

**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.pfw.edu/cme>

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

1 <sup>st</sup> Semester 15 credits	<b>MA 16500 *(4)</b> P: MA 15400 or MA 15900 with C- or better or placement <b>GE A3</b> <small>Analytical Geometry &amp; Calculus I</small>	<b>CHM 11500 *(4)</b> P: CHM 11100 or 1 yr. H.S. C: MA 15400 <b>GE B4</b> <small>General Chemistry</small>	<b>ENGR 12700 (4)</b> C: MA 15400 <b>GE A1</b> <small>Engineering Fundamentals I</small>	<b>ENGL 13100 *(3)</b> P: ENGL 12900 with C or better or placement <b>GE A1</b> <small>Elementary Composition</small>		
2 <sup>nd</sup> Semester 16 credits	<b>MA 16600 (4)</b> P: MA 16500 with C- or better <b>GE B4</b> <small>Analytical Geometry &amp; Calculus II</small>	<b>PHYS 15200 *(5)</b> C: MA 16600 <b>GE B4</b> <small>Mechanics</small>	<b>ENGR 12800 (4)</b> P: ENGR 12700 C: MA 16500, COM 11400, or ENGL 13100 <b>GE A2</b> <small>Engineering Fundamentals II</small>	<b>COM 11400 *(3)</b> <b>GE A2</b> <small>Fund of Speech Communication</small>		
3 <sup>rd</sup> Semester 18 credits	<b>MA 26100 (4)</b> P: MA 16600 with C- or better <small>Multivariate Calculus</small>	<b>MA 35100 (3)</b> P: MA 16600 with C- or better <small>Elementary Linear Algebra</small>	<b>PHYS 25100 (5)</b> P: PHYS 15200 with C or better C: MA 26100 <small>Heat Electricity and Optics</small>	<b>CE 25000 (3)</b> P: PHYS 15200 C: MA 26100 <small>Statics</small>	<b>CE 21000 (3)</b> P: MA 16500 <b>(Summer &amp; Fall only)</b> <small>Introduction to Geomatics</small>	
4 <sup>th</sup> Semester 15 credits	<b>MA 36300 (3)</b> P: MA 26100 with C- or better C: MA 35100 <small>Differential Equations</small>	<b>CE 25100 (3)</b> P: CE 25000 C: MA 36300 <small>Dynamics</small>	<b>CE 25200 (3)</b> P: CE 25000 <small>Strength of Materials</small>	<b>CE 31500 (3)</b> C: CE 25200 <b>(Spring only)</b> <small>CE Materials</small>	<b>General Education Elective *(3)</b> <b>GE B5</b> <small>GE list (Table B5)</small>	
5 <sup>th</sup> Semester 16 credits	<b>CE 31800 (3)</b> P: CE 25100, and MA 36300 <small>Fluid Mechanics</small>	<b>CE 36500 (3)</b> P: CHM 11500 <b>(Fall only)</b> <small>Environmental Engineering</small>	<b>CE 37500 (3)</b> P: CE 25200 <b>(Fall only)</b> <small>Structural Analysis</small>	<b>CE 31600 (1)</b> P: CE 31500 <b>(Fall only)</b> <small>CE Materials Lab</small>	<b>CE 33000 (3)</b> P : 12800, C : CE 21000 & junior standing <b>(Fall only)</b> <small>Construction Management</small>	<b>General Education Elective *(3)</b> <b>GE B6</b> <small>GE list (Table B6)</small>
6 <sup>th</sup> Semester 12 credits	<b>CE 31900 (1)</b> P: CE 31800 <small>Fluid Mechanics Lab</small>	<b>CE 36600 (1)</b> P: CE 36500 <b>(Spring only)</b> <small>Environmental Engineering Lab</small>	<b>CE 47800 (3)</b> P: CE 37500 CE 31500 <b>(Spring only)</b> <small>Design of Concrete Structures</small>	<b>CE 34500 (3)</b> P: CE 21000 <b>(Spring only)</b> <small>Transportation Engineering</small>	<b>CE 38000 (3)</b> P: CE 25200 C: CE 31800 & 38100 <b>(Spring only)</b> <small>Soil Mechanics</small>	<b>CE 38100 (1)</b> C: CE 38000 <b>(Spring only)</b> <small>Soil Mechanics Lab</small>
7 <sup>th</sup> Semester 16 credits	<b>CE 41800 (3)</b> P: CE 31800 <b>(Fall only)</b> <small>Hydraulics Engineering</small>	<b>STAT 51100 (3)</b> P: MA 16600 with C- or higher <small>Statistical Methods</small>	<b>CE 40100 (1)</b> C: Senior Standing <b>(Fall only)</b> <small>CE Profession and Practice</small>	<b>CE 48700 (3)</b> P: Senior standing and advisor approval. <b>(Spring only)</b> <b>GE C8</b> <small>CE Design Project</small>	<b>CE 48100 (3)</b> P: CE 38000 & 38100 <b>(Fall only)</b> <small>Foundation Engineering</small>	<b>Technical Elective (3)</b>
8 <sup>th</sup> Semester 15 credits	<b>Technical Elective (3)</b>	<b>Technical Elective (3)</b>	<b>Science Elective *(3)</b> <b>GE B4 or B7</b> <small>Table Science Electives</small>	<b>CE 48800 (3)</b> P: CE 48700 <b>OR</b> <b>Technical Elective (3)</b> <small>CE Design Project II</small>	<b>General Education Elective *(3)</b> <b>B7</b> <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