

Choose  
UMSL

And your major

# Computer Science BS

*The BS in Computer Science is designed for those interested in software and computer systems on the technical side. Graduating seniors can find fulfilling careers in many related areas such as cybersecurity, networks, Internet programming, software and mobile apps development, data science, AI, graphics, or pursue additional graduate studies in computer science or in a more specialized area. Some courses are available online, and the entire program can be completed in the evening.*

## Career Outlook

Our graduates find positions in various industries, and also in government and education. According to federal and local government statistics, the demand for computer science graduates exceeds supply and is expected to grow faster than average, with above average salaries. Our alumni can be found in virtually all large and medium size local companies, as well as throughout the country and overseas; for example in companies such as Boeing, Google, Microsoft, Mastercard, Bayer, USPS, and WWT.

## Future Career Options

- Computer Network Architects
- Computer Programmers
- Computer Support Specialists
- Computer Systems Analytics
- Database Administrators
- Information Security Analysts
- Network and Computer Systems Administrators
- Software Developers
- Web Developers

## Skills developed by degree completion

- Create software systems
- Implement Internet applications on client and server sides
- Analyze and solve computing problems with varying size and scope
- Analyze, evaluate and compare alternative solutions to computing problems
- Design, code and document solutions to computational problems
- Work effectively in teams to design, implement and evaluate solutions to computational problems

*Successful alumni have gone on to fulfill many of the opportunities above. Additional possibilities are taken from the Bureau of Labor Statistics. Contact an advisor to discuss additional future career options.*

4-YEAR ACADEMIC MAP

**UMSL** | Arts &  
Sciences  
University of Missouri–St. Louis

**College of Arts and Sciences**  
**Department of Computer Science**  
311 Express Scripts Hall  
314-516-6355  
[umsl.edu/cs](http://umsl.edu/cs)

**Academic Advising**  
303 Lucas Hall  
314-516-5501  
[artsience@umsl.edu](mailto:artsience@umsl.edu)  
[umsl.edu/cas/advising](http://umsl.edu/cas/advising)

# Bachelor of Science in Computer Science

## Year 1 FALL SEMESTER (15 credit hours)

- MATH 1030: College Algebra (3)
- MATH 1035: Trigonometry (2)
- ENGL 1100: First-Year Writing (3)
- GEN ED EXPLORE: Humanities & Fine Arts (3)
- GEN ED EXPLORE: Social Sciences (3)
- INTDSC 1003: University Studies (1)

## Year 1 SPRING SEMESTER (17 credit hours)

- CMP SCI 1250: Introduction to Computing (3)
- MATH 1800: Analytical Geometry and Calculus I (5)
- GEN ED EXPLORE: Humanities & Fine Arts (3)
- GEN ED EXPLORE: Social Sciences (3)
- GEN ED CORE: US History & Government (3)

## Year 2 FALL SEMESTER (17 credit hours)

- CMP SCI 2250: Programming and Data Structures (3)
- CMP SCI 2700: Computer Organization and Architecture (3)
- MATH 1320: Introductory Probability and Statistics (3)
- MATH 1900: Analytic Geometry and Calculus II (5)
- GEN ED EXPLORE: Humanities & Fine Arts (3)

## Year 2 SPRING SEMESTER (15 credit hours)

- CMPS SCI 2261: Object - Oriented Programming (3)
- CMP SCI 2750: System Programming and Tools (3)
- CMP SCI 3010: Web Programming (3)
- MATH 3000: Discrete Structures (3)
- GEN ED CORE: Communication Proficiency (3)

## Year 3 FALL SEMESTER (15 credit hours)

- CMP SCI 3130: Design and Analysis of Algorithms (3)
- CMP SCI 4250: Programming Languages (3)
- CMP SCI 3XXX: Computer Science Elective (3)
- MATH 2450: Elementary Linear Algebra (3)
- ENGL 3130: Technical Writing (3)

## Year 3 SPRING SEMESTER (14 credit hours)

- CMP SCI 4760: Operating Systems (3)
- CMP SCI 3XXX: Computer Science Elective (3)
- CMP SCI 3XXX: Computer Science Elective (3)
- GEN ED EXPLORE: Social Sciences (3)
- Elective (2)

## Year 4 FALL SEMESTER (15 credit hours)

- CMP SCI 4500: Introduction to Software Profession (3)
- CMP SCI 3XXX: Computer Science Elective (3)
- Cultural Diversity (3)
- Elective (3)
- Elective (3)

## Year 4 SPRING SEMESTER (12 credit hours)

- CMP SCI 4280: Programming Translation (3)
- CMP SCI 3XXX: Computer Science Elective (3)
- Elective (3)
- Elective (3)

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**Degree completed!**

## 2023-2024 4-YEAR ACADEMIC MAP

This is a sample academic map for the courses to take each academic semester/session. ***This map is not a substitute for academic advisement.*** Contact your advisor when making final selections.

 – **University Studies** is required for all first-year students and those with less than 24 credit hours.

 – **Milestone courses** should be taken in the order shown to ensure you stay on a timely and accurate path toward graduation.

 – **Summer and Intersession courses** Don't forget that summers and winter breaks are a way to fast-track your route to degree completion – and lighten your load during fall and spring!



Ready to be an UMSL Triton? Apply today.

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**314-516-5451**  
**admissions.umsl.edu**