Welcome to the

Computer Science Major
Software Engineering Emphasis

in the College of Computational, Mathematical, and Physical Sciences

College Advisement Center
- Website: https://science.byu.edu/advisement
- Email: cmsadvising@byu.edu
- Phone: 801-422-2674
- Office: N-181 ESC



Computer Science Department
- Website: cs.byu.edu
- Email: cs-office@byu.edu
- Phone: 801-422-3027
- Office: 3361 TMCB

Undergraduate Department Advisor (A-J) – Yannick Fitu
- Email: yfitu@cs.byu.edu
- Phone: 801-422-8602
- Office: 2245

Undergraduate Department Advisor (K-Z) – Lynnette Nelson
- Email: lnelson@cs.byu.edu
- Phone: 801-422-9439
- Office: 2250 TMCB

Internship Coordinator – Dennis Ng (International Students only)
- Email: ng@compsci.byu.edu
- Phone: 801-422-2835
- Office: 3322 TMCB

Career Advisor – Wagner Pinheiro
- Website: careers.byu.edu (Handshake--see flyer in packet)
- Email: wagner@cs.byu.edu
- Website: https://careers.byu.edu (schedule appointment)
- Phone: (801) 422-0211
- Office: 1112 TMCB

Clubs

ACM – Kimball Germane, cs.byu.acm@gmail.com

Developers Club – Kimball Germane, dev-assoc@byu.edu , visit dev.byu.edu to join and learn more

BYU Competitive Programming Club—Ryan Farrell, farrell@cs.byu.edu, visit cpc.byu.edu to join and learn more

Dev-G (Game development) – Seth Holladay, dev-g-assoc@byu.edu

Linux Users Group – Casey Deccio, linux-assoc@byu.edu

Women in Computer Science – Angela Jones – angela@cs.byu.edu, wics@cs.byu.edu

Club-Data Science: For information contact: datascience-assoc@byu.edu

Things to Know

Resources for Graduation Planning

- Flow Charts and Packets can be found here: https://science.byu.edu/advisement/explore-majors-and-minors.
- MAPs can be found in the university catalog.
- Academic advisors in N-181 ESC will help you understand course sequencing and help you plan classes to efficiently fill requirements. They can also help you with study skills and initial career exploration as well as connecting you with correct resources.
- Plan and register from your plan on MyMAP. Your academic advisor can help you understand how to best utilize this resource.
- Evaluate your current program. Periodically major programs are updated. An academic advisor would be happy to review the differences between the programs with you to help you determine what would be best for you.
- Consider meeting with a faculty advisor in your department. Contact info is found on the first page of this packet.

Tutoring Resources and Research

- Volunteer peer tutors are available through Y-Serve if you need help with a class. Also, if you excel in a subject, consider serving your fellow students by becoming a tutor. Find out more here: https://tutoring.byu.edu/.
- Many departments provide TA Tutorial Labs and research opportunities. Check your department for details:
  - Chemistry and Biochemistry: C-100 BNSN, 801-422-3667, https://www.chem.byu.edu/department/faculty/
  - Computer Science: 3361 TMCB, 801-422-3027, cs-office@byu.edu
  - Geological Sciences: S-389 ESC, 801-422-3918, geology@byu.edu
  - Mathematics: 275 TMCB, 801-422-2061, office@mathematics.byu.edu
  - Mathematics Education: A180 ESC, 801-422-1735, office@mathed.byu.edu
  - Physics and Astronomy: N-283 ESC, 801-422-4361, physics_office@byu.edu
  - Statistics: 2152 WVB, 801-422-4505, statsec@stat.byu.edu

Prepare Early for a Career

- Check out Careers & Experiential Learning in 1134 WSC and at careers.byu.edu.
- Visit BYU's Career Studio to work on your resume, cover letter, or other professional documents; learn to navigate LinkedIn, Handshake, and CareerShift; receive networking help; practice interview skills.
- Consider doing an internship.
  - Attend the STEM and Career Fairs held in fall and winter semesters.
  - Talk to your department about internship opportunities.
  - Use LinkedIn and Handshake (see flyer in this packet) to connect with alumni and apply for jobs/internships. BYU Connect is another great resource for networking (connect.byu.edu).
  - Talk with the college or department Career Director who can help you search for internships as well as assist you with many other career related strategies (see first page of this packet).
- Consider taking StDev 317 (Career Strategies) your junior year.
- Consider taking either Chem 502, CS 502, Geol 502, Math 502, PHSCS 502, or STAT 502 (1-credit Networking Class). Class is held for 1 hour each week.

