BYU Computer Science Major

Data Science Emphasis

Fall 2020 Requirements

Major (74 Hours)
1. Grades below C are not allowed in major courses.
2. Complete the following courses: CS 142, 224, 235, 236, 240, 312, 324, 404, 452, 472, 474
3. Complete the following supporting courses: WRTG 316, Math 112, 113, 213, 215, and PHSCS 121
4. Complete one of the following: Stat 121 or Stat 201
5. Complete one of the following: Stat 330 or ECON 388
6. Complete a total of 6 elective courses from the follow 3 groups:
   A. 1 course must be from the following courses:
      Stat 240, Stat 340, Stat 251, Econ 378, Econ 388, Econ 488, Econ 588, Ling 581, Math 314, Math 413
   B. 4 courses must be from the following courses:
   C. 1 additional course from a list that includes all classes from elective A and B.
      1. If a class is taken in A or B, it may not double count in C.
      2. Students are strongly encouraged to take the DS capstone courses (CS 482 and 483)
         (If CS 401R, 497R, 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 A (Complete 1 courses)
- CS 252 Intro Comp Theory Req: 235
- CS 412 Linear Programming Reg: 240
- Math 314 Multi-variable Calculus Req: Math 113
- Econ 378 Stats for Econ Reg: 280
- Econ 388 Intro Econometrics Req: Econ 388
- Stat 240 Probability and Infer. 1 Reg: Stat 121, Math 112
- Stat 340 Operating Sys Dsgn Reg: 224 & 240
- Ling 581 NLP Req: Econ 388

Elective B (Complete 4 courses)
- CS 401R** Topics in CS Reg: 240
- CS 412 Linear Programming Reg: 240
- CS 340 Design & Testing Reg: 240
- CS 355 Interactive Graphics Req: 240, Math 213, 219
- CS 356 User Experience Reg: 240
- CS 462 Distributed Systems Reg: 240
- CS 465 Security Reg: 324
- CS 470 Artificial Intelligence Reg: 312, Math 215, Stat 121
- CS 482 Data Capstone 1 Reg: 240
- CS 483 Data Capstone 2 Reg: 240
- CS 497R** Research Req: Stat 121, Math 112

Elective C (Complete 1 course)
- CS 497R** Research Reg: 312, Math 215, Stat 121
- CS 501R** Adv CS Topics Req: Math 113
- Econ 588 Adv. Econometrics Reg: Econ 388
- Math 413 Adv. Linear Algebra Req: Math 113
- Stat 240 Probability and Infer. 2 Reg: Stat 121, Math 112
- WRTG 316 Technical Writing
- Math 413 Adv. Linear Algebra Req: Math 113
- Econ 378 Stats for Econ Reg: 280
- Econ 388 Intro Econometrics Req: Econ 388
- Stat 251 Bayesian Stats Reg: 240

Elective A
- CS 252 Intro Comp Theory Reg: 235
- CS 412 Linear Programming Reg: 240
- Math 314 Multi-variable Calculus Req: Math 113
- Econ 378 Stats for Econ Reg: 280
- Econ 388 Intro Econometrics Req: Econ 388
- Stat 240 Probability and Infer. 1 Reg: Stat 121, Math 112
- Stat 340 Operating Sys Dsgn Reg: 224 & 240
- Ling 581 NLP Req: Econ 388

Elective B
- CS 401R** Topics in CS Reg: 240
- CS 412 Linear Programming Reg: 240
- CS 340 Design & Testing Reg: 240
- CS 355 Interactive Graphics Req: 240, Math 213, 219
- CS 356 User Experience Reg: 240
- CS 462 Distributed Systems Reg: 240
- CS 465 Security Reg: 324
- CS 470 Artificial Intelligence Reg: 312, Math 215, Stat 121
- CS 482 Data Capstone 1 Reg: 240
- CS 483 Data Capstone 2 Reg: 240
- CS 497R** Research Req: Stat 121, Math 112

Elective C
- CS 497R** Research Reg: 312, Math 215, Stat 121
- CS 501R** Adv CS Topics Req: Math 113
- Econ 588 Adv. Econometrics Reg: Econ 388
- Math 413 Adv. Linear Algebra Req: Math 113
- Stat 240 Probability and Infer. 2 Reg: Stat 121, Math 112
- WRTG 316 Technical Writing
- Math 413 Adv. Linear Algebra Req: Math 113
- Econ 378 Stats for Econ Reg: 280
- Econ 388 Intro Econometrics Req: Econ 388
- Stat 251 Bayesian Stats Reg: 240

Guide only—please consult MyMap for full requirements.

** Must be taken for 3 hours to fill the requirement