

Bachelor of Science in Engineering –Electrical Engineering Concentration

Worksheet & Pre-requisites—2016-17

Students must also attempt the Fundamentals of Engineering (FE) exam twice

| Course # | Course title | Credits | Off'rd | Pre-requisites |
|---|---|-----------|--------|-----------------------------------|
| CORE | | | | |
| ENGL 3120 | Writing in the Sciences | 3 | F | ENGL 2010 |
| ENGR 1000 | Engineering Success Skills | 1 | F | |
| ENGR 1030 | Computer Assisted Design using SolidWorks | 3 | F/S | |
| ENGR 2010 | Statics | 3 | F | ENGR 1010, MATH 1210 |
| ENGR 2030 | Dynamics | 3 | S | ENGR 2010 & PHYS 2210 |
| ENGR 2140 | Strength of Materials | 3 | S | ENGR 1030, 2010 MATH 1220 |
| ENGR 2145 | Strength of Materials lab | 1 | S | ENGL 2010 Co-req ENGR 2140 |
| ENGR 2250 | Electric Circuits | 3 | S | MATH 2250 & PHYS 2220/2225 |
| ENGR 2255 | Electric Circuits Lab | 1 | S | ENGL 2010 Co-req ENGR 2250 |
| ENGR 3000 | Thermodynamics | 3 | F | PHYS 2220 |
| ENGR 3010 | Material Science Engineering | 3 | F | CHEM 1210/1215, MATH 1210 |
| ENGR 3015 | Material Science Engineering lab | 1 | F | co-req: ENGR 3010 |
| ENGR 3030 | Technical Project Management | 3 | S | ENGR 3045 |
| ENGR 3050 | Fluid Mechanics | 3 | S | ENGR 3000 |
| ENGR 3055 | Fluid Mechanics Lab | 1 | S | Co-req ENGR 3050 |
| ENGR 4025 | Engineering Capstone Design Lab I | 3 | F | ENGR 3030 |
| ENGR 4030 | Electronics | 3 | F | ENGR 2250 & 2255 |
| ENGR 4035 | Electronics Lab | 1 | F | Co-req ENGR 4030 |
| ENGR 4060 | Manufacturing | 3 | F | ENGR 3010 & 3015 |
| ENGR 4085 | Engineering Capstone Design Lab II | 3 | S | ENGR 4025 |
| MATH 1040 or 2040 | Statistics or Business Statistics | 4 | F/S/Su | "C" or better in MATH 1010 |
| MATH 1220 | Calculus II | 4 | F/S | "C" or better in MATH 1210 |
| MATH 2210 | Calculus III | 4 | F/S | "C" or better in MATH 1220 |
| MATH 2250 | Linear Algebra & Diff Equations | 4 | F | MATH 1210 & MATH 1220 |
| PHYS 2210 | Physics for Scientists & Engineers I | 4 | F/S | MATH 1210 Co-req-PHYS 2215 |
| PHYS 2215 | Physics for Scientists & Engineers I Lab | 1 | F/S | Co-req PHYS 2210 |
| PHYS 2220 | Physics for Scientists & Engineers II | 4 | F/S | PHYS 2210/15 & MATH 1220 |
| PHYS 2225 | Physics for Scientists & Engineers II Lab | 1 | F/S | Co-req PHYS 2220 |
| Electrical Engineering Concentration | | | | |
| ENGR 2170 | Programming for Engineers | 3 | F | MATH 1210 |
| ENGR 4000 | Mechatronics | 3 | S | ENGR 2030, 4030 & 4035 |
| ENGR 4005 | Mechatronics Lab | 1 | S | Co-req ENGR 4000 |
| ENGR 4200 | Advanced Electronic System Architectures | 3 | F | ENGR 4030 |
| Electives | <i>Choose any Upper Division elective class</i> | 3 | | |
| EDGE Requirement | | | | |
| EDGE 1010 | Becoming an Engaged Learner | 1 | F/S/Su | |
| EDGE 30XX | Project Proposal and Planning | 1 | F/S/Su | EDGE 1010 |
| EDGE 40XX | Project Reporting and Reflection | 1 | F/S/Su | EDGE 30XX |
| GENERAL EDUCATION | | | | |
| ENGL 1010 | Intro to Academic Writing | 3 | F/S/Su | |
| ENGL 2010 | Intermediate Writing | 3 | F/S/Su | |
| MATH 1210 | Calculus I | 4 | F/S/Su | "C" or better in MATH 1050 & 1060 |
| American Institution | | 3 | F/S/Su | |
| LM 1010 | Information Literacy | 1 | F/S/Su | |
| CSIS 1000 | Intro to Computer Apps & Internet | 3 | F/S/Su | |
| FINE ARTS | | 3 | F/S/Su | |
| HUMANITIES:ENGR 1010 | Engineering in the 21st Century | 3 | F/S | |
| SOCIAL SCIENCE | | 3 | F/S/Su | |
| LIFE SCIENCE | | 3 | F/S/Su | |
| PHYS SCI: CHEM 1210/15 | Principles of Chemistry I/Lab | 5 | F/S/Su | MATH 1050 or H.S. chemistry |
| | | 123 total | | 41 upper division |