What can I do with a degree in... COMPUTER SCIENCE?

Why study **COMPUTER SCIENCE?**

Computer Science is the development of algorithms and software to solve important problems. Students majoring in Computer Science develop critical thinking skills in the design and implementation of software solutions.

The B.S. in Computer Science prepares students for immediate employment in computing-related careers as well as for graduate school.

The undergraduate computer science major at Western Carolina University is a bachelor of science degree program accredited by the Computing Accreditation Commission of ABET. In the United States, accreditation is a voluntary, non-governmental process of peer review used to assure quality in educational institutions and programs.

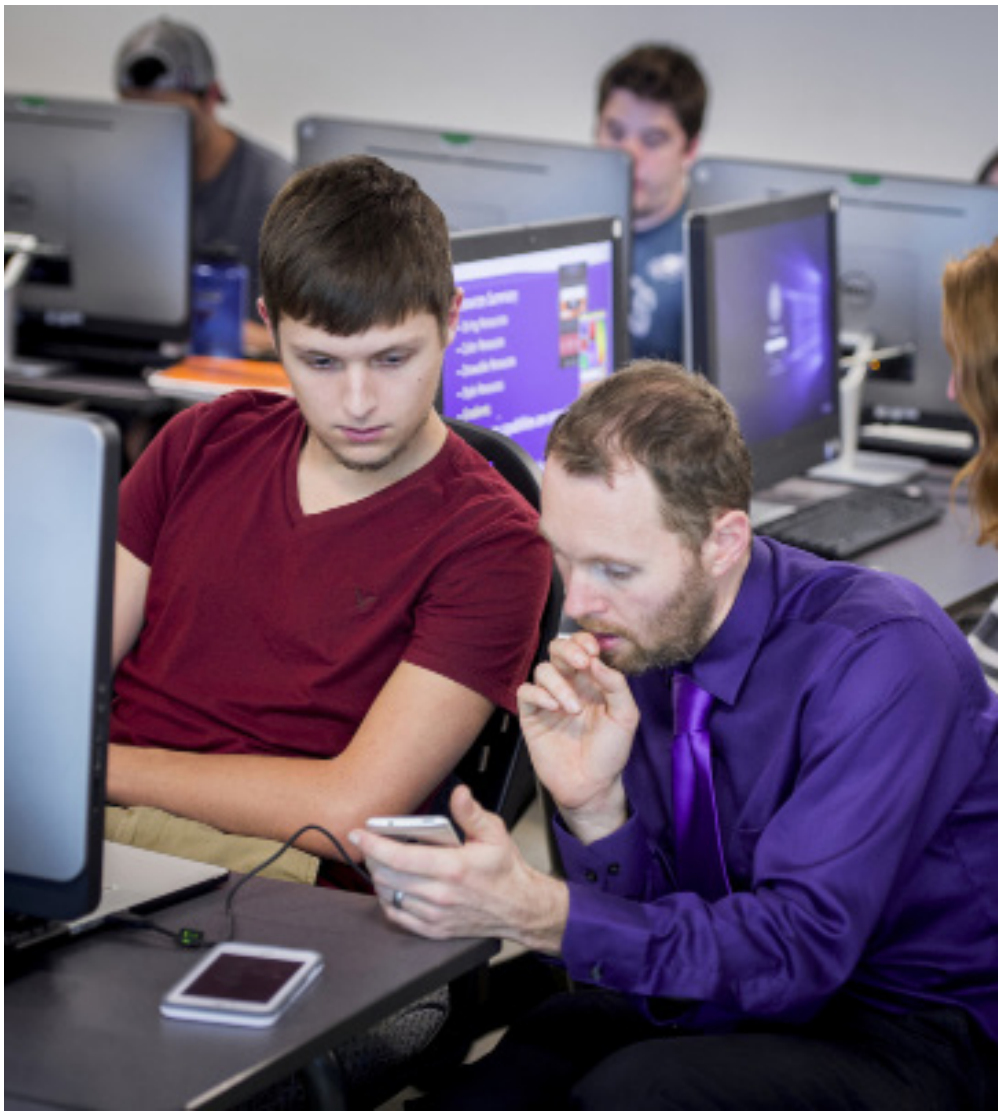
What are the **DEGREE OPTIONS?**

Bachelor of Science (B.S.) in Computer Science
NOTE: Students may also minor in Computer Science

Students majoring in Computer Science will also receive a minor in Mathematics as a component of their CS curriculum.

What is the **ADMISSION PROCESS?**

Students declare a Pre-Computer Science major with the Advising Center, located in Killian Annex. Once they complete CS 150, CS 151, MATH 153, and MATH 255, they can declare a Computer Science major with their primary advisor. Please make an appointment with your advisor via your MyWCU account.



What **JOBS ARE AVAILABLE?**

Our graduates are prepared to become a variety of professions including software developers, computer information specialist, security analysts, computer support specialists, network and system administrators, computer scientists, back-end or front-end developers, network architects, web developers, or project managers among others.

Who employs **COMPUTER SCIENCE** graduates?

Our graduates gain employment with a variety of employers including information security firms, computer systems design firms, non-profit organizations, government agencies, businesses and industries, tax preparation companies, hospitals and health organizations, banks and other financial organizations, management enterprises, software companies, insurance companies, consulting services, school systems, higher education institutions, and technology firms.

