

LEGEND: Pre = Prerequisite, Co = Corequisite, Pr/Co = Prior or concurrent enrollment, Subs = Substitution(s), Ar = Area, Cr = Credit, Gr = Grade

A grade of C or better is required in all Engineering, Math, and Science prerequisite courses.

FALL

1 st Year		Prereqs	Subs	Ar	Cr	Gr
ENGL 1101	Composition I			A1	3	
MATH 1441	Calculus I			A2	4	
CHEM 1310	Comp. Gen. Chemistry	Note 1	Note 2	F	4	
ENGR 1133	Engineering Graphics			F	3	
ENGR 1310	Manufacturing Processes Laboratory			F	1	
FYE 1220	First-Year Seminar			U	2	

17

SPRING

		Prereqs	Subs	Ar	Cr	Gr
ENGL 1102	Composition II	ENGL 1101		A1	3	
MATH 2242	Calculus II	MATH 1441		D2	4	
PHYS 2211K	Principles of Physics I	MATH 1441		D1	4	
ENGR 2112	Solid Modeling & Analysis	ENGR 1133			1	
ENGR 1131	Programming & Computing Applications	Pr/Co MATH 1112 (or 1113 or 1441)	Note 3	F	3	
CORE 2000	CORE Capstone			B	1	

16

2nd Year

		Prereqs	Subs	Ar	Cr	Gr
MATH 2243	Calculus III	MATH 2242		F	4	
PHYS 2212K	Principles of Physics II	PHYS 2211K		D1	4	
ENGR 2231	Engineering Mechanics I (Statics)	MATH 2242 PHYS 2211K			3	
ENGR 2139	Numerical Methods in Engr.	Note 4	Note 5	F	3	
POLS 1101	American Government			E	3	

17

		Prereqs	Subs	Ar	Cr	Gr
MATH 3230	Ordinary Differential Eqns.	MATH 2242			3	
ENGR 2131	Electronics & Circuits Analysis	PHYS 2212K Pr/Co ENGR 2139			3	
ENGR 2232	Dynamics of Rigid Bodies (Dynamics)	ENGR 2231			3	
ENGR 3233	Mechanics of Materials	ENGR 2231			3	
MENG 2110	Case Studies in Design & Analysis	ENGR 1133	ENGR 2110		1	
	Lower-Division Emphasis Elect.	See Catalog			3	

16

3rd Year

		Prereqs	Subs	Ar	Cr	Gr
ENGR 3235	Fluid Mechanics	MATH 2243 MATH 3230 ENGR 2231			3	
ENGR 3431	Thermodynamics	MATH 2242 PHYS 2211K			3	
MENG 3135	Machine Design	ENGR 3233 MENG 2110			3	
MENG 3331	Materials Science	CHEM 1310 ENGR 3233 Co MENG 3311			3	
MENG 3311	Materials Science Lab	CHEM 1310 ENGR 3233 Co MENG 3331			1	
	Area E - US History Elective			E	3	

16

		Prereqs	Subs	Ar	Cr	Gr
MENG 3233	Heat Transfer	ENGR 3235 ENGR 3431			3	
MENG 3130	Mechanism Design	ENGR 2232			3	
MENG 3333	Materials Processing Studio	ENGR 1310 MENG 3331 MENG 3311			3	
MENG 3531	Introduction to Mechatronics	ENGR 2139 ENGR 2131 ENGR 3233 Co MENG 3511			3	
MENG 3511	Measurement & Instrumentation Lab	ENGR 2139 ENGR 2131 ENGR 3233 Co MENG 3531			1	
	Area B - World History			B	3	

16

4th Year

		Prereqs	Subs	Ar	Cr	Gr
MENG 4210	Energy Science Lab	MENG 3233 MENG 3531			1	
MENG 4214	Advanced Mechanics Lab	MENG 3130 MENG 3135			1	
MENG 4430	Quality Control & Project Management	MENG 2110 MENG 3135 MENG 3333			3	
MENG 5136 or MENG 5432	Modeling & Simulation Requirement (FEA or CFD)	Note 6			3	
	Upper-Division Emphasis Elective 1	See Catalog			3	
	Area B - Global Perspective	See Catalog		B	3	
	Area C - Lit. & Philosophy	See Catalog		C	3	

17

		Prereqs	Subs	Ar	Cr	Gr
MENG 4612	Senior Seminar	Note 7			1	
MENG 5137	Mechanical System Design	Note 8			3	
	Upper-Division Emphasis Elective 2	See Catalog			3	
KINS 1525	Concepts of Health & Physical Activity			U	2	
	Area C - Arts & Humanities Elective	See Catalog		C	3	
	Area E - Social Science	See Catalog		E	3	

15

Notes

Note 1: Concurrent enrollment in MATH 1441 recommended.

