

## Bachelor of Science in Electrical Engineering (BSEE) Degree Department of Engineering



Effective date: Fall 2014

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://ipfw.edu/engineering/>

P = Prerequisite, C = Corequisite, DC = Design Content

1 <sup>st</sup> semester 15 credits	<b>MA 165 (4)</b> P: MA 154 or MA 159 (C- or better), or placement	<b>CHM 115 (4)</b> P: CHM 111 or 1 yr. H.S. C: MA 154	<b>ENGR 127 (4)</b> C: MA 154	<b>ENG W131 (3)</b> P: ENG W129 (C or better) or placement		
	Anly. Geometry & Calc. I CAT A-3	General Chemistry CAT B-4	Engr. Fundamentals I	Elem. Composition I CAT A-1		
2 <sup>nd</sup> semester 16 credits	<b>MA 166 (4)</b> P: MA 165 (C- or better)	<b>PHYS 152 (5)</b> C: MA 166	<b>ENGR 128 (4)</b> P: ENGR 127 C: MA 165, ENG W131, COM 114 DC	<b>COM 114 (3)</b> (C or better)		
	Anly. Geometry & Calc. II	Mechanics CAT B-4	Engr. Fundamentals II	Fundament. of Speech CAT A-2		
3 <sup>rd</sup> semester 18 credits	<b>MA 261 (4)</b> P: MA 166 (C- or better)	<b>MA 351 (3)</b> P: MA 166 (C- or better)	<b>PHYS 251 (5)</b> P: PHYS 152 (C or better) C: MA 261	<b>ECE 201 (3)</b> C: MA 261	<b>CS 227 or ENGR 221 (2)</b> P: ENGR 101, ENGR 121	<b>CS 228 or ENGR 222 (1)</b> C: ENGR 221
	Multivariate Calculus	Elem. Linear Algebra	Heat Electricity & Optics	Linear Circuit Anly. I	C & C++ Prog. for Engr.	Object Orient. Program.
4 <sup>th</sup> semester 15 credits	<b>MA 363 (3)</b> P: MA 261 (C- or better) C: MA 351	<b>ECE 202 (3)</b> P: ECE 201 C: MA 363 DC	<b>ECE 255 (3)</b> P: ECE 201 DC	<b>ECE 270 (4)</b> P: ENGR 199 DC	<b>ECE 293 (2)</b> P: ECE 201, ENG W131, COM 114	
	Differential Equations	Linear Circuit Anly. II	Intr. Electron Anly. Des.	Intro. Digitl Sys. Desgn.	Measure. & Instrument.	
5 <sup>th</sup> semester 12 credits	<b>ECE 208 (1)</b> P: ECE 255, ECE 293 DC	<b>ECE 301 (3)</b> P: ECE 202	<b>ECE 324 (3)</b> P: PHYS 251, ECE 255 C: ECE 208 DC	<b>Technical Elective (3)</b>	<b>ME 253 (2)</b> P: MA 261, PHYS 152	
	Electron. Dev. Des. Lab	Signals & Systems	Intr. Enegy Sys.	<b>Group II</b>	Statics & Dynamics	
6 <sup>th</sup> semester 16 credits	<b>ECE 302 (3)</b> P: MA 363 C: ECE 301	<b>ECE 311 (3)</b> P: MA 363, PHYS 251	<b>ECE 333 (3)</b> P: ECE 301, ME 253 DC	<b>ECE 362 (4)</b> P: ECE 270, ECE 293, CS 227 or ENGR 221 DC	<b>ECON E201 (3)</b> P: MA 153 (C- or better) OR <b>ECON E200 (3)</b> OR <b>ENG W234 (3)</b>	
	Probabilistic Methods	Elec. & Magnetic Fields	Automatic Control Sys.	Micropro. Sys & Infrac.	<b>CAT B/A</b>	
7 <sup>th</sup> semester 15 credits	<b>ECE 405 (3) or ENGR 410 (3)</b> P: ECE 208, ECE 301, ECE 362 (and permission of the senior design advisor) DC	<b>ECE 428 (3)</b> P: ECE 301, ECE 302 DC	<b>ECE 436 (3)</b> P: ECE 301 DC	<b>Technical Elective (3)</b> DC	General Education Elective (3)	
	Sr. Engr. Design I	Modern Commun. Syst.	Digital Signal Process.	<b>Group I</b>	<b>CAT B-5</b>	
8 <sup>th</sup> semester 15 credits	<b>ECE 406 (3) or ENGR 411 (3)</b> P: ECE 405 or ENGR 410 DC	<b>Technical Elective (3)</b> DC	<b>Technical Elective (3)</b>	General Education Elective (3)	General Education Elective (3)	
	Sr. Engr. Design II	<b>Group I</b>	<b>Group II</b>	<b>CAT B-6</b>	<b>CAT B-7</b>	