MAJOR MAP

How to use this map: Review the four categories and suggestions of activities and when you should consider engaging in them. Remember, these are just suggestions! There is a fillable space for you to add in any other ideas you have to set yourself up for success in life after college.

	1st YEAR	2nd YEAR
EXCEL IN ACADEMICS	First-year students will focus on introductory courses in programming, as well as their liberal studies requirements. **Check out the 8-semester plan** and make an appointment with your advisor. Students *may* place out of pre-requisite courses with departmental approval. See the **CS Program Pre-requisite Chart** for more information.	Students in their second year will likely continue to take courses in software engineering and development, along with learning about data structures and algorithms. Students will also continue their liberal studies electives. **Check out the 8-semester plan** and make an appointment with your advisor.
GET HANDS-ON EXPERIENCE	Check out **WCU's DegreePlus program** and choose which events in any of the four categories you want to attend. Categories include: Professionalism, Teamwork, Leadership, or Cultural Responsiveness. See what on-campus employment opportunities are available by logging in to JobCat via your MyWCU.	Get involved with Math or CS clubs, which are both sponsored by the department. If you are thinking about attending a graduate school, start engaging in hands-on experiences required in graduate school admissions such as internships or volunteer opportunities. Engage deeper with **DegreePlus;** choose an additional competency to complete
BE PART OF THE COMMUNITY	Connect with the **Center for Service Learning** and ask about the **Spark Award,** a program aimed to encourage students to be connected with their community.	Job shadow with professionals in the career area you wish to pursue. Volunteer with area non-profits or organizations which interest you. Consider the **study abroad programs related to computer science.** Talk with a study abroad advisor about targeted experience for your concentration.
PREPARE FOR LIFE AFTER COLLEGE	Further explore your career options or career interests using the **Center for Career and Professional Development's** online resources, **Focus 2,** and **Onet Online.** Connect with a career counselor early on to explore opportunities and experiences you can do while in college to further develop your professional resume.	Check out **CCPD's list of career-building activities** and participate in an activity this year, such as attending Career Fair Plus. Start a spreadsheet of graduate schools you wish to apply to in a few years with their admission requirements so that you are aware of the expectations.

Looking for a minor? Consider these options:

Communication
Computer Information Systems
Entrepreneurship
International Studies
Mathematics

3rd YEAR	4th YEAR
Third level courses focus on upper-level CS topics such as networking and databases, along with Math courses, as well as special topics relating to your career path or your chosen minor. **Check out the 8-semester plan** and make an appointment with your advisor.	Courses in your final year will complete the major coursework requirement including a Computer Science capstone course, classes for your minor, and finishing any liberal studies electives you need to complete your degree. Be sure to **check out the 8-semester plan,** make an appointment with your advisor, complete your degree audit, and **apply for graduation!**
Consider internship experiences that will give you practical and hands-on experience to put on a resume.	Investigate requirements for full-time jobs. Assess what skills or experiences you're lacking and invest time in seeking additional opportunities such as certification programs, classes, or professional development workshops during your last year to fill that gap. Connect with your faculty advisor or career counselor.
Develop deeper relationships with the organizations for which you volunteer. Ask for special projects or responsibilities that you can highlight on a resume. Connect with alumni in your field through **LinkedIn**	Join professional Computer Science organizations such as the **Association for Computing Machinery** Network with employers and non-profits at the annual Career Fair Plus event, held each October and February.
Visit the CCPD to hone your professional resume and cover letter. Apply for internships. Utilize the **Writing and Learning Commons** for GRE and other professional exam preparation sessions. Use **Big Interview** to learn more about professional interviews. Schedule a visit to tour medical/ graduate schools of your choice, if applicable.	Apply to graduate schools, if applicable. Look for and apply for jobs between 4 and 6 months before graduation. Polish your resume, cover letter, and interview skills by vising the **CCPD.**

DID YOU KNOW? Internships are still the number-one educational experience employers look for in a recent college graduate resume. (Chronicle of Higher Education's study on 50,000 employers)

MORE INFORMATION

INTERNSHIP Information

At Western Carolina University there are numerous internship opportunities for students. In some cases internships are established through a faculty member in the student's major. Oftentimes students find part-time jobs in an area related to their field of study. When this happens, students should discuss with their academic advisor the possibility of receiving college credit. Generally, three hours of general elective credit can be earned for a minimum of 200 hours of experience.

SKILLS LEARNED in the classroom

The core competencies will center on developing skills, knowledge, and attitudes such as:

- information handling and organization
- curiosity and creativity
- critical thinking and evaluation
- problem solving
- data collection
- written and oral communication
- professional teamwork

KNOWLEDGE Base

This program will prepare students to:

- Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.

Professional **RESOURCES**

- Association for Computing Machinery: acm.org
- IEEE Computer Society: www.computer.org
- Computer Science Online: www.computerscienceonline.org/careers

QUESTIONS?

For questions, please call the Computer Science program at 828-227-7245 or visit cs.wcu.edu.

To schedule an appointment with a career counselor, contact the Center for Career and Professional Development, 828-227-7133 or careerservices@wcu.edu.

Western Carolina UNIVERSITY