

Bachelor of Science in Civil Engineering (BSCE) Degree Department of Engineering



Effective: **Fall 2010**

All engineering & technical elective courses must have a combined minimum GPA of 2.0.

Course sequencing follows the academic year, and assumes beginning the program in the fall semester.

P = Pre-requisite, C = Co-Requisite

For more information visit <http://www.engr.ipfw.edu>

1 st Semester 16 credits	MA 165 (4) P: MA 154 or 159 (C- or better) or placement <i>Calculus I</i>	CHM 115 (4) P: CHM 111 or 1 yr. H.S. C: MA 153 or MA 159 <i>General Chemistry</i>	ENGR 101 (1) <i>Introduction to Engineering</i>	ENGR 120 (2) P: MA 153 <i>Graphical Communication</i>	ENGR 121 (2) P: MA 154 or 159 (C- or better) or placement C: ENGR 120 <i>Computer Tools for Engr</i>	ENG W131 (3) P: ENG W129 or placement <i>Elementary Composition</i>
2 nd Semester 17 credits	MA 166 (4) P: MA 165 (C- or better) <i>Calculus II</i>	PHYS 152 (5) C: MA 166 <i>Mechanics</i>	ENGR 199 (3) P: ENGR 101 C: ENGR 121, PHYS 152 <i>Intro to Engineering Design</i>	ENGR 221 (2) or CS 227 (2) P: ENGR 101, ENGR121 <i>C and C + Programming</i>	COM 114 (3) (C- or better) <i>Fund of Speech Communication</i>	
3 rd Semester 18 credits	MA 261 (4) P: MA 166 (C- or better) <i>Multivariate Calculus</i>	MA 351 (3) P: MA 166 (C- or better) <i>Elementary Linear Algebra</i>	PHYS 251 (5) P: PHYS 152 C: MA 261 <i>Heat, Electricity, and Optics</i>	CE 250 (3) P: PHYS 152 C: MA 261 <i>Statics</i>	CE 210 (3) P: MA 165 ENGR 120 <i>Introduction to Geomatics</i>	
4 th Semester 18 credits	MA 363 (3) P: MA 261 and MA 351 <i>Differential Equations</i>	CE 251 (3) P: CE 250 C: MA 363 <i>Dynamics</i>	CE 252 (3) P: CE 250 <i>Strength of Materials</i>	CE 315 (3) C: CE 252 <i>CE Materials</i>	ME 200 (3) P: CHM 115 C: MA 261 <i>Thermodynamics I</i>	General Education Elective (3) Area III
5 th Semester 16 credits	CE 318 (3) P: ME 200, CE 251, and MA 363 <i>Fluid Mechanics</i>	STAT 511 (3) P: MA 166 <i>Statistical Methods</i>	CE 375 (3) P: CE 252, MA 363 <i>Structural Analysis</i>	CE 316 (1) P: CE 315 <i>CE Materials Lab</i>	CE 330 (3) P: ENGR 199 & junior standing <i>Construction Management</i>	ECON E201 (3) <i>Intro to Microeconomics</i>
6 th Semester 14 credits	CE 319 (1) P: CE 318 <i>Fluid Mechanics Lab</i>	CE 365 (3) P: CHM 115 C: CE 318 <i>Environmental Engineering</i>	CE 478 (3) P: CE 375 CE 315 <i>Design of Concrete Structures</i>	CE 345 (3) P: CE 210 <i>Transportation Engineering</i>	CE 380 (3) P: CE 252 C: CE 318 & 381 <i>Soil Mechanics</i>	CE 381 (1) C: CE 380 <i>Soil Mechanics Lab</i>
7 th Semester 14 credits	CE 418 (3) P: CE 318 <i>Hydraulics Engineering</i>	CE 366 (1) P: CE 365 <i>Environmental Engineering Lab</i>	Select either Track 1 or Track 2		CE 401 (1) C: Senior standing <i>CE Profession and Practice</i>	Technical Elective (3)
			Track 1: Design only	Track 2: Design, Build, & Test		
8 th Semester 15 credits	Science Elective (3)	Technical Elective (3)	CE 487 (3) P: Senior standing and advisor approval. <i>CE Design Project</i>	CE 487 (3) or ENGR 410 P: Senior standing and advisor approval. <i>CE Design Project</i>	General Education Elective (3) Area IV	General Education Elective (3) Area VI
				CE 488 (3) or ENGR 411 (3) P: CE 487 <i>CE Design Project II</i>		

Total credit hours: 128

Math & Science	Freshmen Engineering	Civil Engineering	Mechanical Engineering	General Education
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