BYU Computer Science Major

Software Engineering Emphasis

Fall 2019 Requirements

Major (74-76 Hours)
1. Grades below C- are not allowed in major courses.
2. Complete the following courses: CS 142, 202, 203, 204, 223, 236, 240, 312, 324, 392, 404, 405, 406, 462, 486
3. Complete the following supporting courses: Engl 316, Math 112, 113, 213, 215, and Phscs 121
4. Complete one of the following: Stat 121 or Stat 201
5. Complete a total of 4 elective courses from the following three groups:
   a. 2-4 courses must be from the following courses:
      CS 260, 330, 345, 356, 453, 456, 460, 462, 465, 486
   b. Up to 2 courses from the following courses:

   (If CS 401R, 493R, 497R, 498R, or 501R is chosen, it must be taken for three credit hours)

Key
- Core class
- Minor Class
- Elective Class
- Prerequisite
- May be taken concurrently

Elective Information:
Students must complete a total of 4 elective courses. At least 2 electives must come from elective group A. The remaining 2 electives can be taken from the elective groups A (up to 2) or B (up to 2).

Elective A (Choose 2-4 courses)
- CS 260 Web Programming Req: 142
- CS 330 Prog Languages Req: 240
- CS 345 Operating Sys Dsgn Req: 224 & 240
- CS 356 User Experience Req: 240
- CS 453 Info Retrieval Req: 240
- CS 456 UI Software Req: 240, 356
- CS 460 Networks Req: 324
- CS 465 Security Req: 324
- CS 466 Distributed Systems Req: 260, 324
- CS 486 Verification & Validation Req: 312

Elective B (Choose 0-2 courses)
- CS 252 Intro Comp Theory Req: 236
- CS 255 Interactive Graphic Req: 240, Math 213, 219
- CS 256 Networks Req: 324
- CS 340 Operating Systems Dsgn Req: 240 & 246
- CS 345 Operating Sys Dsgn Req: 224 & 240
- CS 356 User Experience Req: 240
- CS 453 Info Retrieval Req: 240
- CS 456 UI Software Req: 240, 356
- CS 460 Networks Req: 324
- CS 465 Security Req: 324
- CS 466 Distributed Systems Req: 260, 324
- CS 486 Verification & Validation Req: 312

CORE
- Math 112 Calculus 1
- Math 113 Calculus 2
- Phscs 121 Physics

CS 142 Intro Programming
CS 202 SE Lab 1
CS 203 SE Lab 2
CS 235 Data Structures
CS 236 Intro to Comp Sys
CS 240 Adv Programming
Stat 121 or 201
CS 260 or other CS Elective
CS 204* SE Lab 3
CS 312* Algorithm Analysis
CS 324* Sys Programming
CS 329* Test, Analyze, Verify
CS 340* Design and Testing
CS 452* Database Modeling
CS SE 494* Capstone 1
CS SE 495 Capstone 2
CS 404* Ethics in Comp

Elective A
- CS 345 Interactive Graphic Req: 240, Math 213, 219
- CS 356 User Experience Req: 240
- CS 453 Info Retrieval Req: 240
- CS 465 Security Req: 324
- CS 466 Distributed Systems Req: 260, 324
- CS 486 Verification & Validation Req: 312

Elective B
- CS 252 Intro Comp Theory Req: 236
- CS 255 Interactive Graphic Req: 240, Math 213, 219
- CS 256 Networks Req: 324
- CS 340 Operating Systems Dsgn Req: 240 & 246
- CS 345 Operating Sys Dsgn Req: 224 & 240
- CS 356 User Experience Req: 240
- CS 453 Info Retrieval Req: 240
- CS 456 UI Software Req: 240, 356
- CS 460 Networks Req: 324
- CS 465 Security Req: 324
- CS 466 Distributed Systems Req: 260, 324
- CS 486 Verification & Validation Req: 312

Updated 6/21/2019

Guide only—please consult MyMap for full requirements.