

Bachelor of Science (BS)

Computer Science

Computer science graduates are in very high demand and earn high starting salaries when compared with other majors in US.



Computer Science is an exciting, challenging, and growing field that impacts the world and everyday life in countless ways and allows you to make a difference in the world.

Computer scientists are involved in creating technology and systems that are used in almost all areas in modern life, such as all industry areas, including medicine, communications, entertainment, manufacturing, business, science, etc. Some of the skills that a Computer Science program prepares you for, include: software and hardware related problem-solving and development, analytical skills, teamwork, technical skills and what you need for a successful professional career.

Our program is ABET accredited by the Computing Accreditation Commission of ABET, (<http://www.abet.org>).

Becoming Career Ready...

/ Highly-trained faculty work closely with students and teach in state-of-the-art facilities in Dempster Hall using the latest developments in software and computing systems.

/ Computer Science graduates are in high demand across many different industries. These include: financial organizations, management consultancy firms, software houses, communications companies, data warehouses, multinational companies (IT-related, financial services and others), governmental agencies, universities and hospitals. However, many graduates go into roles within the computer industry.

/ 100% of Southeast programs offer real-world experience. Computer Science students earn this experience through the departments facilities, providing an enhanced environment for specialized software and computer systems. Many students also complete an internship, working right along industry professionals and learning valuable skills and knowledge in their field.

/ Computer Science students demonstrate a thorough understanding of the fundamental principles of computer systems and software engineering skills, as well as, programming proficiency in modern language. Students are prepared to enter the workforce or be accepted into the graduate school of choice due to their experience in a variety of courses: gaming, artificial intelligence, cybersecurity, data analytics and many more.

/ The path to a successful career starts with you! You can maximize your career development by working closely with Career Services and Southeast faculty – they are here to help you connect your passions, interests and skills to jobs and opportunities in the field. Career Services provides professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities and more.

Computer Science Graduates Enjoy Various Employment Opportunities:

- Software Developer
- Database Administrator
- Computer Hardware Engineer
- Computer Systems Analyst
- Computer Network Architect
- Web Developer
- Information Security Analyst
- Computer Programmer
- Computer and Information Systems Managers
- Project Manager

Internships & Employment Opportunities of Recent Graduates:

- Boeing
- Garmin
- Microsoft
- AT&T
- Edward Jones
- Maritz
- Big River Telephone
- Element 74
- Vintage Software
- MedAssets
- NASA
- National Labs

Graduate Schools of Recent Graduates:

- Southeast Missouri State University
- University of Missouri
- Missouri State University
- Auburn University
- University of Illinois
- Rice University
- Clemson University

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at <http://semo.edu/transfercredit>

To learn more
Office of Admissions
(573) 651-2590
admissions@semo.edu
semo.edu

To explore
the Harrison College of Business
and Computing online, visit
semo.edu/business-computing

For advising
Center for Academic Advising
semo.edu/advising

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This is a guide based on the 2019-2020 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as the area of specialization chosen by the student, dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

CURRICULUM CHECKLIST

"Critical Courses" are italicized and bolded. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.

Computer Science Required Courses:

A grade of "C" or better is required in each course that is a prerequisite course.

84 hours – No Minor Required

Required Courses:

- ___ CS 101 Introduction to Computer Programming (3)
- ___ CS 155 Computer Science I (4)
- ___ CS 245 Discrete Structures I (3)
- ___ CS 265 Computer Science II (4)
- ___ CS 288 Computer Systems & Assembly Language (4)
- ___ CS 300 Computer Science III (3)
- ___ CS 345 Discrete Structures II (3)
- ___ CS 350 Analysis of Algorithms (3)
- ___ CS 351 C and POSIX Environment (4)
- ___ CS 380 Computer Operating Systems (3)
- ___ CS 390 Programming Languages (3)
- ___ CS 433 Data Analytics (3)
- ___ CS 440 Database (3)
- ___ CS 445 Software Engineering I (3)
- ___ CS 480 Data Communications (3)
- ___ CS 495 Senior Seminar (1)
- ___ CS 499 Capstone Experience (3)
- ___ CS 591 Advanced Artificial Intelligence (3)
- ___ CY 201 Introduction to Cybersecurity (4)
- ___ IU 315 Ethics in the Cyber World (3)
- ___ MA 139 Applied Calculus (3)
- ___ MA 223 Elementary Probability and Statistics (3)
- ___ MA 464 Mathematical Cryptography (3)
- ___ CSxxx 300 level and above (6)

Choose 9 hours:

- ___ BI 163 Evolution and Ecology (4)
- ___ CH 185 General Chemistry I (5)
- ___ PH 120 Introductory Physics I (5)

General Education Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)
- Civics examination

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	CS155	4
	EN100	3	CS245	3
	CS101	3	IU315	3
	General Education	3	MA139	3
	General Education	3	General Education	3
	Total	15	Total	16
Milestone: maintain 2.0 cumulative GPA				
SECOND YEAR	CS265	4	CS300	3
	CS288	4	CS380	3
	CS351	4	MA223	3
	General Education	3	General Education	3
			General Education	3
	Total	15	Total	15
Milestone: maintain 2.0 cumulative GPA				
<i>(summer courses are encouraged to avoid 18 hour semesters)</i>				
THIRD YEAR	CS345	3	CS433	3
	CS390	3	CS591	3
	CS440	3	CY201	4
	CS480	3	Natural Science course	4-5
	General Education	3		
	Total	15	Total	14-15
Milestone: maintain 2.0 cumulative GPA				
FOURTH YEAR	CS350	3	CS495	1
	CS445	3	CS499	3
	CS300-599	3	CS300-599	3
	Natural Science course	4-5	MA464	3
	General Education	3	Elective	3
	Total	16-17	Total	13
Milestone: maintain 2.0 cumulative GPA				

A "Milestone" signifies a significant stage for a student in the completion of a degree.

*One of the science courses will satisfy either Living Systems or Physical Systems

Degree requirements for all students: a minimum of 120 credit hours, completion of the General Education program, completion of 39 senior division hours (300-599), Writing Proficiency Exam (WP003). Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

All Harrison College of Business and Computing majors are encouraged to study abroad during their junior or senior year. Numerous opportunities exist from 10 days to a full semester. Programs are available in which all classes are taught in English and tuition rates are the same as Southeast's.

Revised
5/8/2019

Degree Map 2019-2020

To learn more
Office of Admissions
(573) 651-2590
admissions@semo.edu
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To explore
the Harrison College of Business
and Computing online, visit
semo.edu/business-computing

For advising
Center for Academic Advising
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