

Updated 4/22/2020

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Introduction to Materials Engineering Design I MATE 110 (1)	Introduction to Materials Engineering Design II MATE 120 (1) (MATE 110)	Materials Engineering MATE 210 (3) (CHEM 111, 124, or 127; Recom: MATE 215 concur.)	Materials, Ethics, and Society MATE 232 (4) (MATE 210)	Materials Laboratory III MATE 235 (1) (MATE 225)	Introduction to Materials Engineering Design III MATE 130 (1) (MATE 120)	Electronic Materials Systems MATE 340 (4) (MATE 210, PHYS 133)	Materials Selection Life Cycle MATE 320 (4) (MATE 210)	Noncrystalline Material Systems MATE 310 (4) (MATE 210 & 340)	Senior Project I MATE 482 (1)^o (Sr Standing)	Senior Project II MATE 483 (2)^o (MATE 482)	Senior Project III MATE 484 (2)^o (MATE 483)
Introduction to Design & Manufacturing IME 144 (4) (Recom: IME 140 or ME 129)		Materials Laboratory I MATE 215 (1) (Prereq or concur: MATE 210)	Materials Laboratory II MATE 225 (1) (MATE 215, Concur: MATE 232)	Introduction to Materials Thermodynamics MATE 280 (4) (CHEM 125, PHYS 133, MATH 143, MATE 210 & 215)	Metallurgical Materials Systems MATE 360 (4) (MATE 235)	Kinetics of Materials & Process Design MATE 370 (4) (MATE 280 or MATE 380)		Structural Materials Systems MATE 350 (4) (MATE 210, Coreq: CE 204)	Composite Materials Systems MATE 480 (4) (MATE 350)	Technical Elective (4)^{1,2,5}	Technical Elective (4)^{1,2,5}
Calculus I MATH 141 (4)* * [B4]	Calculus II MATH 142 (4)* (MATH 141 w/min C-) [B4]	Calculus III MATH 143 (4)* (MATH 142 w/min C-) [Area B Elective]	Calculus IV MATH 241 (4) (MATH 143)	Linear Analysis I MATH 244 (4) (MATH 143)	Programming for Engineering Students CSC 231 (2) (MATH 142; PHYS 121, 131, or 141)	Electric Circuit Theory & Lab EE 201 (3) & EE 251 (1) (MATH 244, PHYS 133)		Mechanics of Materials I CE 204 (3) (ME 211)	Technical Elective (4)^{1,2,5}	Approved Elective/ Technical Breadth Elective (4)^{1,2,3,5}	Approved Elective/ Technical Breadth Elective (4)^{1,2,3,5}
General Chem for Physical Science & Engineering I CHEM 124 (4)* * [B1 & B3]	General Chem for Physical Science & Engineering II CHEM 125 (4) (CHEM 124)	General Physics IA PHYS 141 (4)* * [Area B Elective]	General Physics III PHYS 133 (4) (PHYS 131, 141, or HNRS 131; MATH 142, Rec: MATH 241)	General Physics II PHYS 132 (4) (PHYS 131, HNRS 131, or PHYS 141)	Choose One Series ¹ : [Upper-Division B] STAT 312 (4) & IME 315 (3) (MATH 142) OR STAT 321 (4) & IME 315 (3) (MATH 142) OR STAT 321 (4) & IME 326 (4) (MATH 142) (STAT 321 w/ min C-)		GE (4) **				
Expository Writing ENGL 133 or 134 (4)** [A1] Can be taken anytime during Freshman Year	Oral Communication COMS 101 or 102 (4)** [A2] Can be taken anytime during Freshman Year			Engineering Statics ME 211 (3) (PHYS 131 or 141, Prereq or concur: MATH 241.)		Heat Transfer ME 350 (4) (CPE/CSC 101, 231, or 234; MATE 360 & 380, or ME 236, 302, & 341) OR Transport Phenomena I, II, & III MATE 325 (1), 326 (1), & 327 (1)³ (MATE 325 prereq: PHYS 132 & MATH 141; MATE 326 prereq: MATH 141 & ME 211; MATE 327 prereq: CHEM 124 & PHYS 133)					
		Technical Writing for Engineers ENGL 149 (4)* [A3] (Completion of GE A2 with a C- or better, Recommended: Completion of GE A1) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years			GE (4) **						
	GE (4) **						GE (4) **	GE (4) **	GE (4) **	GE (4) **	GE (4) **
							Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)				
17	17	16	13	16	15	15-16	16	15	16-17	14	14
										TOTAL:	184-186

Notes:

MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET.
Transfer students - see department for flowchart information intended specifically for transfer students.

* Refer to current catalog for prerequisites.

** One course from each of the following GE areas must be completed: A1, A2, B2, C1, C2, Lower-Division C Elective, Upper-Division C, D1, D2, Area D Elective, E. Upper-Division C should be taken only after junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

¹The courses selected to satisfy this requirement may not be used to satisfy other major, support, or general education requirements (no double counting of coursework).

²Consultation with advisor is recommended prior to selecting approved electives; your selections may impact pursuit of post-baccalaureate studies and/or goals.

³If support requirements are met with IME 315 and MATE 325, 326, 327 (for a total of 6 units), at least one unit of upper division should be selected in Approved Electives/Technical Breadth Electives, to meet the required 60 units of upper division.

⁴Required in Support; also satisfies GE.

⁵8 units maximum of MATE 400 and/or MATE 500 may count towards Tech Electives or Approved Electives/Technical Breadth Electives.

⁶ENGR 459, ENGR 460, and ENGR 461 (6) may substitute for MATE 482, MATE 483, and MATE 484 (5) with the one excess unit counting towards Technical Electives.

Legend:

Course Title		
Course # (Units)		Major (70)
(Prerequisite)		Support (70-72)
[GE Area]		General Ed. (44)