

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 <small>Analytical Geometry & Calculus I</small>	CHM 115 *(4) P: CHM 111 or 1 yr. H.S. C: MA 154 GE B4 <small>General Chemistry</small>	ENGR 127 (4) C: MA 154 <small>Engineering Fundamentals I</small>	ENG W131 *(3) P: ENG W129 with C or better or placement GE A1 <small>Elementary Composition</small>		
2 nd Semester 16 credits	MA 166 (4) P: MA 165 with C- or better <small>Analytical Geometry & Calculus II</small>	PHYS 152 *(5) C: MA 166 GE B4 <small>Mechanics</small>	ENGR 128 (4) P: ENGR 127 C: MA 165, COM 114, or ENG W131 <small>Engineering Fundamentals II</small>	COM 114 *(3) GE A2 <small>Fund of Speech Communication</small>		
3 rd Semester 18 credits	MA 261 (4) P: MA 166 with C- or better <small>Multivariate Calculus</small>	MA 351 (3) P: MA 166 with C- or better <small>Elementary Linear Algebra</small>	PHYS 251 (5) P: PHYS 152 with C or better C: MA 261 <small>Heat Electricity and Optics</small>	CE 250 (3) P: PHYS 152 C: MA 261 <small>Statics</small>	CE 210 (3) P: MA 165 (Summer & Fall only) <small>Introduction to Geomatics</small>	
4 th Semester 15 credits	MA 363 (3) P: MA 261 with C- or better C: MA 351 <small>Differential Equations</small>	CE 251 (3) P: CE 250 C: MA 363 <small>Dynamics</small>	CE 252 (3) P: CE 250 <small>Strength of Materials</small>	CE 315 (3) C: CE 252 (Spring only) <small>CE Materials</small>	General Education Elective *(3) GE B5 <small>GE list (Table B5)</small>	
5 th Semester 16 credits	CE 318 (3) P: CE 251, and MA 363 <small>Fluid Mechanics</small>	CE 365 (3) P: CHM 115 (Fall only) <small>Environmental Engineering</small>	CE 375 (3) P: CE 252 (Fall only) <small>Structural Analysis</small>	CE 316 (1) P: CE 315 (Fall only) <small>CE Materials Lab</small>	CE 330 (3) P: 128, C: CE 210 & junior standing (Fall only) <small>Construction Management</small>	General Education Elective *(3) GE B6 <small>GE list (Table B6)</small>
6 th Semester 12 credits	CE 319 (1) P: CE 318 <small>Fluid Mechanics Lab</small>	CE 366 (1) P: CE 365 (Spring only) <small>Environmental Engineering Lab</small>	CE 478 (3) P: CE 375 CE 315 (Spring only) <small>Design of Concrete Structures</small>	CE 345 (3) P: CE 210 (Spring only) <small>Transportation Engineering</small>	CE 380 (3) P: CE 252 C: CE 318 & 381 (Spring only) <small>Soil Mechanics</small>	CE 381 (1) C: CE 380 (Spring only) <small>Soil Mechanics Lab</small>
7 th Semester 16 credits	CE 418 (3) P: CE 318 (Fall only) <small>Hydraulics Engineering</small>	STAT 511 (3) P: MA 166 with C- or higher <small>Statistical Methods</small>	CE 401 (1) C: Senior Standing (Fall only) <small>CE Profession and Practice</small>	CE 487 (3) P: Senior standing and advisor approval. (Spring only) GE C8 <small>CE Design Project</small>	CE 481 (3) P: CE 380 & 381 (Fall only) <small>Foundation Engineering</small>	Technical Elective (3)
8 th Semester 15 credits	Technical Elective (3)	Technical Elective (3)	Science Elective *(3) GE B4 or B7 <small>Table Science Electives</small>	CE 488 (3) P: CE 487 <small>CE Design Project II</small> OR Technical Elective (3)	General Education Elective *(3) B7 <small>GE list (Table B7)</small>	

*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