

Bachelor of Science (BS)

Computer Information Systems

Computer information systems support the delivery, use and management of information systems within an information systems environment which ranges from government to businesses. The goal of the program is the education of software developers and information analysts – the people who create the software for various systems and applications as well as analyze information systems to provide digital and intelligent solutions. The program has many course choices either for applying computing in different application areas or for specializing in different computing disciplines.

Computer information systems program offers three advising tracks:

- / Artificial Intelligence
- / Business Administration
- / Cybersecurity

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 Information Systems is a growing field that allows graduates to work with companies' IT systems, analyze issues within the systems, and ensure all systems are kept up to date and working. Graduates often pursue careers as an application analyst, data analyst, database administrator, information systems manager, IT consultant and systems analyst. Graduates are prepared to enter the workforce or be accepted into the graduate school of their choice.

/ Computer Information Systems students obtain a thorough understanding of the fundamental principles of computing, information infrastructure and cyber management. Students will demonstrate programming proficiency in a modern language.

/ 100% of Southeast programs offer real-world experience. Computer Information Systems students earn this experience through the department's facilities, as well as, by demonstrating their software engineering skills on a project for an actual client. Many students choose to complete an internship, working right along industry professionals and learning valuable skills and knowledge in their field.

/ 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.

Internship and Employment Opportunities of Recent Graduates:

- Boeing
- Garmin
- Microsoft
- A T & T
- Edward Jones
- Centene
- NISC
- Element 74
- Vintage Software
- Vizient

Graduate Schools of Recent Graduates:

- University of Missouri
- Carnegie Mellon University
- Rice University
- Northeastern University

Special Options with Computer Information Systems

This program is available as an online program, as well as to students on the main campus.

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at 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

COMPUTER INFORMATION SYSTEMS

A grade of C or better is required in each core course.

78 Hours – No Minor Required

Core Courses:

- ___ CS 101 Introduction to Computer Programming (3)
- ___ CS 155 Computer Science I (4)
- ___ CS 265 Computer Science II (4)
- ___ CS 300 Computer Science III (3)
- ___ CS 440 Database (3)
- ___ CS 445 Software Engineering (3)
- ___ CS 495 Senior Seminar (1)
- ___ CS 499 Capstone Experience (3)
- ___ IS 145 Introduction to Web Development (3)
- ___ IS 175 Information Systems I (3)
- ___ IS 245 Web Development & Security (3)
- ___ IS 275 Computer Information Systems II (3)
- ___ IS 299 Security in Data Protocols (3)
- ___ IS 340 Information Technology (3)
- ___ IS 360 Mobile Application Development (3)
- ___ IS 420 Human Computer Interaction (3)
- ___ IS 440 Web Design for Electronic Commerce (3)
- ___ IS 448 IS/IT Project Management (3)
- ___ IS 465 Management Support Systems (3)
- ___ IS 575 IS/IT Strategy and Management (3)
- ___ IU 315 Ethics in the Cyber World (3)
- ___ MA 223 Elementary Probability & Statistics (3)

Choose One Track:

Artificial Intelligence – Choose 12 hours:

- ___ CS 373 Introduction to Game Programming (3)
- ___ CS 433 Data Analytics (3)
- ___ CS 453 Machine Learning (3)
- ___ CS 473 3D Game Programming (3)
- ___ CS 503 Fundamentals of Computing (3)
- ___ CS 505 Data Mining (3)
- ___ CS 533 Mobile Computing (3)
- ___ CS 575 Advanced Web Development (3)
- ___ CS 591 Advanced Artificial Intelligence (3)

Business Administration – Choose 12 hours:

- ___ AC 221 Principles of Accounting I (3)
- ___ EC 225 Principles of Macroeconomics (3)
- ___ ER 361 Principles of Entrepreneurship (3)
- ___ MG 301 Principles of Management (3)
- ___ MG 362 Management Skills (3)
- ___ MI 375 Management Information Systems. (3)
- ___ MK 301 Principles of Marketing (3)

Cybersecurity – Choose 12 hours:

- ___ CY 101 Fundamentals of Cybersecurity (4)
- ___ CY 201 Introduction to Cybersecurity (4)
- ___ CY 320 Information Security in System Administration (4)
- ___ CY 410 Web Application Security (3)

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 | IS145 | 3 |
| | IS175 | 3 | IS275 | 3 |
| | CS101 | 3 | IU315 | 3 |
| | MA116* | 3 | General Education** | 3 |
| | Total | 15 | Total | 16 |
| Milestone: maintain 2.0 cumulative GPA | | | | |

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|--|--------------|-----------|-------------------|-----------|
| SECOND YEAR | CS265 | 4 | CS300 | 3 |
| | IS245 | 3 | IS299 | 3 |
| | IS340 | 3 | Track course | 3 |
| | MA223 | 3 | General Education | 3 |
| | Track course | 3 | General Education | 3 |
| | Total | 16 | Total | 15 |
| Milestone: maintain 2.0 cumulative GPA | | | | |

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|--|-------------------|--------------|-------------------|---|
| THIRD YEAR | CS440 | 3 | IS360 | 3 |
| | Track course | 3 | IS420 | 3 |
| | General Education | 3 | IS440 | 3 |
| | General Education | 3 | IS465 | 3 |
| | General Education | 3 | General Education | 4 |
| Total | 15 | Total | 16 | |
| Milestone: maintain 2.0 cumulative GPA | | | | |

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|--------------------|-------------------|--------------|-------------------|---|
| FOURTH YEAR | CS445 | 3 | CS495 | 1 |
| | IS448 | 3 | CS499 | 3 |
| | Track course | 3 | IS575 | 3 |
| | General Education | 5 | General Education | 3 |
| | | | General Education | 3 |
| Total | 14 | Total | 13 | |

*MA116 is a prerequisite to MA223.

**If Business Administration track is chosen, take EC215 as prerequisite to EC225.

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

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.