Welcome to the

Computer Science Major

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

Fall 2026 Requirements

Major (74-75 Hours)

Grades below C- are not allowed in major courses.

1. Complete the following courses: CS 111, 191, 224, 235, 236, 240, 252, 260, 291, 312, 324, 340, 404
2. Complete the following supporting courses: WRTG 316, Math 112, 213, 215, and PHSCS121,
3. Complete one of the following: Math 431, Stat 121 or Stat 201
4. Complete one of the following: Math 113, Math 290 or STAT 220
5. Complete 21 hours from the following options
   a. 12 hours **must** be from the following courses, but may take up to 21 hours: CS 329, 330, 345, 355, 356, 393, 401R**,412, 416, 418, 428, 430, 431, 450, 452, 453, 455, 456, 460, 462, 465, 466, 470, 471, 473, 474, 479, 486, 501R**, 513, 556, 574, 575, 580
   b. Up to 6 hours from the following CS 180, 202, 203, 204, 256, 270, 405, EC EN 220, MATH 113, Math 290, STAT 220
   c. Up to 8 hours from the following courses: EC EN 330, EC EN 427, IS 567, or Math 485
   d. Up to 9 hours from the following courses: CS 480, 481, 482, 483, 493R**, 494, 495, 497R**, 498R** (If CS, 493R, 497R, 498R, or 501R is chosen, it must be taken for three credit hours)

Guide only---please consult MyMap for full requirements.

CORE

Stat 121 or 201 or Math 431 (Stats or Prob Theory)
Math 112 (Calculus 1)
Math 113, or Math 290 or STAT 220
PHSCS 121 (Newtonian Mechanics)
CS 111 (Intro to CS)
CS 191 (Exploring CS (.5))
CS 235 (Data Structures Req.142 or cs 111)
CS 260 (Web Programming Req: CS 142 or 111)
CS 291 (Careers in CS (.5) Req: 111 & 191)
CS 236 (Discrete Structures Req. CS 235)
CS 224 (Intro to Comp Sys Req. CS 235)
Math 213 (Elem Linear Algebra Req. Math 112)
Math 215 (Comp Linear Algebra Req. Math 112)
CS 240 (Adv Software Cons. Req. 235)
CS 252 (Intro Comp Theory Req. 236)
WRTG 316 (Technical Writing)
CS 312 (Algorithm Analysis CS 236)
CS 340 (Software Design Req. CS 240 & 260)
CS 404 (Ethics in Comp Req. WRTG CS 240 & 316)
Elective A
CS 324 (Sys Programming Req.CS 224)

Semester 1 Semester 2 **Freshman**
Semester 3 Semester 4 **Sophomore**
Semester 5 Semester 6 **Junior**
Semester 7 Semester 8 **Senior**

Key

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

Elective Information:
At least 12 hours **must** come from elective group A. The remaining 9 hours can be taken from any of the elective groups A (up to 9), B (up to 6), C (up to 8), or D (up to 9).

Elective A
Elective A
Elective A
Elective A,B C or D
Elective A, B C or D
Elective A, B C or D

Elective A
Complete 12 (required) up to 21 hours)

- CS 329 QA & DevOps Req: 240 & 260
- CS 412 Convex Optimization Req: 240, Math 213 or 313
- CS 452 Database Modeling Req: 240
- CS 466 Blockchain Tech CS 312
- CS 330 Prog Languages Req: CS 236 & 260 or 224
- CS 416 Adv. Algorithms Req:CS 240 & CS 312
- CS 453 Info Retrieval Req: 240
- CS 470 Artificial Intelligence 312,Math 215,Stat 121
- CS 501R** Adv CS Topics
- CS 345 Operating Sys Dsgn Req: 224 & 240
- CS 418 Bioinformatics Algorithms Req:CS 2402
- CS 455 Comp Graphics CS 355,Math 213,215
- CS 471 Voice User Interfaces
- CS 513 Robust Control Req: Math 213, 215
- CS 355 Interactive Graphic Req: 240,Math 213,215
- CS 428 Software Engineer Req: 340
- CS 456 UI Software Req: 240,& CS 356
- CS 473 Avd. Machine Learning CS 270 & Math 213&215
- CS 556 Inter Soft Systems
- CS 356 Adv.Tech in HCI Req: 256 & 260
- CS 430 Formal Verification Req: CS 330 or Math 290
- CS 460 Networks Req: 235
- CS 474 Deep Learning CS 270 or CS 312
- CS 574 Transformers for NLP Req: 270, 312
- CS 393 Collaborative Problem Solving Req:CS 240 & 342
- CS 431 A. Lang & Compilers Req: 240
- CS 462 Distributed Systems Req: 260, & 324
- CS 479 Machine Translation CS 240
- CS 575 Intro toNetwork Science Req: 312
- CS 401R** Topics in CS
- CS 450 Computer Vision Req: 312, & Math 313
- CS 465 Security Req: 324
- CS 486 Verification & Valid Req: 312
- CS 580 Theory of Predictive Modeling

Elective B
(Choose up to 6 hours)

- CS 180 Intro to Data Science
- CS 405 Software Business Req: 240 & WRTG 316
- CS 202 SE Lab 1 (1 credit) Req: CS 142 or 111
- ECEN 220 Fund of Digital sys CS 142 or 111
- CS 203 SE Lab 2 (1 credit) Req: CS 202 & 235
- MATH 113 Calculus 2 Req: MATH 112
- CS 204 SE Lab 3 (1 credit) Req: CS 203 & 240
- MATH 290 Fundamentals of Math Req: MATH 112
- CS 256 Intro to HCI
- STAT 220 Stat Modeling for DS Req: MATH 121 & CS 111
- CS 270 Intro to ML CS 111 or 142 & Math 112

Elective C
(Choose up to 8 hours)

- EC EN 330 Embedded Program Req: CS 235 & ECEN 220 or 224
- EC EN 427 Embedded systems Req: EC EN 323 or 330
- IS 567 Cybersecurity & Pen Req: CS 465 or IT 366
- MATH 485 Cryptography Req: MATH 213

Elective D
(Choose up to 9 hours)

- CS 480 Software Eng Cap 1 Req: 240, 340, 329
- CS 495 Capstone 2 Req: 240, 494
- CS 481 Software Eng Cap 2 Req: CS 480
- CS 493R** Comp. Competitions Req: 240
- CS 482 Data Science Cap 1 Req: 240
- CS 497R** Research
- CS 483 Data Science Cap 2 Req: 282
- CS 498R** Special Projects Req: 240
- CS 494 Capstone 1 Req: 240

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

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/