BYU Computer Science Major

Software Engineering Emphasis

Fall 2026 Requirements

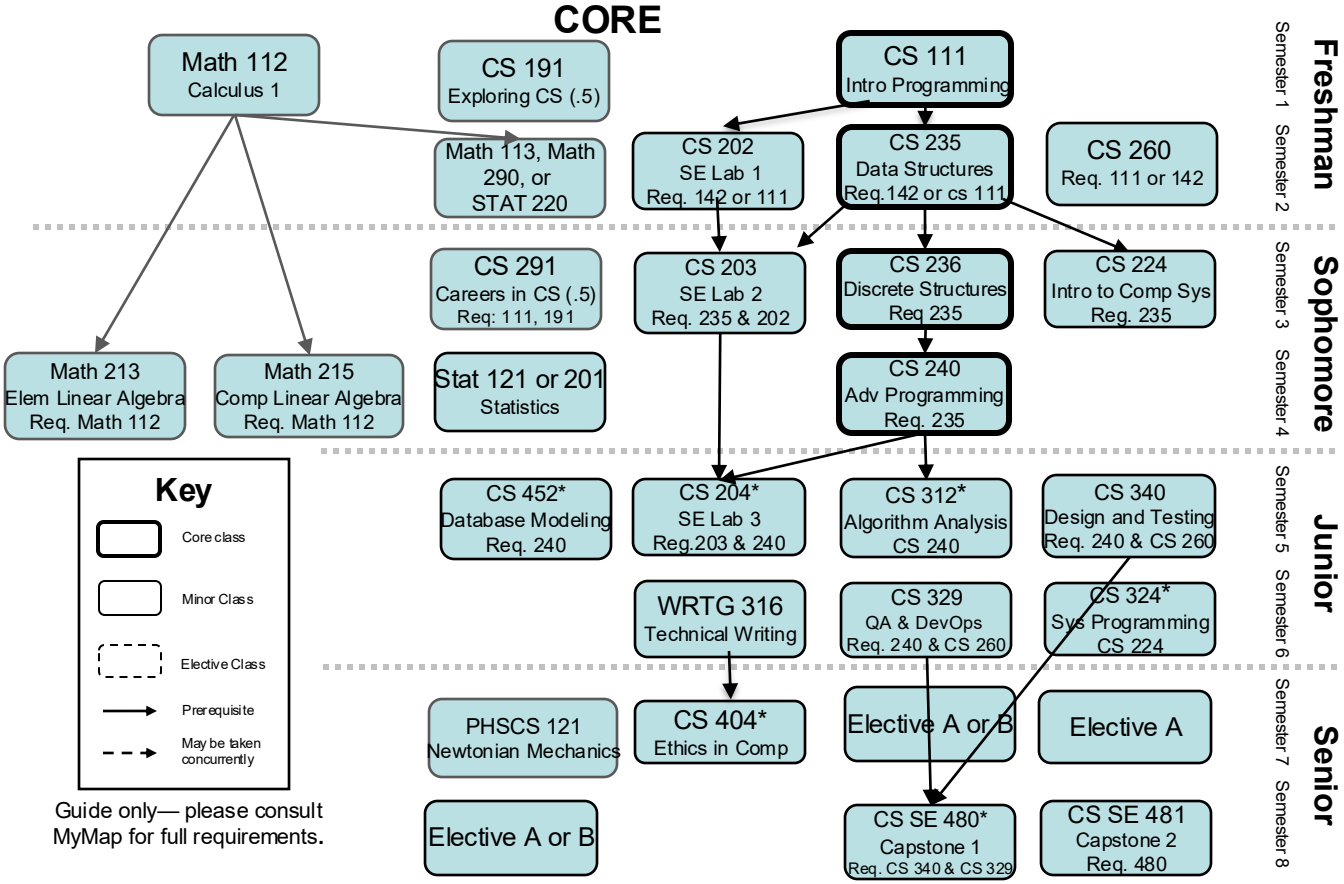
Major (74-76 Hours)

Grades below C- are not allowed in major courses.

