

**Mechanical Engineering Concentration Outline**  
( )=Pre-requisites, Co=Co-requisites

MPE = P5

Some general education courses may be taken during the summers

	Fall Semester			Spring Semester	
<b>Freshman</b>					
ENGR120	Intro to Engineering & Design	2	ENGR181	Material Properties and Processes	3
ENGR125	Engineering Graphics	3	MATH192	Calculus II (MATH191 or MATH195)	4
Math191	(P5 or MATH167 or MATH168 with grade no lower than C)	4	HIST110	Worldviews, Cultures, and God	3
CHEM131	General Chemistry I	4	RELT100	God & Human Life	3
ENGL115	(P3, MATH165, MATH166, MATH168, or MATH191, MATH195)	4	COMM104	Communication Skills	3
	College Writing I	<u>3</u>			<u>3</u>
		16			16
<b>Sophomore</b>					
ENGR185	Engineering Statics (MATH191)	3	ENGR225	Circuit Analysis (MATH191)	3
PHYS241/	Physics for Scientists I (MATH192, Co: PHYS271)	4	ENGR285	Engineering Dynamics (ENGR185, PHYS241, and MATH192; Co: MATH286)	3
PHYS271	Physics for Scientists Lab I (Co: PHYS241)	1	PHYS242/	Physics for Scientists II (MATH 192 and PHYS 241, Co: PHYS272)	4
MATH240	Calculus III (MATH192)	4	PHYS272	Physics for Scientists Lab II	1
HLED135	Well-Being 360 Degrees	3	CPTR151	Computer Science I	3
INEN221	Intro to Innovation	<u>3</u>	MATH286	Differential equations (MATH192)	<u>3</u>
		18			17
<b>Junior</b>					
ENGR275	Electronics I (ENGR225)	3	ENGR310	Linear Systems Analysis (MATH215, MATH286, CPTR151)	3
ENGR320	Manufacturing Processes (ENGR180)	3	ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
ENGR 330	Thermodynamics (PHYS241)	3	ENGR390	Engineering Measurements (ENGR330, ENGR340)	3
ENGR340	Mechanics of Materials (ENGR185)	3	ENGR391	Electric Motors (ENGR275)	1
ENGL215	College Writing II 9:30 MWF,	3	STAT340	Probability/Statistical Ap (MATH191 or MATH195)	3
ENGR365	Numerical Methods for Engineers	<u>3</u>	REL	Religion	<u>3</u>
		18			16
<b>Senior</b>					
ENGR410	Feedback Control Systems	4	ENGR440	Heat & Mass Transfer	3
ENGR420	Machine Design (ENGR320, ENGR390)	3	ENGR492	Senior Design Project (ENGR491)	3
ENGR491	Review of Engineering Design (ENGR355, 385 or 390)	1	ENGR	ENGR Elective	3
ENGR450	Engineering Economy (MATH145 or MATH191)	2	REL	Religion (RELB, RELG, RELT)	3
REL	Religion (RELB, RELG, RELT)	3	GEN ED	Arts/Humanities	<u>3</u>
GEN ED	Social Sciences	<u>3</u>			
		16			15
Suggested 4-year course outline per Bulletin 2024-2025			Total Credits for Graduation		132