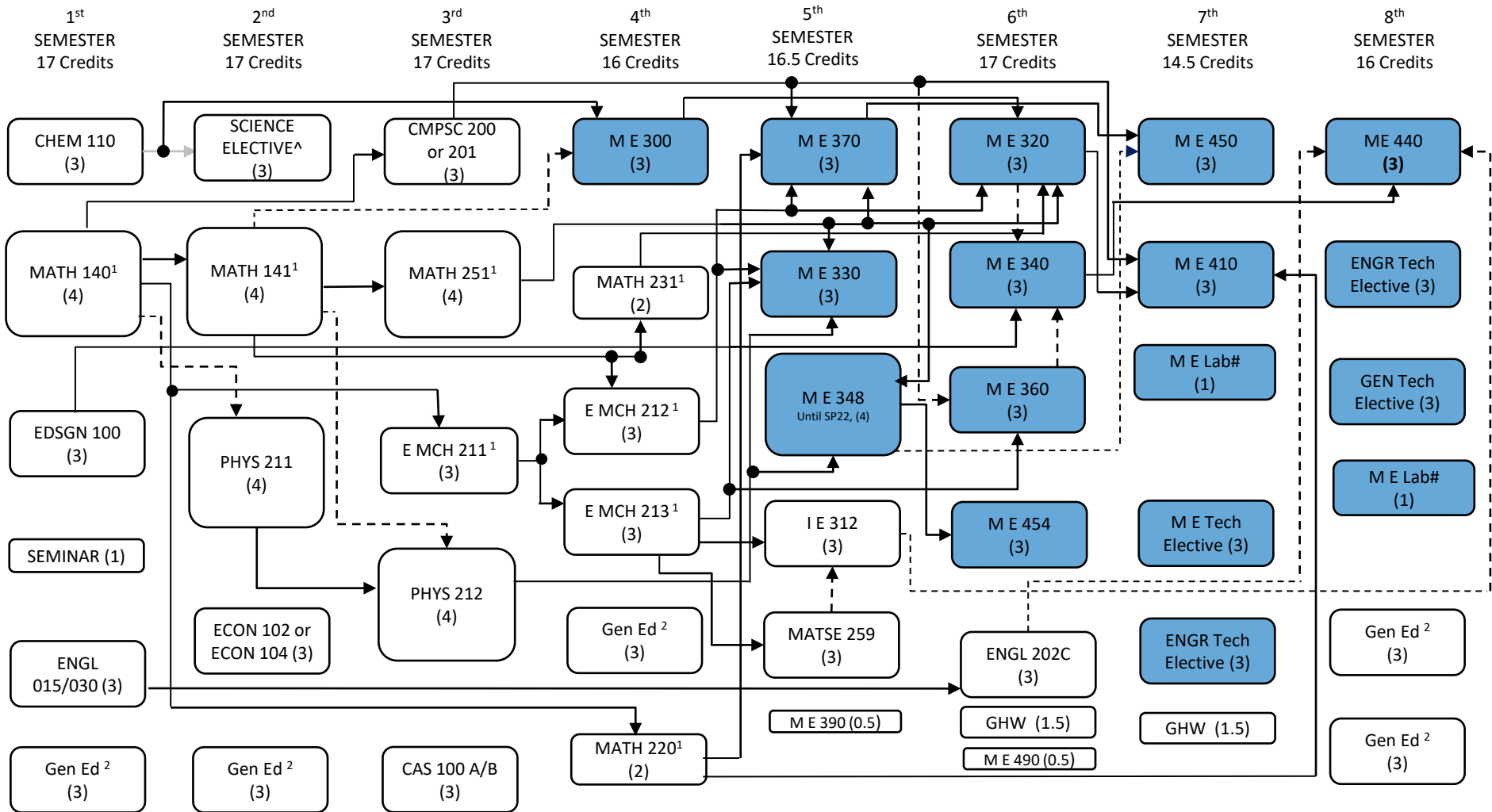


# MECHANICAL ENGINEERING CURRICULUM (Option A: last Name begins with A-K)



<sup>^</sup> Science Elective options – CHEM 112, BIOL 141, or CHEM 111 and PHYS 214 – 3 total credits

<sup>1</sup> Completion of E MCH & MATH courses **before the 5<sup>th</sup> semester** is important for future course sequencing; E MCH 210 or E MCH 210H is not a direct substitute for E MCH 211 and 213 requirements and should not be taken for ME\_BS

**2 US Cultures & IL Cultures and Integrative studies** requirements are satisfied in conjunction with gen ed courses

**#** 1-credit lab options for 2022-2023 academic year are ME 325 and EMCH 316; this 2, 1-credit ME lab option is only for students who have completed ME 348 prior to summer 2022. Refer to adviser communications for details on these changes.

