluid Mechanics	4	
	Synthesis (STS)	3	ME 373 Mechanical Engr Methods	3	ME 383 Mechanical Component Design	4	
			ME 382 Intro to Design	4			
Total	13	Total	15	Total	16	Total	0
Senior	MATS 322 Mechanical Properties of Materials	3	ME 497 MIME Capstone Design	4	ME 498 MIME Capstone Design	4	
	ME 317 Intermediate Dynamics	4	ME 430 Systems Dynamics & Control	4	ME Restricted Elective	4	
	ME 332 Heat Transfer	4	ME 451 Intro to Instrumentation & Measurement Systems	4	ME Restricted Elective	4	
	ME Restricted Elective □	4	ME Restricted Elective	3			
Total	15	Total	15	Total	12	Total	0

**Bold Courses** in gray cells are used in the pre-core GPA calculation and must be completed prior to taking Pro courses.

# Pre-Mechanical Engineering



\* ECON 201 or ECON 202 also satisfies OSU's baccalaureate core requirement for a Social Processes and Institutions Perspectives Elective.

\*\* Soph = Sophomore standing in engineering required to enroll in this class.

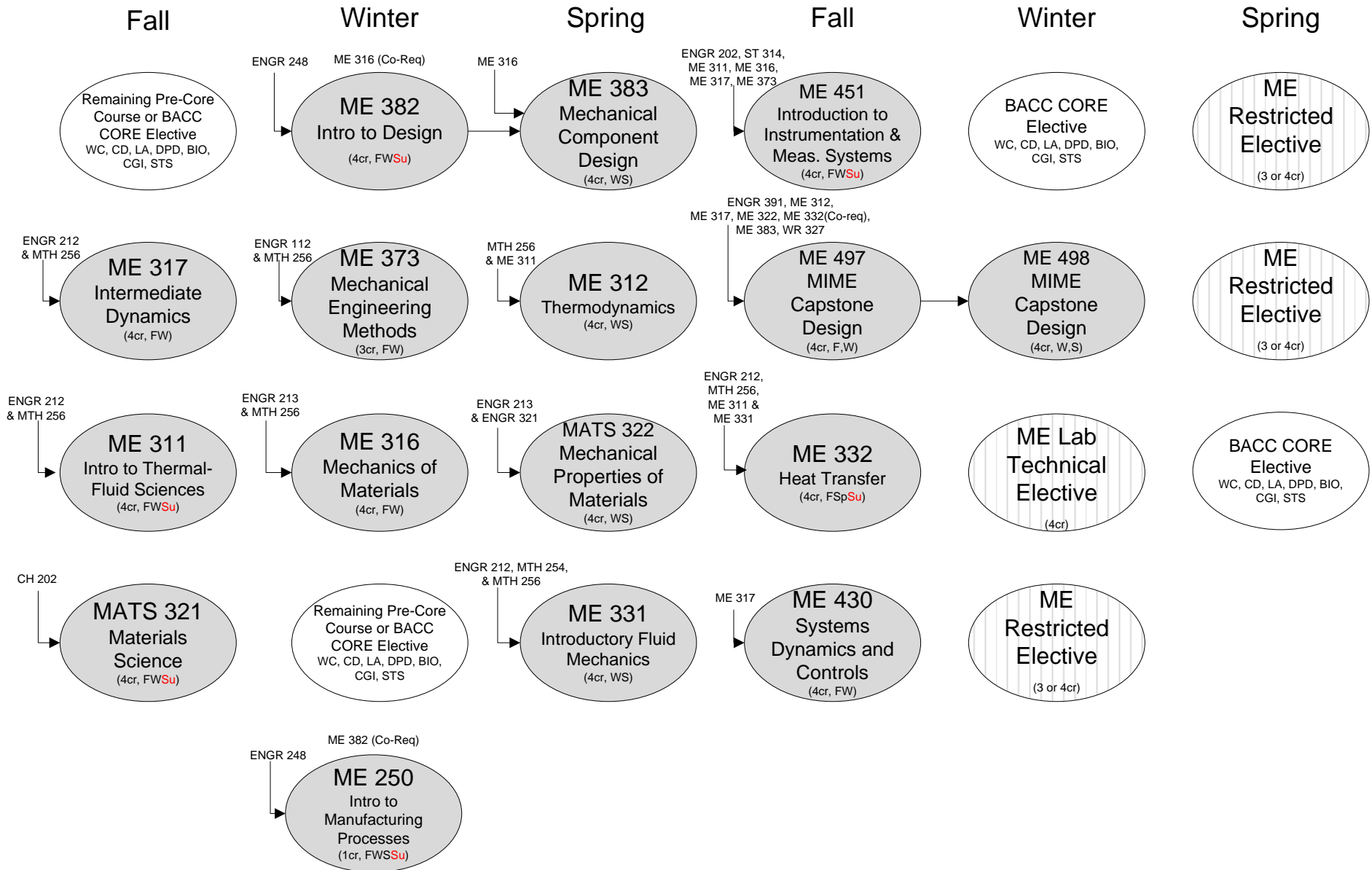
◐ Grades in shaded courses are used to determine pre-Core GPA and are required for entry into the professional program.

◑ Shaded courses are prerequisites for junior year courses, recommended for completion prior to entry into the professional program.

Su Courses listed in red as being available during a term, may or may not actually be offered.

