Approved Engineering Support Courses

Updated and approved by the EE Curriculum Committee on 4/23/2018.

Course	Units	Description
BIO 111	4	General Biology
BMED 212	3	Introduction to Biomedical Engineering Design
BMED 310	4	Biomedical Engineering Management and Analysis
BMED 434	3	Microfabrication
BMED 435	2	Microfabrication Lab
BMED 450	4	Contemporary Issues in Biomedical Engineering
BMED 460	4	Engineering Physiology
CHEM 125	4	General Chemistry for the Engineering Disciplines II
CHEM 212	5	Introduction to Organic Chemistry
CHEM 216	5	Introduction to Organic Chemistry I
CHEM 313	5	Survey of Biochemistry and Biotechnology
CPE 290	3	Intro to C++ Programming
CPE 333	4	Computer Hardware Architecture and Design
CSC 141	4	Discrete Structures I
CSC 142	4	Discrete Structures II
CSC 341	4	Numerical Engineering Analysis
CSC 342	3	Numerical Analysis I
CSC 343	3	Numerical Analysis II
CSC/CPE 202	4	Data Structures
CSC/CPE 203	4	Project-Based Object-Oriented Programming and Design
CSC/CPE 315	4	Computer Architecture
CSC/CPE 357	4	Systems Programming
IME 143	2	Manufacturing Processes: Materials Removal
IME 301	4	Operations Research I
IME 305	4	Operations Research II
IME 314	3	Engineering Economics
IME 315	3	Financial Decision Making for Engineers
MATE 210	3	Materials Engineering
MATE 215	1	Materials Laboratory I
MATE 232	4	Nanotechnology, Human Biology, Ethics and Society

Course	Units	Description
MATE 340	4	Electronic Materials Systems
MATE 430	3	Microfabrication
MATE 435	2	Microfabrication Laboratory
MATH 206	4	Linear Algebra I
MATH 248	4	Methods of Proof in Mathematics
MATH 304	4	Vector Analysis
MATH 306	4	Linear Algebra II
MATH 406	4	Linear Algebra III
MATH 408	4	Complex Analysis I
MATH 409	4	Complex Analysis II
MATH 412	4	Introduction to Analysis I
MATH 413	4	Introduction to Analysis II
MATH 414	4	Introduction to Analysis III
MATH 418	4	Partial Differential Equations
MATH 451	4	Numerical Analysis I
MATH 452	4	Numerical Analysis II
MATH 453	4	Numerical Optimization
ME 211	3	Engineering Statics
ME 212	3	Engineering Dynamics
ME 302	3	Thermodynamics
ME 341	3	Fluid Mechanics I
~~ME 343~~	~~4~~	~~Heat Transfer~~
PHYS 212	4	Modern Physics II
PHYS 310	3	Physics of Energy
PHYS 313	3	Introduction to Atmospheric Physics
PHYS 315	3	Introduction to Lasers and Laser Applications
PHYS ~~317~~ 318	3	Special Theory of Relativity
PHYS 322	3	Vibrations and Waves
PHYS 323	4	Optics
PHYS 340	2	Quantum Physics Laboratory I
PHYS 341	2	Quantum Physics Laboratory II
PHYS 342	1	Quantum Physics Laboratory III
PHYS 403	3	Nuclear & Particle Physics
PHYS 405	4	Quantum Mechanics I
PHYS 406	3	Quantum Mechanics II

Course	Units	Description
PHYS 408	4	Electromagnetic Fields & Waves I
PHYS 409	3	Electromagnetic Fields & Waves II
PHYS 412	3	Solid State Physics
PHYS 417	4	Nonlinear Dynamical Systems
PHYS 422	1	Polymer Electronics Laboratory
PHYS 423	4	Advanced Optics
PHYS 424	3	Theoretical Physics
PHYS 452	1	Solid State Physics Lab
STAT 426	4	Estimation & Sampling Theory
STAT 427	4	Mathematical Statistics

Table 1: Approved Engineering Support Courses

The following courses have also been approved by the EE Curriculum Committee as Engineering Support Electives. However, students can only take these courses for Support Elective credit if they meet the course prerequisites or obtain instructor approval and permission number to enroll in the courses; AND if they successfully petition for the course to provide Support Elective degree credit using a "Major/Support Course Substitution Form" (available from the Engineering Advising Center) with approval from the EE Department Chair.

Course	Units	Description	Prerequisites
CHEM 216	5	Organic Chemistry I	CHEM 126 > CHEM 125 > CHEM 124
MATH 413	4	Introduction to Analysis II	MATH 412 > MATH 306 > MATH 248
MATH 414	4	Introduction to Analysis III	MATH 413 > MATH 412 > MATH 306 > MATH 248
MATH 418	4	Partial Differential Equations	MATH 344
PHYS 340	2	Quantum Physics Laboratory I	PHYS 340 > PHYS 206; PHYS 212
PHYS 340	2	Quantum Physics Laboratory I	PHYS 341 > PHYS 340 > (PHYS 206; PHYS 212)
PHYS 341	2	Quantum Physics Laboratory II	PHYS 340 > PHYS 206; PHYS 212
PHYS 342	1	Quantum Physics Laboratory III	PHYS 341 > PHYS 340 > (PHYS 206; PHYS 212)
STAT 426	4	Estimation and Sampling Theory	STAT 425 > MATH248
STAT 427	4	Mathematical Statistics	STAT 426 > STAT 425 > MATH248