Mechanical Engineering Concentration Outline

()=Pre-requisites, Co=Co-requisites

Fall Semester			Spring Semester		
Freshman					
ENGR120	Intro to Engineering & Design	2	ENGR181	Material Properties and Processes	3
ENGR125	Engineering Graphics	3	MATH192	Calculus II (MATH191 or MATH195)	4
Math191	Calculus I (P5 or MATH167 or MATH168 with grade no lower than C)	4	ENGR185	Engineering Statics (MATH191)	3
CHEM131	General Chemistry I (P3, MATH165 , MATH166 , MATH168, or MATH191 , MATH195)	4	RELT100	God & Human Life	3
ENGL115	College Writing I	3	COMM104	Communication Skills	3
		16			16
Sophomore					
ENGR225	Circuit Analysis (MATH191)	3	ENGR285	Engineering Dynamics (ENGR185, PHYS241 , and MATH192; Co: MATH286)	3
PHYS241/27	Physics for Scientists I (MATH192, Co: PHYS271)	5	ENGR275	Electronics I (ENGR225)	3
MATH240	Calculus III (MATH192)	4	PHYS242/27	Physics for Scientists II (MATH 192 and PHYS 241, Co: PHYS272)	5
HLED135	Well-Being 360 Degrees	3	CPTR151	Computer Science I	3
ENGL215	College Writing II	3	MATH286	Differential equations (MATH192)	3
		18			17
Junior					
MATH215	Linear Algebra (MATH182, MATH191, or MATH195)	3	ENGR310	Linear Systems Analysis (MATH215, MATH286, CPTR151)	3
ENGR320	Manufacturing Processes (ENGR180)	3	STAT340	Probability/Statistical Ap (MATH191 or MATH195)	3
ENGR 330	Thermodynamics (PHYS241)	3	ENGR391	Electric Motors (ENGR275)	1
ENGR340	Mechanics of Materials (ENGR185)	3	ENGR360	Fluid Dynamics (ENGR285, ENGR330, MATH286)	3
GEN ED	Social Sciences	3	ENGR390	Engineering Measurements (ENGR330, ENGR340)	4
HIST110	Worldviews, Cultures, and God	3	REL	Religion	3
		18			17
Senior					
ENGR491	Review of Engineering Design	1	ENGR492	Senior Design Project (ENGR385 or ENGR390)	3
ENGR450	Engineering Economy (MATH145 or MATH191)	2	REL	Religion (RELB, RELG,RELT)	3

ENGR410	Feedback Control Systems (ENGR 275 ENGR 285 ENGR 310)	4
ENGR420	Machine Design (ENGR320, ENGR390)	3
REL	Religion (RELB,RELG,RELT)	3
GEN ED	Arts/Humanities	3
		16

ENGR440	Heat & Mass Transfer (ENGR360, MATH286)	3
GEN ED	Arts/Humanities	3
ENGR	ENGR Elective	3
		15

Suggested 4-year course outline per Bulletin 2021-2022

Total Credits for Graduation 133