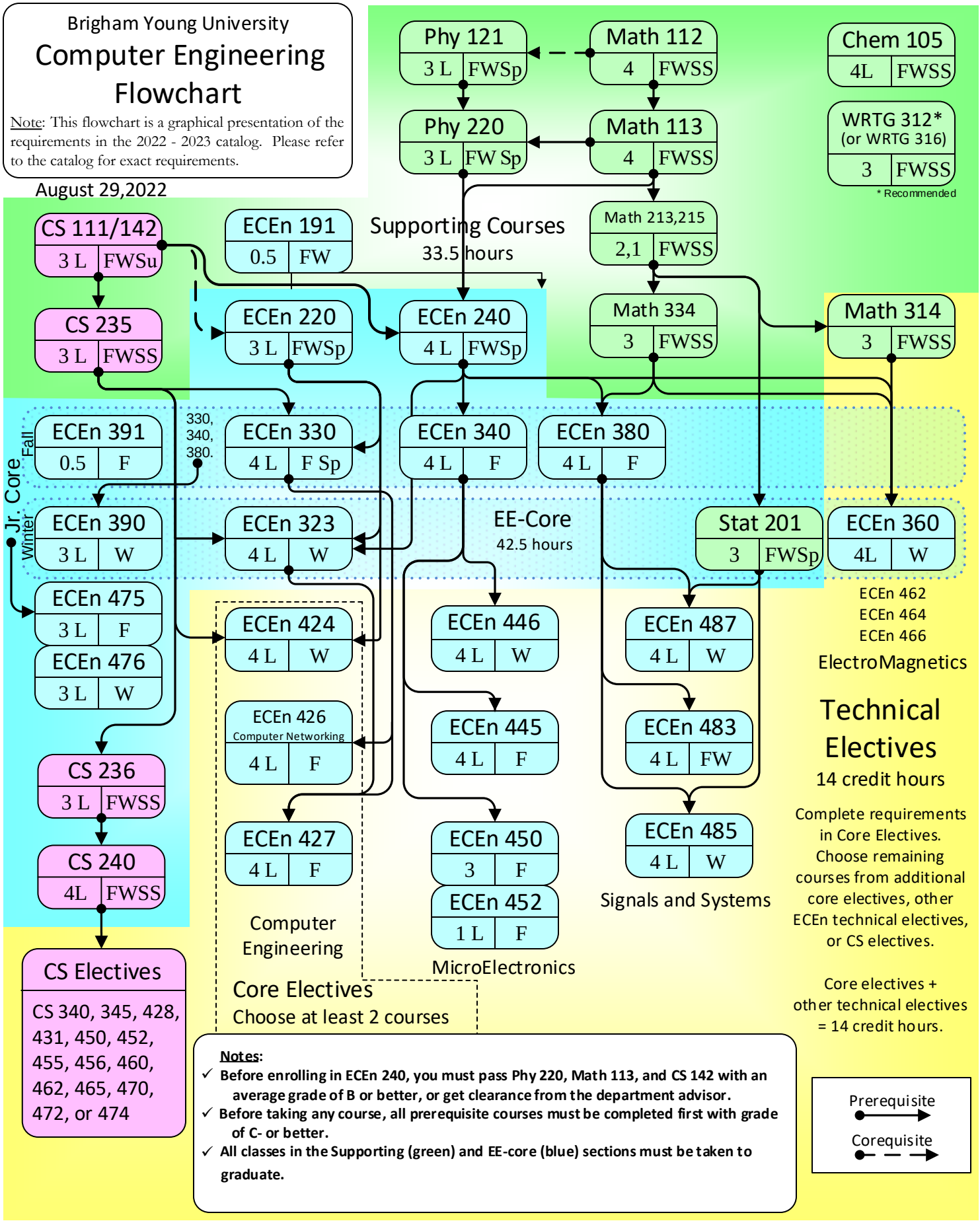
Brigham Young University

Computer Engineering Flowchart

Note: This flowchart is a graphical presentation of the requirements in the 2022 - 2023 catalog. Please refer to the catalog for exact requirements.

August 29,2022



Computer Engineering Program Requirements

Requirement 1: Complete 23 courses.
C S 111 - Introduction to Computer Science 3.0
C S 235 - Data Structures and Algorithms 3.0
C S 236 - Discrete Structures 3.0
C S 240 - Advanced Programming Concepts 4.0
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 323 - Computer Organization 4.0
EC EN 330 - Introduction to Embedded System Programming 4.0
EC EN 340 - Electronic Circuit Design 1 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 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 8.0 hours from the following.
EC EN 424 - Computer Systems 4.0
EC EN 493R - Computer Networking 4.0
EC EN 427 - Embedded Systems 4.0

Requirement 4: Complete at least 6.0 hours from the following.
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 360 - Electromagnetic Fields and Waves 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 314 - Calculus of Several Variables 3.0