

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



Effective: Spring 2012

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.

The math and physics departments require a C- or better in some pre-requisite courses.

Consult with the most recent bulletin at <http://bulletin.ipfw.edu>

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

P = Pre-requisite, C = Co-Requisite

1 st Semester 16 credits	MA 165 (4) P: MA 154 or MA 159 with C- or better or placement <i>Analytical Geometry & Calculus I</i>	CHM 115 (4) P: CHM 111 or 1 yr. H.S. C: MA 154 <i>General Chemistry</i>	ENGR 101 (1) <i>Introduction to Engineering</i>	ENGR 120 (2) P: MA 153 Area V <i>Graphical Communication</i>	ENGR 121 (2) P: MA 154 or MA159 or placement C: ENGR 120 <i>Computer Tools for Engineers</i>	ENG W131 (3) P: ENG W129 with C or better or placement <i>Elementary Composition</i>
2 nd Semester 17 credits	MA 166 (4) P: MA 165 with C- or better <i>Analytical Geometry & 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 Programming for Engineers</i>	COM 114 (3) <i>Fund of Speech Communication</i>	
3 rd Semester 18 credits	MA 261 (4) P: MA 166 with C- or better <i>Multivariate Calculus</i>	MA 351 (3) P: MA 166 with C- or better <i>Elementary Linear Algebra</i>	PHYS 251 (5) P: PHYS 152 with C or better) 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 with C- or better C: 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 with C- or higher <i>Statistical Methods</i>	CE 375 (3) P: CE 252 <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 E 200 (3) <i>Fundamentals of Economics</i> OR ECON 201 (3) MA 153 with C- or better <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 <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>	Senior Design: Select one Track Only		CE 401 (1) C: Senior Standing <i>CE Profession and Practice</i>	Technical Elective (3) General Education Elective (3) Area IV
			Track 1: Design only Technical Elective (3)	Track 2: Design, Build & Test CE 487 (3)/ ENGR 410 P: Senior standing and advisor approval. <i>CE Design Project</i>		
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 488 (3)/ ENGR 411 P: CE 487 <i>CE Design Project II</i>	General Education Elective (3) Area IV	General Education Elective (3) Area VI

Revised February 2012

Total credit hours: 128

Key: Math & Science Freshmen Engineering Civil Engineering Mechanical Engineering General Education