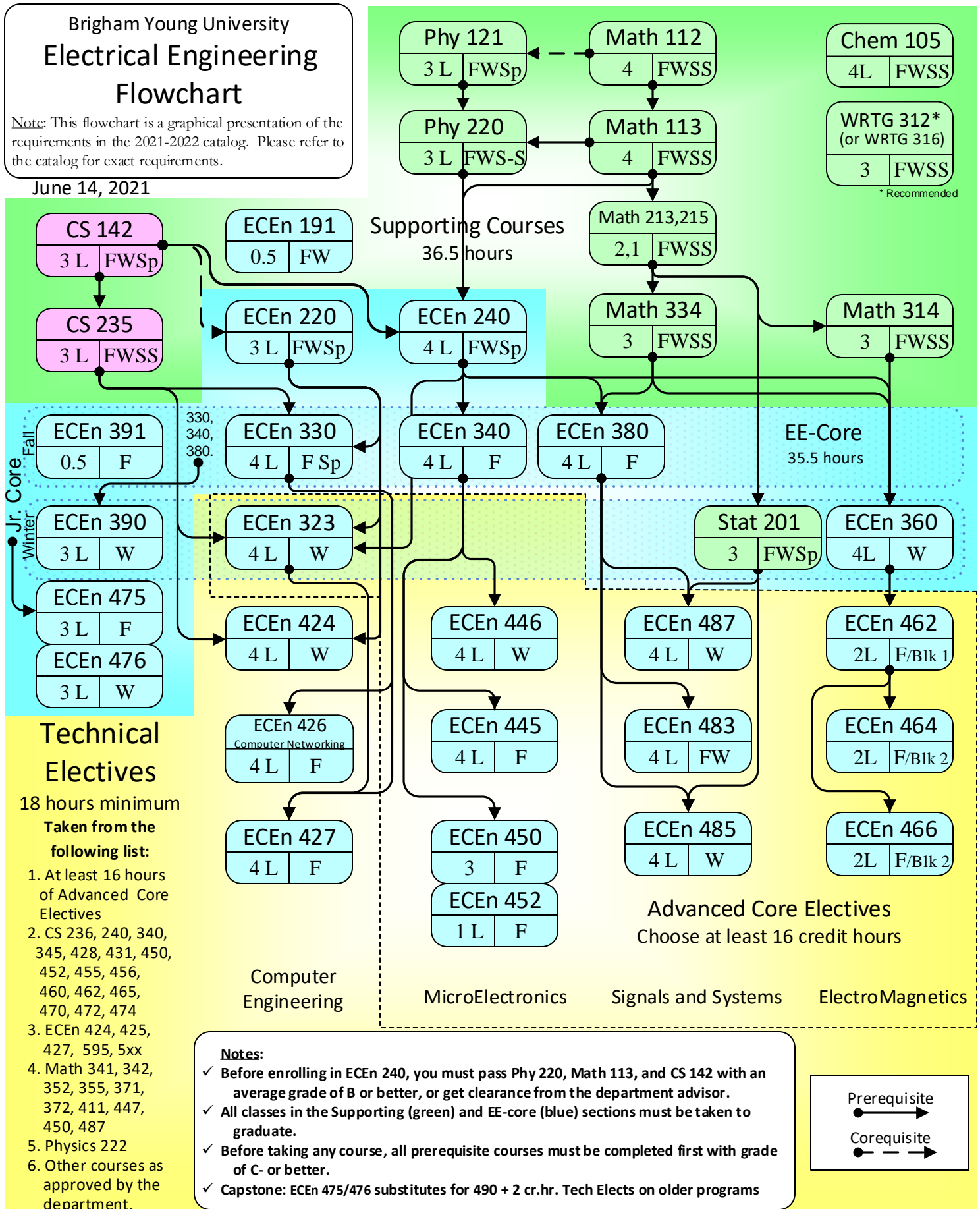


Brigham Young University Electrical Engineering Flowchart

Note: This flowchart is a graphical presentation of the requirements in the 2021-2022 catalog. Please refer to the catalog for exact requirements.

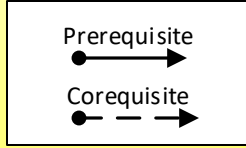
June 14, 2021



Technical Electives

- 18 hours minimum
Taken from the following list:
- At least 16 hours of Advanced Core Electives
 - CS 236, 240, 340, 345, 428, 431, 450, 452, 455, 456, 460, 462, 465, 470, 472, 474
 - ECEn 424, 425, 427, 595, 5xx
 - Math 341, 342, 352, 355, 371, 372, 411, 447, 450, 487
 - Physics 222
 - Other courses as approved by the department.

- Notes:**
- ✓ Before enrolling in ECEn 240, you must pass Phy 220, Math 113, and CS 142 with an average grade of B or better, or get clearance from the department advisor.
 - ✓ All classes in the Supporting (green) and EE-core (blue) sections must be taken to graduate.
 - ✓ Before taking any course, all prerequisite courses must be completed first with grade of C- or better.
 - ✓ Capstone: ECEn 475/476 substitutes for 490 + 2 cr.hr. Tech Elects on older programs



Electrical Engineering Program Requirements

Requirement 1: Complete 22 courses.