1. Complete the following courses: CS 111, 191, 202, 203, 204, 224, 235, 236, 240, 260, 291, 312, 324, 329, 340, 404, 452, 480, 481
2. Complete the following supporting courses: WRTG 316, Math 112, 213, 215, and Phscs 121
3. Complete one of the : Stat 121 or Stat 201
4. Complete one of the following three courses: Math 113, Math 290 or STAT 220
5. Complete 2 courses from the following courses: CS 256, 270, 330, 345, 356, 453, 456, 460, 462, 465, 473, 486
6. Complete 1 courses from the following courses: CS 252, 256, 270, 330, 345, 355, 356,393, 401R**, 405, 412, 416, 418, 430, 450, 453, 455, 456, 460, 462, 465, 466, 470,471, 473, 474, 479, 486, 493R**, 497R**, 498R**, 501R**, 513, 556, 574, 575, 580, EC EN 424, EC EN 425, IT&C 567, MATH 411, Math 431, MATH 485

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

Elective Information:
Students must complete a total of 3 elective courses.2 from Elective A and 1 from Elective B. Courses may not double count between Elective A and Elective B.



Guide only— please consult MyMap for full requirements.

Elective A
(Choose 2 courses)

- CS 256 Intro to HCI
- CS 270 Intro to Machine Learning
- CS 330 Prog Languages Req: 240
- CS 345 Operating Sys Dsgn Req: 224 & 240
- CS 356 Adv. Tech in HCI Req: 256 &260
- CS 453 Info Retrieval Req: 240
- CS 456 UI Software Req: 240, 356
- CS 460 Networks Req: 324
- CS 462 Distributed Systems Req: 260, 324
- CS 465 Security Req: 324
- CS 473 Avd. Machine Learning 312,Math 215,Stat 121
- CS 486 Verification & Valid Req: 312
- CS 252 Intro Comp Theory Req: 235
- CS 256 Intro to HCI
- CS 270 Intro to Machine Learning Req:
- CS 330 Prog Languages Req: 240
- CS 345 Operating Sys Dsgn Req: 224 & 240
- CS 355 Interactive Graphic Req: 240,Math 213,215
- CS 356 Adv. Tech in HCI Req: 256 & 260
- CS 393 Collaborative Problem Solving
- CS 401R** Topics in CS
- CS 405 Software Business Req: 240 & Engl 316
- CS 412 Convex Optimization Req: 240
- CS 416 Advanced Algorithms Req: 312, 355,Math 313
- CS 418 Bioinformatics Algorithms CS 240
- CS 430 Formal Verification CS 330 or Math 290
- CS 450 Computer Vision Req: 312, 355,Math 313
- CS 453 Info Retrieval Req: 240
- CS 455 Comp Graphics Req: 355,Math 213,215
- CS 456 Mobile& Ubiquitous HCI Req: 240, 356
- CS 460 Networks Req: 235
- CS 462 Distributed Systems Req: 260, 324
- CS 465 Security Req: 324
- CS 466 Block Chain Req: 312
- CS 470 Artificial Intelligence 312,Math 215,Stat 121

Elective B
(Choose 1 courses)

- CS 471 Voice User Interfaces
- CS 473 Avd. Machine Learning 312,Math 215,Stat 121
- CS 474 Deep Learning 312,Math 213, 215
- CS 479 Intro to Machine Translation
- CS 486 Verification & Valid Req: 312
- CS 493R** Comp. Competition Req: 240
- CS 497R** Research
- CS 498R** Special Projects Req: 240
- CS 501R** Adv CS Topics
- CS 513 Robust Control Req: Math 213, 215
- CS 556 Inter Soft Systems
- CS 574 Transformers for NLP Req: 270, 312
- CS 575 Intro to Network Science Req: 312
- CS 580 Theory of Predictive Modeling
- EC EN 424 Computer Systems
- EC EN 425 Real-Time Operating Systems
- IT&C 567 Security Testing Req: CS 465 or IT 366
- MATH 411 Numerical Methods Req: MATH 334
- MATH 431 Probability Theory Req: Math 213
- MATH 485 Cryptography Req: MATH 213

Handshake

At A Glance

Handshake is BYU's own job board. Employers who want to hire BYU graduates or offer internships to current students post their job openings to this website and students can apply. Just like LinkedIn, employers can view student profiles and students can network as they apply for jobs and internships.

