

**Bachelor of Science in Civil Engineering (BSCE) Degree
Department of Civil & Mechanical Engineering**



Effective: **Fall 2016**

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.ipfw.edu/cme>

P = Pre-requisite, C = Co-Requisite, GE = General Education with Categories A, B, and C, and Competencies 1– 8.

1 st Semester 15 credits	MA 165 *(4) P: MA 154 or MA 159 with C- or better or placement GE A3 <i>Analytical Geometry & Calculus I</i>	CHM 115 *(4) P: CHM 111 or 1 yr. H.S. C: MA 154 GE B4 <i>General Chemistry</i>	ENGR 127 (4) C: MA 154 GE B4 <i>Engineering Fundamentals I</i>	ENG W131 *(3) P: ENG W129 with C or better or placement GE A1 <i>Elementary Composition</i>		
2 nd Semester 16 credits	MA 166 (4) P: MA 165 with C- or better GE B4 <i>Analytical Geometry & Calculus II</i>	PHYS 152 *(5) C: MA 166 GE B4 <i>Mechanics</i>	ENGR 128 (4) P: ENGR 127 C: MA 165, COM 114, or ENG W131 GE A2 <i>Engineering Fundamentals II</i>	COM 114 *(3) GE A2 <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 <i>Introduction to Geomatics</i>	
4 th Semester 15 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>	General Education Elective *(3) GE B5 <i>GE list (Table B5)</i>	
5 th Semester 16 credits	CE 318 (3) P: CE 251, and MA 363 <i>Fluid Mechanics</i>	CE 365 (3) P: CHM 115 <i>Environmental Engineering</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: 128 C: CE 210 & junior standing <i>Construction Management</i>	General Education Elective *(3) GE B6 <i>GE list (Table B6)</i>
6 th Semester 12 credits	CE 319 (1) P: CE 318 <i>Fluid Mechanics Lab</i>	CE 366 (1) P: CE 365 <i>Environmental Engineering Lab</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 16 credits	CE 418 (3) P: CE 318 <i>Hydraulics Engineering</i>	STAT 511 (3) P: MA 166 with C- or higher <i>Statistical Methods</i>	CE 401 (1) C: Senior Standing <i>CE Profession and Practice</i>	CE 487 (3) P: Senior standing and advisor approval. GE C8 <i>CE Design Project</i>	CE 481 (3) P: CE 380 & 381 <i>Foundation Engineering</i>	Technical Elective (3)
8 th Semester 15 credits	Technical Elective (3)	Technical Elective (3)	Science Elective *(3) GE B4 or B7 <i>Table Science Electives</i>	CE 488 (3) P: CE 487 <i>CE Design Project II</i> OR Technical Elective (3)	General Education Elective *(3) B7 <i>GE list (Table B7)</i>	

*All courses used to fulfill General Education Requirements require a grade of C- or better.

Total credit hours: 123

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