

Bachelor of Science in Electrical Engineering (BSEE) Degree Department of Electrical and Computer Engineering



Effective date: 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.

For more information visit www.ipfw.edu/ece/

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

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|--|---|---|---|---|--|----------------------------------|
| 1 st semester 15 credits | MA 165 (4) P: MA 154 or MA 159 (C- or better), or placement | CHM 115 (4) P: CHM 111 or 1 yr. H.S. C: MA 154 | ENGR 127 (4) C: MA 154 | ENG W131 (3) P: ENG W129 (C or better) or placement | | |
| | Anly. Geometry & Calc. I GenEd A3 | General Chemistry GenEd B4 | Engr. Fundamentals I | Elem. Composition I GenEd A1 | | |
| 2 nd semester 16 credits | MA 166 (4) P: MA 165 (C- or better) | PHYS 152 (5) C: MA 166 | ENGR 128 (4) P: ENGR 127 C: MA 165, ENG W131, or COM 114 DC | COM 114 (3) (C or better) | | |
| | Anly. Geometry & Calc. II GenEd A3 | Mechanics GenEd B4 | Engr. Fundamentals II | Fundament. of Speech GenEd A2 | | |
| 3 rd semester 19 credits | MA 261 (4) P: MA 166 (C- or better) | MA 351 (3) P: MA 166 (C- or better) | PHYS 251 (5) P: PHYS 152 (C or better) C: MA 261 | ECE 201 (3) C: MA 261 | CS 229 (4) P: ENGR 128 | |
| | Multivariate Calculus | Elem. Linear Algebra | Heat Electricity & Optics GenEd B7 | Linear Circuit Anly. I | Intro. to C/C++ Prog. | |
| 4 th semester 14 credits | MA 363 (3) P: MA 261 or MA 263 (C- or better) C: MA 351 (C- or better) or current enrollment in MA 351 | ECE 202 (3) P: ECE 201 C: MA 363 DC | ECE 255 (3) P: ECE 201 DC | ECE 270 (4) C: ENGR 128 DC | ECE 207 (1) P: ECE 201 DC | |
| | Differential Equations | Linear Circuit Anly. II | Intr. Electron Anly. Des. | Intro. Digitl Sys. Desgn. | Elect. Measure. Tech. | |
| 5 th semester 13 credits | ECE 208 (1) P: ECE 255, ECE 207 DC | ECE 301 (3) P: ECE 202 | ECE 324 (3) P: PHYS 251, ECE 255 C: ECE 208 DC | Technical Elective (3) | ME 253 (2) P: MA 261, PHYS 152 | ECE 313 (1) C: ECE 324 |
| | Electron. Dev. Des. Lab | Signals & Systems | Intr. Enegy Sys. | Group II | Statics & Dynamics | Energy Conversion Lab |
| 6 th semester 16 credits | ECE 302 (3) P: MA 363 C: ECE 301 | ECE 311 (3) P: MA 363, PHYS 251 | ECE 333 (3) P: ECE 301, ME 253 DC | ECE 362 (4) P: ECE 270, ECE 207, CS 229 DC | General Education Elective (3) | |
| | Probabilistic Methods | Elec. & Magnetic Fields | Automatic Control Sys. | Micropro. Sys & Intrafac. | GenEd B5 | |
| 7 th semester 12 credits | ECE 405 (3) Senior standing in the program and permission of the senior design project advisor DC GenEd C8 | ECE 428 (3) P: ECE 301, ECE 302 DC | ECE 436 (3) P: ECE 301 DC | Technical Elective (3) DC | | |
| | Sr. Engr. Design I | Modern Commun. Syst. | Digital Signal Process. | Group I | | |
| 8 th semester 16 credits | ECE 406 (3) P: ECE 405 DC | Technical Elective (3) DC | Technical Elective (3) | General Education Elective (3) | ECE 460 (4) P: ECE 202, ECE 255 DC | |
| | Sr. Engr. Design II | Group I | Group II | GenEd B6 | Power Electronics | |