B.S. in GENERAL ENGINEERING (Individualized Course of Study Concentration)

Suggested 4-Year Academic Flowchart

Updated 8/1/2014	FRESHMAN		SOPHOMORE			JUNIOR			SENIOR		
Fall Winter Spring			Fall Winter Spring			Fall Winter Spring			Fall Winter Spring		
Engineering Science I ENGR 110 (2)	Engineering Science II ENGR 111 (3)		Engineering Statics ME 211 (3) (MATH 241†, PHYS 131 or 141)	Engineering Dynamics ME 212 (3) (MATH 241; ME 211 or ARCE 211)	Engineering Economics IME 314 (3) (MATH 241)	Thermodynamics I ME 302 (3) (PHYS 132; ME 212 or CHEM 128)	Fluid Mechanics I ME 341 (3) (ME 212 or ARCE 225)	Heat Transfer ME 343 (4) (ME 341; ME 302 or MATE 380; MATH 244; CSC 231 or 234)	Sr Project Design Lab I ENGR 481 (2) (MATH 244, IME 314, ME 302 or Instr. consent)	Sr Project Design Lab II ENGR 482 (2) (ENGR 481 or Instr. consent)	Sr Project Design Lab III ENGR 483 (2) (ENGR 482 or Instr. consent)
Calculus I MATH 141 (4) * [B1]	Calculus II MATH 142 (4) (MATH 141 w/min C-) [B1]	Calculus III MATH 143 (4) (MATH 142 w/min C-) [Add'l Area B]	Calculus IV MATH 241 (4) (MATH 143)	Linear Analysis I MATH 244 (4) (MATH 143)	Math or Stat Elective MATH 344, STAT 312, 321, or 350 (4) * [B6]	Materials Engineering MATE 210 (3) (CHEM 111 or 124 or 127. Recom: Concur MATE 215)	ICS (4)***		ICS (4)***	ICS (4)***	ICS (4)***
	General Physics IA PHYS 141 (4) (MATH 141 w/min C-, MATH 142 or 182†) [Add'l Area B]	General Physics II PHYS 132 (4) (PHYS 131 or HNRS 131 or PHYS 141)	General Physics III PHYS 133 (4) (PHYS 131 or HNRS 131 or 141; MATH 142. Recom: MATH 241)	Physical Science Elective (4) *	Mechanics of Materials I CE 204 (3) (ME 211)	Materials Lab I MATE 215 (1) (MATE 210†)	ICS (4)***	ICS (4)***	Physical Science Elective (4) *	ICS (4)***	ICS (4)***
General Chemistry I CHEM 124 OR CHEM 127 (4) * [B3/B4]	General Chemistry II CHEM 125 OR CHEM 128 (4) *	C and Unix CSC 234 (3) * OR Fundamentals of Computer Science I CSC 101 (4) *		Take concurrently: BIO 213 (2), ENGR/BRAE 213 (2) (MATH 142, Recom: CHEM 124) [B2]	Electric Circuit Theory EE 201 (3) (MATH 244, PHYS 133)	GE (4) **		ICS (4)***	ICS (2)***		ICS (3)***
Expository Writing ENGL 133/134 (4)** [A1] Can be taken anytime during Freshman Year Oral Communication COMS 101/102 (4)** [A2] Can be taken anytime during Freshman Year Technical Writing ENGL 149 (4) [A3] (Completion of GE A1 with a C- or better, Recommended: Completion of GE A2) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years			letion of GE A2)	GE (4) ***	GE (4) **	GE (4) **	GE (4) **	GE (4) **	GE (4) ***	GE (4) **	
							Writing Requirement ken any time after 90 earne				
14	15	15-16	15	15	17	15	15	16	16	14	17
										TOTAL:	184-185
Notes:								<u>Legend:</u>			

Notes:

MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

* Refer to current catalog for prerequisites.

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: C3, C4, D1, D3, or D4.

*** The individualized course of study consists of 41 units of technical electives with a minimum of 36 units at the 300-400 level. Courses are selected by the student with the advice and approval of the student's academic advisor and department chair.

† Course can be taken previously or concurrently.

Course Title Major (43-44) Course # (Units) (Prerequisite) Support (60)

[GE Area] Concentration (41)

General Ed. (40)

^{**} One course from each of the following GE areas must be completed: A1, A2, C1, C2, C3, C4, D1, D2, D3, D4. C4 should be taken only after Junior standing is reached (90 units).