Login to Handshake.byu.edu with your netid@byu.edu

1. Download Handshake App

- Select Continue with School
- Type in "Brigham Young University"
- Select School Login
- Input your BYU e-mail address: netid@byu.edu (it will forward emails to the e-mail you have on file with BYU)
- Handshake will send you a link via e-mail to enable your account in the app
- Navigate the app to perform all the funcions of the website that have been previoiusly mentioned

2. Complete Your Profile

- Fill in the Summary/Bio section
- Fill in your past jobs and experiences, including all the bullet points you use on your resume
- Add a professional headshot and background photo
- Information from your transcript is already uploaded
- Make your profile discoverable to employers

Remember: Every word in your profile will be searchable by students and employers

3. Apply For Jobs

- Search collections related to your major
- Search for job titles, employers, or skills
- Apply for interesting jobs that meet your skill set

4. Research Companies

- Under the Jobs tab there is an Employers tab
- Use keywords or locations to search for companies that are the right fit for you
- Plan to attend employer info sessions on BYU Campus, connect with employers at Career Fairs or set up informational interviews with them.

Remember: When looking at companies or jobs, Handshake will tell you what other BYU Students have worked there. Use this resource to network and discover more information!

5. Explore Fellow Students

- Use the People tab to find peers
- Search for fellow BYU students to view their profiles and job positions
- Attend events

Employers are
5x more likely
to view a profile that has at least one job, skill, and organization.

6. Attend Events

- The Events tab will be your key to finding info sessions interviews, and Career Fairs
- Make sure to save events you are interested in and RSVP so you do not forget to attend
- Spread the word to your friends on social media
- Use Collections to filter results in your major

BYU Career Services
1134 WSC
(801) 422-3000
careers.byu.edu

Career Services studio!

Handshake Profile Rubric

Name: Reviewer: Date:

Meets and/or Exceeds Expectations	Partially Meets Expectations	Does Not Meet Expectations
Profile includes a photo that is professionally appropriate for the student's intended industry.	Profile includes a photo but it is not professionally appropriate.	Profile does not include a photo.
My Journey section includes specific information about the student's skills, experience, and goals. The section is free from grammatical and spelling errors.	My Journey section is vague. Summary contains one or more grammatical/spelling errors.	Student has not written anything in the My Journey section.
Expected graduation date has been added to Education section.		Expected graduation date has not been added to Education section.
Experience section includes at least 2 entries. Each entry includes title, employer, dates, location and a description of the work done.	Experience section includes 2 entries but no description of work is provided.	Experience section contains less than 2 entries.
The Job Hunt, Cities, and Industries fields of the Your Career Interests section are complete.	Fill out entire Career Interests section on profile (especially types of jobs) and where you are interested in living sections (partially).	The Job Hunt, Cities, and Industries fields of the Your Interests section are not complete.
Profile includes at least 3 skills.	Profile includes 1-2 skills.	Profile does not include any skills.
A resume is uploaded to profile and is viewable by employers (public).	A resume is uploaded to the profile but not viewable by employers.	A resume is not uploaded to the profile.

All other fields/categories make your profile more robust, which makes it more likely to be viewed by employers and promote your brand.

Possible Careers with a Computer Science major

(Not a comprehensive list)

AI Engineer
AI Ethics Consultant
Animation Tool Developer
Applications Developer
Bioinformatics Developer
Business Intelligence Analyst
Cloud Architect
Computational and Information Scientist
Computer Programmer
Computer Vision Engineer
Cybersecurity Analyst
Data Scientist
Database Manager
DevOps Engineer
Embedded Systems Programmer / Engineer
Front-End Developer
Information Architect
IT Project Manager
Multimedia Programmer
Natural Language Processing Specialist
Network Architect
Product Manager
Professor*
Research Scientist
Robotics Software Engineer
Security Architect
Site Reliability Engineer
Software Engineer
Software Test Engineer
Software Development Manager
Systems Engineer
UI/UX Engineer / Researcher / Designer
Video Game Developer & Designer
Web Designer / Programmer

*Usually requires a graduate degree

More information is available at the Counseling and Career Center and from CareerOneStop: http://www.careeronestop.org/