Courses shaded in **BLUE** used for the In-major GPA calculation  
Note listed prerequisites when planning tech electives and ME labs

# Mechanical Engineering Curriculum

Students entering major FA19 and later

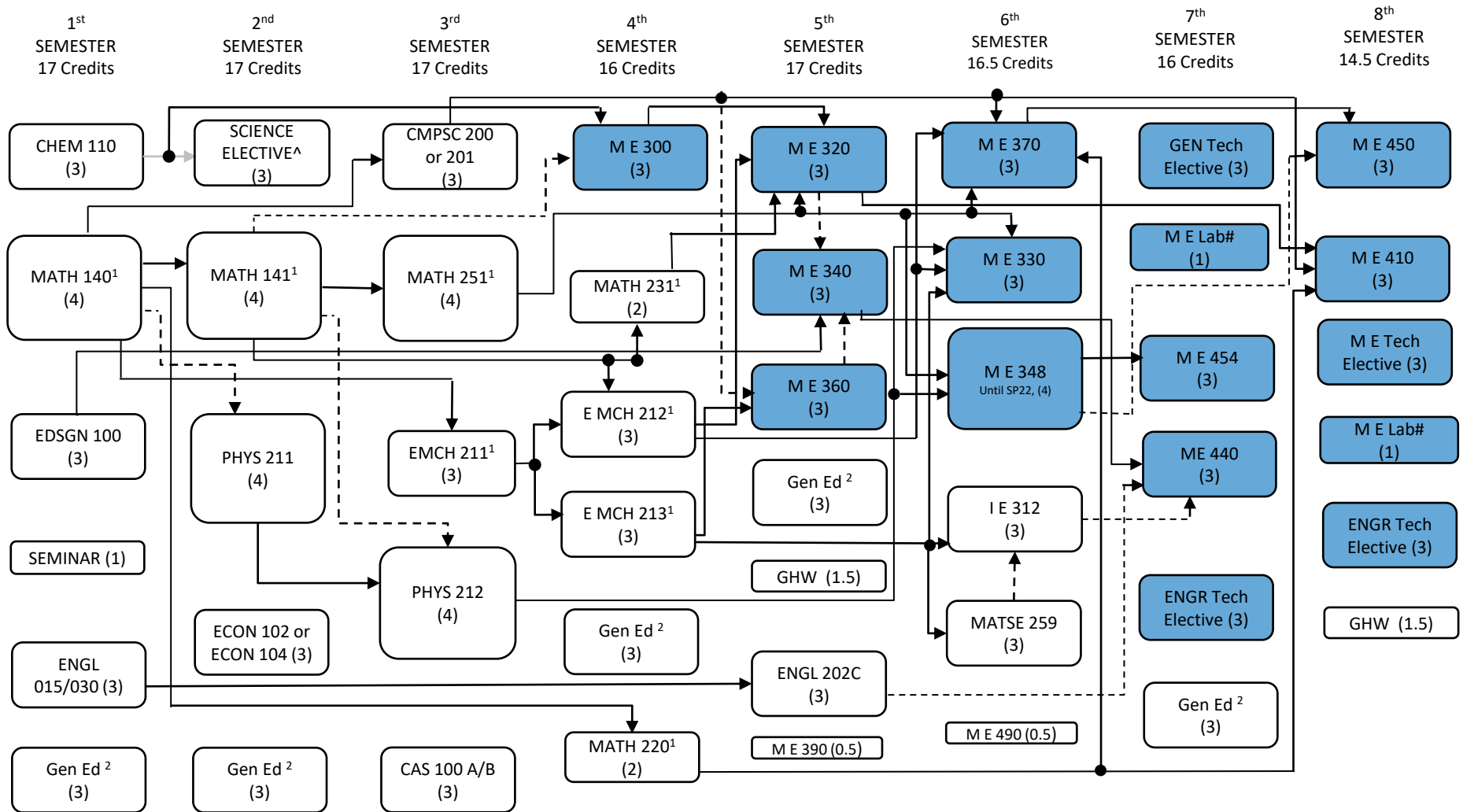
(Option A: last Name begins with A-K)

