

## Bachelor of Science in Mechanical Engineering (BSME) 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.

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

P = Pre-requisite, C = Co-requisite, DC = Design Content

1 <sup>st</sup> semester 16 credits	<b>MA 165 (4)</b> P: MA 154 or 159 (C or better) or placement  <i>Analytical Geometry &amp; Calculus I</i>	<b>CHM 115 (4)</b> P: CHM 111 or 1 yr. H.S. C: MA 153 or 159  <i>Chemistry</i>	<b>ENGR 101 (1)</b>  <i>Introduction to Engineering</i>	<b>ENGR 120 (2)</b> P: MA 153  <i>Graphical Comm. &amp; Spac. Anal.</i>	<b>ENGR 121 (2)</b> P: MA 154 or 159 (C or better) or placement C: ENGR 120  <i>Computer Tools for Engineers</i>	<b>ENG W131 (3)</b> P: ENG W129 (C or better) or placement  <i>Elementary Composition I</i>
2 <sup>nd</sup> semester 17 credits	<b>MA 166 (4)</b> P: MA 165 (C or better)  <i>Analytical Geometry &amp; Calculus II</i>	<b>PHYS 152 (5)</b> C: MA 166  <i>Mechanics</i>	<b>ENGR 199 (3) DC</b> P: ENGR 101 C: ENGR 121, PHYS 152  <i>Introduction to Design</i>	<b>ME160 (2)</b> P: ENGR 120, MA 165 C: ENGR 199  <i>Solid Modeling</i>	<b>COM 114 (3)</b> (C or better)  <i>Fundamentals of Speech</i>	
3 <sup>rd</sup> semester 17 credits	<b>MA 261 (4)</b> P: MA 166 (C or better)  <i>Multivariate Calculus</i>	<b>MA 351 (3)</b> P: MA 166 (C or better)  <i>Elementary Linear Algebra</i>	<b>PHYS 251 (5)</b> P: PHYS 152 C: MA 261  <i>Heat, Electricity, &amp; Optics</i>	<b>ME 250 (3)</b> P: PHYS 152 C: MA 261  <i>Statics</i>	<b>ENGR 221 (2) or CS 227 (2)</b> P: ENGR 101, ENGR 121  <i>C &amp; C++ Prog for Engineers</i>	
4 <sup>th</sup> semester 15 credits	<b>MA 363 (3)</b> P: MA 351, MA 261  <i>Differential Equations</i>	<b>ME 251 (3)</b> P: ME 250 C: MA 363  <i>Dynamics</i>	<b>ME 200 (3) DC</b> P: CHM 115 C: MA 261  <i>Thermodynamics I</i>	<b>ME 252 (3) DC</b> P: ME 250  <i>Strength of Materials</i>	<b>ECE 201 (3)</b> C: MA 261  <i>Linear Circuit Analysis I</i>	
5 <sup>th</sup> semester 16 credits	<b>ME 318 (3) DC</b> P: ME 200, ME 251, MA 363  <i>Fluid Mechanics</i>	<b>ME 361 (3) DC</b> P: ME 160, ME 251, MA 363  <i>Kinematics &amp; Dynamics Mach</i>	<b>ME 303 (2)</b> P: CHM 115, PHYS 251 C: ME 252  <i>Materials Science and Engr</i>	<b>ME331 (3) DC</b> P: ME 251, MA 363  <i>System Dynamics</i>	<b>ME 293 (2)</b> P: COM 114, ENG W131, ECE 201  <i>Measurement &amp; Instrumentation</i>	<b>ECON E201 (3)</b>  <i>Area III</i>
6 <sup>th</sup> semester 14 credits	<b>ME 301 (3) DC</b> P: ME 200  <i>Thermodynamics II</i>	<b>ME 304 (1)</b> P: ME 293, ME 303  <i>Mechanics &amp; Materials Lab</i>	<b>ME 319 (1) DC</b> P: ME 293, ME 318  <i>Fluid Mechanics Lab</i>	<b>ME 321 (3) DC</b> C: ME 318  <i>Heat Transfer</i>	<b>ME 369 (3) DC</b> P: ME 361, ME 252, ME 303 C: ME 304  <i>Design of Machine Elements</i>	<b>ME 333 (3) DC</b> P: ME 331  <i>Automatic Control Systems</i>
7 <sup>th</sup> semester 16 credits	<b>ME 487(3) DC or ENGR 410 (3) DC</b> P: ME 321, ME 369 C: ME 322  <i>Senior Design I</i>	<b>ME 322 (1)</b> P: ME 293, ME 321 C: ME 319  <i>Heat Transfer Lab</i>	<b>Technical Elective (3)</b>  <i>Group 1</i>	<b>Technical Elective (3)</b>  <i>Group 1</i>	<b>General Education Elective (3)</b>  <i>Area IV</i>	<b>General Education Elective (3)</b>  <i>Area III</i>
8 <sup>th</sup> semester 15 credits	<b>ME 488 (3) DC or ENGR 411 (3) DC</b> P: ME 487 or ENGR 410  <i>Senior Design II</i>	<b>Technical Elective (3)</b>  <i>Group 1</i>	<b>Technical Elective (3)</b>  <i>Group 1 or 2</i>	<b>General Education Elective (3)</b>  <i>Area IV</i>	<b>General Education Elective (3)</b>  <i>Area VI</i>	

Revised June 2010

Total credit hours 126