Higher Level EECE Electives

Students must take 5 classes (20 credits) of Higher Level EECE Electives chosen from the following list. The student’s chosen concentration requires 3 specific Higher Level EECE Electives to be taken, leaving 2 for the student to choose:

EECE 321 ELECTRONIC SYSTEMS (4)
EECE 333 DIGITAL SYSTEM DESIGN (4)
EECE 361 SIGNAL PROPAGATION (4)
EECE 362 WIRELESS NETWORKING AND APPLIC. (4)
EECE 372 ELECT POWER & ELECTROMECH DEVICES (4)
EECE 374 ENERGY PROCESSING (4)
EECE 378 POWER SYS ANALYSIS & THE SMART GRID (4)
EECE 383 MACHINE LEARNING FOR ENGINEERS (4)
EECE 384 AI AND REINFORCEMENT LEARNING (4)
EECE 385 CYBER-PHYSICAL SYSTEMS (4)
EECE 433 DIG. SIGNAL PROCESSING (4)
EECE 460 DIGITAL COMMUNICATIONS (4)

Approved Technical Electives

The following courses are pre-approved to be used toward the degree requirement of 10 credits of technical electives. Other courses in supporting disciplines that are not on this list can possibly fulfill the technical elective requirement if the student obtains approval from the EECE Program in consultation with their advisor:

EECE 300- and 400-level Higher Level EECE Electives*
EECE 400 INDEPENDENT STUDY
EECE 495 DIRECTED RESEARCH IN EECE

BIOL 204, 205, 206 INTRODUCTORY SERIES (5)
BIOL 348 HUMAN ANATOMY AND PHYSIOLOGY (5)
CHEM 162, 163 GENERAL CHEMISTRY II, III (5,5)
CSCI 145 COMP. PROG. & LINEAR DATA STRUCT. (4)
CSCI 247 COMPUTER SYSTEMS I (5)
CSCI 241 DATA STRUCTURES (4)
CSCI 300- and CSCI 400-level
ENGR 170 INTRO TO MATERIALS SCIENCE & ENGR (4)
ENGR 214 STATICS (4)
ENGR 225 MECHANICS OF MATERIALS (4)
ENGR 320 SCIENCE OF ENERGY RESOURCES (4)
ENGR 360 ENERGY EFFICIENT DESIGN (4)
ENGR/ESCI 380 ENERGY AND ENVIRONMENT (4)
ENGR/ECON 386 ECONOMICS OF ELECT. MARKETS (4)
ENGR 420 ENERGY SCIENCE II (3)
ENGR 464 SUSTAINABLE BUILDING ANALYSIS (4)
ENGR 480 APPLICATIONS ENERGY PRODUCTION (4)
ENGR 486 ELECTRIC UTILITY PLANNING (4)
MATH 225 MULTIVARIABLE CALC. AND GEOM. II (4)
MATH 226 LIMITS AND INFINITE SERIES (4)
MATH 302 INTRO TO PROOFS VIA NUMBER THEORY (4)
MATH 304 LINEAR ALGEBRA (4)
MATH 307 MATHEMATICAL COMPUTING (4)
MATH 309 INTRO TO PROOF IN DISCRETE MATH (4)
MATH 312 PROOFS IN ELEMENTARY ANALYSIS (4)
MATH 342 STATISTICAL METHODS I (4)
MATH 343 STATISTICAL METHODS II (4)
MATH 344 HONORS PROBABILITY AND STATS (4)
MATH 410 NUMERICAL METHODS (4)
MATH 411 METHODS OF MATHEMATICAL ANALYSIS I (4)
MATH 412 METHODS OF MATHEMATICAL ANALYSIS II (4)
MATH 421 METHODS OF MATHEMATICAL ANALYSIS I (4)
MATH 422 METHODS OF MATHEMATICAL ANALYSIS II (4)
MATH 423 TOPICS IN ANALYSIS (4)

* Taken beyond the 20 credits of required Higher Level EECE Electives. Courses may not be double counted to simultaneously fulfill the 20 credits of Higher Level EECE Electives and the 10 credits of technical electives.