† Bacc Core Elective courses are taken to complete OSU's baccalaureate core curriculum (<http://catalog.oregonstate.edu/bcc.aspx>) and need only be taken sometime before graduation. For ME majors, the seven Bacc Core Elective courses consist of one course each in the areas of western culture (WC), cultural diversity (CD), literature and the arts (LA), biological science (BIO), difference, power and discrimination (DPD), contemporary global issues (CGI), and science, technology and society (STS).

# Mechanical Engineering – Non MECOP



○ A complete list of Restricted Electives and Lab Technical Electives is available through the “Download Academic Plan for Mechanical Engineering” link at <http://mime.oregonstate.edu/academics/undergrad/program-planning-tools>.

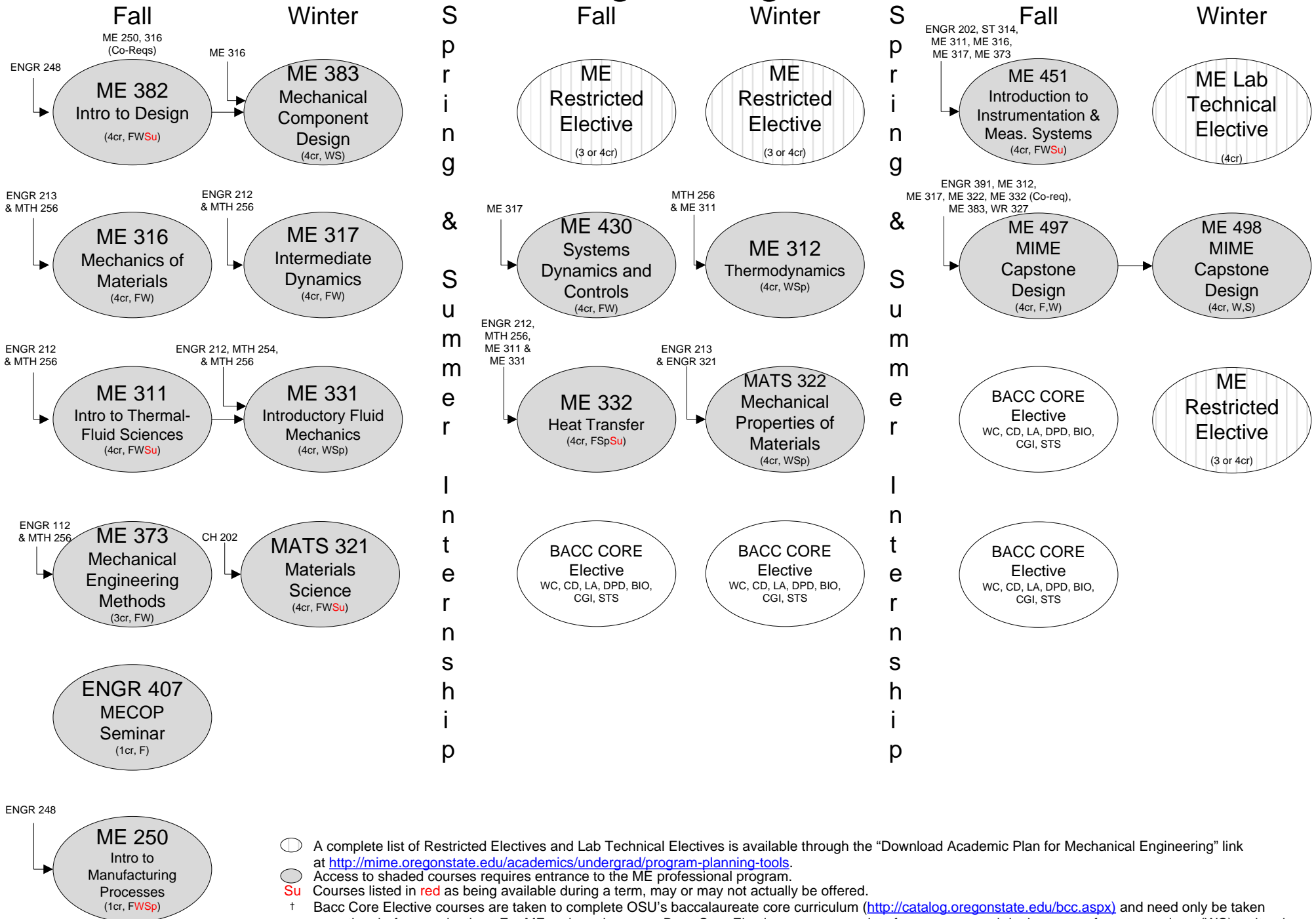
○ Access to shaded courses requires entrance to the ME professional program.

**Su** Courses listed in red as being available during a term, may or may not actually be offered.

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# Mechanical Engineering – MECOP

Updated 9/28/15



- A complete list of Restricted Electives and Lab Technical Electives is available through the "Download Academic Plan for Mechanical Engineering" link at <http://mime.oregonstate.edu/academics/undergrad/program-planning-tools>.
- Access to shaded courses requires entrance to the ME professional program.
- Su Courses listed in red as being available during a term, may or may not actually be offered.
- † Bacc Core Elective courses are taken to complete OSU's baccalaureate core curriculum (<http://catalog.oregonstate.edu/bcc.aspx>) and need only be taken sometime before graduation. For ME majors, the seven Bacc Core Elective courses consist of one course each in the areas of western culture (WC), cultural diversity (CD), literature and the arts (LA), biological science (BIO), difference, power and discrimination (DPD), contemporary global issues (CGI), and science, technology and society (STS).