SEMESTER 1			SEMESTER 2		
Course		Credits	Course		Credits
FYS	First Year Seminar	1	Sci elective	Science Elective (See below)	3
ENGL 015*	Rhetoric and Composition	3	ECON 102/104	Micro or Macro Economics (GS)	3
EDSGN 100	Introduction to Engineering Design	3	MATH 141*	Calc with Analytic Geometry II	4
AHS course	(GA, GH, or GS)	3	AHS course	(GA, GH, or GS)	3
MATH 140*	Calculus with Analytic Geometry I	4	PHYS 211*	Mechanics	4
CHEM 110*	Chemical Principles	3			
<b>Total Semester Credits</b>		<b>17</b>	<b>Total Semester Credits</b>		<b>17</b>
SEMESTER 3			SEMESTER 4		
Course		Credits	Course		Credits
CMPS 200	MATLAB	3	E MCH 212*	Dynamics	3
CAS 100A/B*	Effective Speech	3	E MCH 213*	Strength of Materials	3
E MCH 211*	Statics	3	M E 300*	Engineering Thermodynamics I	3
MATH 251*	Ordinary and Partial Differential Eq.	4	MATH 231	Calculus of Several Variables	2
PHYS 212*	Electricity and Magnetism	4	MATH 220	Matrices	2
			AHS course	(GA/GH/GS)	3
<b>Total Semester Credits</b>		<b>17</b>	<b>Total Semester Credits</b>		<b>16</b>
SEMESTER 5			SEMESTER 6		
Course		Credits	Course		Credits
I E 312	Product Design & Mfg Processes	3	M E 454*	Mechatronics	3
MATSE 259	Properties & Processing of Engr. Mat'l.	3	ENGL 202C*	Technical Writing	3
M E 330*	Computational Tools	3	M E 340*	Mech. Engr. Design Methodology	3
M E 370*	Vibrations of Mechanical Systems	3	M E 360*	Mechanical Design	3
M E 348*	Circuit Analysis, Inst. and Stat.	4	M E 320*	Fluid Flow	3
ME 390	Academic & Career Dev for ME	0.5	GHW	General Health and Wellness	1.5
			ME 490	Professional Dev for ME	0.5
<b>Total Semester Credits</b>		<b>16.5</b>	<b>Total Semester Credits</b>		<b>17</b>
SEMESTER 7			SEMESTER 8		
Course		Credits	Course		Credits
ETE	Engineering Technical Elective	3	M E 440	Senior Capstone Project	3
M E 410*	Heat Transfer	3	AHS course	(GA, GH, or GS)	3
M E 450*	Modeling of Dynamic Systems	3	AHS course	(GA, GH, or GS)	3
METE	M E Technical Elective	3	GTE	General Technical Elective	3
M E Lab	Choose ME 315, 325, 355, 375 or E MCH 316	1	M E Lab	Choose ME 315, 325, 355, 375 or E MCH 316	1
GHW	General Health and Wellness	1.5	ETE	Engineering Tech Elective	3
<b>Total Semester Credits</b>		<b>14.5</b>	<b>Total Semester Credits</b>		<b>16</b>

\*C or higher required

- Science elective choices: CHEM 112, BIOL 141, or CHEM 111 **and** PHYS 214 (3 credits total)
- Completion of E MCH courses **before the 5<sup>th</sup> semester** is important for future course sequencing. E MCH 210 or E MCH 210H is not a direct substitute for E MCH 211 and 213 requirements and should not be taken for ME\_BS
- To graduate, two of the following lab courses must be taken: ME 315, 325, 355, 375, EMCH 316.
- An Engineering Technical Elective is any three credit, 400-level engineering course NOT required for the major. <https://www.me.psu.edu/students/undergraduate/curriculum-electives.aspx>
- A Mechanical Engineering Technical Elective (METE) is any three-credit, 400-level ME course that is not required for the major. ME 494 or ME 496 may not be used.
- Three credits of co-op may also be used for the GTE after completion of three co-op rotations, internships, or a combination of both.
- Students must take 3 credits of United State Cultures (US) and 3 credits of International Cultures (IL) and 6 credits integrative studies (Interdomain or Linked) in conjunction with AHS courses.