Note 2: May substitute CHEM 1211K & CHEM 1212K.

Note 3: May substitute ENGR 1731 if completed prior to entering BSME program

Note 4: MATH 2242 and ENGR 1131 (or ENGR 1731 or MFGE 2534)

Note 5: MATH 2160 and MATH 2430

Note 6: FEA: ENGR 2112, ENGR 2139, ENGR 3235, MENG 3135, and MENG 3233

CFD: MENG 3233

Note 7: MATH 2243, ENGR 2131, ENGR 2139, ENGR 2232, ENGR 3233,

ENGR 3235, MENG 3233, and MENG 3331

Note 8: ENGR 2112, MENG 3130, MENG 3135, MENG 3233, MENG 3333,
 and MENG 3531

General Requirements (Core Areas A - E) [Credit Hours: 42]

Course	Name	Prerequisites	Cr
Area A1 - Communication Skills [Credit Hours: 6]			
ENGL 1101	Composition I		3
ENGL 1102	Composition II	ENGL 1101	3
Area A2 - Quantitative Skills [Credit Hours: 3]			
MATH 1441	Calculus I		4
Area B [Credit Hours: 7]			
CORE 2000	CORE Capstone		1
Area B - World History			
<i>Select one of the following:</i>			
HIST 1111, HIST 1112			3
Area B - Global Perspectives and Foreign Languages			
<i>Select one of the following:</i>			
ANTH 1150, CRJU 2010, FORL 2001, FORL 2002, FORL 2060, GEOG 1130, HLPD 2010, HONS 1134, IDS 2000, INTS 2130, POLS 1150, PSYC 2300, RELS 2100, RELS 2130, SABR 2960, SOCI 2000, WGSS 2200	See catalog		3
Area C - Humanities, Arts, and Ethics [Credit Hours: 6]			
Area C - Literature, Philosophy, and Ethics			
<i>Select one of the following:</i>			
ENGL 2100, ENGL 2111, ENGL 2112, PHIL 2010, PHIL 2030	See catalog		3
Area C - Arts, Humanities, and Foreign Languages			
<i>Select one of the following:</i>			
ART 1000, ARTH 2531, ARTH 2532, COMM 1110, FORL 1001, FORL 1002, FORL 1060, HONS 1132, MUSC 1100, THEA 1100	See catalog		3
Area D1 - Laboratory Sciences [Credit Hours: 8]			
PHYS 2211K	Principles of Physics I		4
PHYS 2212K	Principles of Physics II	PHYS 2211K	4
Area D2 Sciences, Mathematics, & Technology [Credit Hours: 3]			
MATH 2242	Calculus II	MATH 1441	4
Area E - Social Sciences [Credit Hours: 9]			
POLS 1101	American Government		3
Area E - US History			
<i>Select one of the following:</i>			
HIST 2110, HIST 2111, HIST 2112			3
Area E - Social Sciences			
<i>Select one of the following:</i>			
AAST 2000, ANTH 1102, ECON 1101, ECON 1150, ECON 2105, HONS 1131, PSYC 1101, SOCI 1101, WGSS 2100	See catalog		3

Additional University Requirements [Credit Hours: 4]

Course	Name	Prerequisites	Cr
FYE 1220	First-Year Seminar		2
KINS 1525	Concepts of Health and Physical Activity		2

Lower-Division Emphasis Electives [Credit Hours: 3]

Course	Name	Prerequisites	Cr
ENGR 2432	Introduction to Engineering Materials	See Catalog	3
ENGR 2436	Introduction to Molten Metal Processes	See Catalog	3
ENGR 2890	Introductory Selected Problems in Engineering	See Catalog	Var
ENGR 2991	Topics in Engineering	See Catalog	Var

Upper-Division Emphasis Electives [Credit Hours: 6]

Course	Name	Prerequisites	Cr
MENG 4790	Internship & Co-Op Experiences	See Catalog	Var
MENG 5090	Selected Topics in Mechanical Engineering	See Catalog	Var
MENG 5136	Introduction to Finite Element Analysis	See Catalog	3
MENG 5531	Metalcasting	See Catalog	3
MENG 5533	Applied Welding and Joining	See Catalog	3
MENG 5811	Intro. to Mech. Engr. Research and Projects	See Catalog	1
MENG 5822	Research Project in Mechanical Engineering	See Catalog	2
MENG 5891	Special Problems in Mechanical Engineering	See Catalog	Var
MFGE 5333	Additive Manufacturing Studio	See Catalog	3
MFGE 5533	Heat Treatment and Microstructure of Metal	See Catalog	3
MFGE 5536	Char. Advanced Manufacturing Materials	See Catalog	3
MFGE 5538	Nondestructive Testing & Evaluating Tech.	See Catalog	3