C S 142 - Introduction to Computer Programming 3.0
C S 235 - Data Structures and Algorithms 3.0
EC EN 191 - New Student Seminar 0.5
EC EN 220 - Fundamentals of Digital Systems 3.0
EC EN 240 - Circuit Analysis and Laboratory 4.0
EC EN 330 - Introduction to Embedded System Programming 4.0
EC EN 340 - Electronic Circuit Design 1 4.0
EC EN 360 - Electromagnetic Fields and Waves 4.0
EC EN 380 - Signals and Systems 4.0
EC EN 390 - Junior Team Design Project 3.0
EC EN 391 - Junior Seminar 0.5
EC EN 475 - Capstone Design 1 3.0
EC EN 476 - Capstone Design 2 3.0
MATH 112 - Calculus 1 4.0
MATH 113 - Calculus 2 4.0
MATH 213 - Elementary Linear Algebra 2.0
MATH 215 - Computational Linear Algebra 1.0
MATH 314 - Calculus of Several Variables 3.0
MATH 334 - Ordinary Differential Equations 3.0
PHSCS 121 - Introduction to Newtonian Mechanics 3.0
PHSCS 220 - Introduction to Electricity and Magnetism 3.0
STAT 201 - Statistics for Engineers and Scientists 3.0

Requirement 2: Complete 2 options.

Option 2.1: Complete 1 course.

CHEM 105 - General College Chemistry 1 with Lab (Integrated) 4.0

CHEM 111 - Principles of Chemistry 1 4.0

Option 2.2: Complete 1 course. Note: ENGL 312 recommended.

WRTG 312 - Persuasive Writing 3.0

WRTG 316 - Technical Communication 3.0

Requirement 3: Complete at least 16.0 hours from the following.

EC EN 323 - Computer Organization 4.0
EC EN 445 - Introduction to Mixed-Signal VLSI 4.0
EC EN 446 - Power Electronics 4.0
EC EN 450 - Introduction to Semiconductor Devices 3.0
EC EN 452 - Experiments in Integrated Circuit Development 1.0
EC EN 462 - Electromagnetic Radiation and Propagation 2.0
EC EN 464 - Wireless Communication Circuits 2.0
EC EN 466 - Introduction to Optical Engineering 2.0
EC EN 483 - Design of Control Systems 4.0

EC EN 485 - Introduction to Digital Communication Theory 4.0

EC EN 487 - Introduction to Discrete-Time Signal Processing 4.0

Requirement 4: Complete at least 2.0 hours from the following.

C S 236 - Discrete Structures 3.0
C S 240 - Advanced Programming Concepts 4.0
C S 340 - Software Design and Testing 3.0
C S 345 - Operating Systems Design 3.0
C S 428 - Software Engineering 3.0
C S 431 - Algorithmic Languages and Compilers 3.0
C S 452 - Database Modeling Concepts 3.0
C S 455 - Computer Graphics 3.0
C S 456 - Introduction to User Interface Software 3.0
C S 460 - Computer Communications and Networking 3.0
C S 462 - Large-Scale Distributed System Design 3.0
C S 465 - Computer Security 3.0
C S 470 - Introduction to Artificial Intelligence 3.0
C S 472 - Introduction to Machine Learning 3.0
C S 474 - Introduction to Deep Learning 3.0
EC EN 323 - Computer Organization 4.0
EC EN 424 - Computer Systems 4.0
EC EN 426 - Computer Networking 4.0
EC EN 427 - Embedded Systems 4.0
EC EN 445 - Introduction to Mixed-Signal VLSI 4.0
EC EN 446 - Power Electronics 4.0
EC EN 450 - Introduction to Semiconductor Devices 3.0
EC EN 452 - Experiments in Integrated Circuit Development 1.0
EC EN 462 - Electromagnetic Radiation and Propagation 2.0
EC EN 464 - Wireless Communication Circuits 2.0
EC EN 466 - Introduction to Optical Engineering 2.0
EC EN 483 - Design of Control Systems 4.0
EC EN 485 - Introduction to Digital Communication Theory 4.0
EC EN 487 - Introduction to Discrete-Time Signal Processing 4.0
MATH 341 - Theory of Analysis 1 3.0
MATH 342 - Theory of Analysis 2 3.0
MATH 352 - Introduction to Complex Analysis 3.0
MATH 355 - Graph Theory 3.0
MATH 371 - Abstract Algebra 1 3.0
MATH 372 - Abstract Algebra 2 3.0
MATH 411 - Numerical Methods 3.0
MATH 447 - Introduction to Partial Differential Equations 3.0
MATH 450 - Combinatorics 3.0
MATH 487 - Number Theory 3.0
PHSCS 222 - Modern Physics 3.0