# MECHANICAL ENGINEERING CURRICULUM (Option B: last Name begins with L-Z)



<sup>^</sup> Science Elective options – CHEM 112, BIOL 141, or CHEM 111 and PHYS 214 – 3 total credits

<sup>1</sup> Completion of E MCH & MATH courses **before the 5<sup>th</sup> semester** is important for future course sequencing; E MCH 210 or E MCH 210H is not a direct substitute for E MCH 211 and 213 requirements and should not be taken for ME\_BS

<sup>2</sup> US Cultures & IL Cultures and Integrative studies requirements are satisfied in conjunction with gen ed courses

# 1-credit lab options for 2022-2023 academic year are ME 325 and EMCH 316; this 2, 1-credit ME lab option is only for students who have completed ME 348 prior to summer 2022

Courses shaded in **BLUE** used for the In-major GPA calculation  
 Note listed prerequisites when planning tech electives and ME labs

# Mechanical Engineering Curriculum

Students entering major FA19 and later

(Option B: last Name begins with L-Z)

SEMESTER 1			SEMESTER 2		
Course		Credits	Course		Credits
FYS	First Year Seminar	1	Sci elective	Science Elective (See below)	3
ENGL 015*	Rhetoric and Composition	3	ECON 102/104	Micro or Macro Economics (GS)	3
EDSGN 100	Introduction to Engineering Design	3	MATH 141*	Calc with Analytic Geometry II	4
AHS course	(GA, GH, or GS)	3	AHS course	(GA, GH, or GS)	3
MATH 140*	Calculus with Analytic Geometry I	4	PHYS 211*	Mechanics	4
CHEM 110*	Chemical Principles	3			
<b>Total Semester Credits</b>		<b>17</b>	<b>Total Semester Credits</b>		<b>17</b>
SEMESTER 3			SEMESTER 4		
Course		Credits	Course		Credits
CMPS 200	MATLAB	3	E MCH 212*	Dynamics	3
CAS 100A/B*	Effective Speech	3	E MCH 213*	Strength of Materials	3
E MCH 211*	Statics	3	M E 300*	Engineering Thermodynamics I	3
MATH 251*	Ordinary and Partial Differential Eq.	4	MATH 231	Calculus of Several Variables	2
PHYS 212*	Electricity and Magnetism	4	MATH 220	Matrices	2
			AHS course	(GA/GH/GS)	3
<b>Total Semester Credits</b>		<b>17</b>	<b>Total Semester Credits</b>		<b>16</b>
SEMESTER 5			SEMESTER 6		
Course		Credits	Course		Credits
ENGL 202C*	Technical Writing	3	I E 312	Product Design & Mfg Processes	3
AHS course	(GA, GH, or GS)	3	MATSE 259	Properties & Processing of Engr. Mat'l.	3
M E 340*	Mech. Engr. Design Methodology	3	M E 330*	Computational Tools	3
M E 360*	Mechanical Design	3	M E 370*	Vibrations of Mechanical Systems	3
M E 320*	Fluid Flow	3	M E 348*	Circuit Analysis, Inst. and Stat.	4
GHW	General Health and Wellness	1.5	ME 490	Professional Dev for ME	0.5
ME 390	Academic & Career Dev for ME	0.5			
<b>Total Semester Credits</b>		<b>17</b>	<b>Total Semester Credits</b>		<b>16.5</b>
SEMESTER 7			SEMESTER 8		
Course		Credits	Course		Credits
M E 440	Senior Capstone Project	3	ETE	Engineering Technical Elective	3
AHS course	(GA, GH, or GS)	3	M E 410*	Heat Transfer	3
M E 454*	Mechatronics	3	M E 450*	Modeling of Dynamic Systems	3
GTE	General Technical Elective	3	METE	M E Technical Elective	3
M E Lab	Choose ME 315, 325, 355, 375 or E MCH 316	1	M E Lab	Choose ME 315, 325, 355, 375 or E MCH 316	1
ETE	Engineering Tech Elective	3	GHW	General Health and Wellness	1.5
<b>Total Semester Credits</b>		<b>16</b>	<b>Total Semester Credits</b>		<b>14.5</b>

\*C or higher required

- Science elective choices: CHEM 112, BIOL 141, or CHEM 111 **and** PHYS 214 (3 credits total)
- Completion of E MCH courses **before the 5<sup>th</sup> semester** is important for future course sequencing. E MCH 210 or E MCH 210H is not a direct substitute for E MCH 211 and 213 requirements and should not be taken for ME\_BS
- To graduate, two of the following lab courses must be taken: ME 315, 325, 355, 375, EMCH 316.
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- A Mechanical Engineering Technical Elective (METE) is any three-credit, 400-level ME course that is not required for the major. ME 494 or ME 496 may not be used.
- Three credits of co-op may also be used for the GTE after completion of three co-op rotations, internships, or a combination of both.
- Students must take 3 credits of United State Cultures (US) and 3 credits of International Cultures (IL) and 6 credits integrative studies (Interdomain or Linked) in conjunction with AHS courses.