

Bachelor of Science (BS)

Computer Information Systems

Computer information systems teaches software development in focused application areas. Computer science focuses more deeply on the scientific, engineering, and theoretical aspects of computing. The goal of both programs is the education of software developers – the people who create the software tools and systems that are used by others. 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 nine tracks, five of which require a specific minor:

- Business Administration (can be completed fully online)
- Commerce
- Game Programming
- Information Assurance
- Multimedia Programming
- Networking
- Science
- Web Page Design & Multimedia Computing
- Web Programming

Computer Information Systems students will...

- Obtain a thorough understanding of the fundamental principles of computing and mathematics.
- Demonstrate fundamental software engineering skills on a non-trivial project to the satisfaction of a client.
- Demonstrate programming proficiency in a modern language.
- Be prepared to enter the workforce or be accepted into the graduate school of their choice.

Career Planning

Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

The Office of Career Services in Academic Hall 057 can provide students with 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
- Maritz
- Big River Telephone
- Element 74
- Vintage Software
- MedAssets

Graduate Schools and Programs of Recent Graduates

- University of Missouri
- Missouri State University
- Auburn University
- University of Illinois

Admission Requirements

A high school student interested in majoring in Computer Information Systems should complete four years of mathematics that includes trigonometry and an introduction to calculus. Four years of science, which includes both chemistry and physics is highly recommended. A strong background in English is essential.

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

Bachelor of Science (BS)

This is a guide based on the 2018-2019 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 – 82 hours

- ___ IS003 Computer Info Systems Assessment (0)
- ___ IS130 Application Development I (3)
- ___ IS175 Computer Information Systems I (3)
- ___ IS245 Web Development & Security (3)
- ___ IS275 Computer Information Systems II (3)
- ___ IS320 Human Computer Interaction (3)
- ___ IS330 Application Development II (3)
- ___ IS340 Information Technology (3)
- ___ IS360 Mobile Application Development (3)
- ___ IS375 Database & Information Systems (3)
- ___ IS445 Systems Analysis & Design (3)
- ___ IS448 IS/IT Project Management (3)
- ___ IS465 Management Support Systems (3)
- ___ IS495 Senior Seminar (1)
- ___ IU309 Writing for Science and Technology (3)
- ___ IU315 Ethics in the Cyber World (3)
- ___ MA139 Applied Calculus (3)
- ___ MA223 Elementary Probability & Statistics (3)
- ___ UI450 Capstone Experience (3)

Choose one advising track:

- ___ Business Administration – requires Business Administration minor and 12 additional specified hours
- ___ Commerce – Required minor from specified list; 6 specified hours and 6-9 hours from specified list of courses
- ___ Game Programming – requires 33 specified hours
- ___ Information Assurance – requires Cybersecurity minor and 6 hour from specified list of courses
- ___ Multimedia Programming – requires 15 specified hours and 12 hours from specified list
- ___ Networking – requires Computer Networking minor and 18 specified hours
- ___ Science – required minor from specified list and additional 10-15 hours from specified list of courses
- ___ Web Page Design & Multimedia Computing – requires 12 specified hours and additional 15 hours from specified list of courses
- ___ Web Programming – requires 30 specified hours

University Studies Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 3 hours
- Constitution requirement – 3 hours
- US History 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)

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	IS175	3
	EN100	3	Track course	3
	IS130	3	Track course	3
	MA139	3	University Studies	3
	University Studies	3	University Studies	3
	Total	15	Total	15
Milestone: maintain 2.0 cumulative GPA				
SECOND YEAR	IS245	3	IS330	3
	IS275	3	IS340	3
	MA223	3	Track course	3
	Track course	3	Track course	3
	University Studies	3	University Studies	3
	Total	15	Total	15
Milestone: maintain 2.0 cumulative GPA				
<i>(summer courses are encouraged to avoid 18 hour semesters)</i>				
THIRD YEAR	IS375	3	IS320	3
	IS465	3	IS360	3
	IU309	3	IU315	3
	Track course	3	University Studies	3
	Track course	3	University Studies	3
	Total	15	Total	15
Milestone: maintain 2.0 cumulative GPA				
FOURTH YEAR	IS445	3	IS003	0
	IS448	3	IS495	1
	Track course	3	UI450	3
	Track course	3	Track course	3
	University Studies	3	University Studies	3
	Total	15	Total	16
Milestone: maintain 2.0 cumulative GPA				

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 University Studies program, completion of 39 senior division hours (300-599), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

Computer Information Systems

Bachelor of Science (BS)

Computer Information Systems Tracks

BUSINESS ADMINISTRATION	Required Courses:	
	AC 330 Accounting Analytics	3
	IS 440 Web Design for Electronic Commerce	3
	IS 575 IS/IT Strategy & Management	3
	MK 555 Internet Marketing	3
	Required Minor: Business Administration	

COMMERCE	Required Courses:	
	IS 440 Web Design for Electronic Commerce	3
	IS 575 IS/IT Strategy & Management	3
	Additional Requirements: Choose 6-9 hours depending on minor chosen	
	AC 222 Principles of Managerial Accounting	3
	AC 375 Financial Statement Analysis	3
	EC 225 Principles of Macroeconomics	3
	FI 361 Financial Management	3
	IM 411 Total Quality Assurance	3
	MG 301 Principles of Management	3
MK 301 Principles of Marketing	3	
Required Minor (Choose One):	Marketing: Integrated Marketing Accounting Economics International Business Management	Marketing: Marketing Management Marketing: Retail Management Marketing: Sales Management

GAME PROGRAMMING	Required Courses:	
	AR 104 2D Design	3
	AR 323 Art & New Technology	3
	CS 155 Computer Science I	4
	CS 265 Computer Science II	4
	CS 300 Computer Science III	4
	CS 315 C & the Unix Environment	3
	CS 373 Introduction to Game Programming	3
	CS 375 Computer Graphics	3
	CS 473 3D Game Programming	3
MA 345 Linear Algebra	3	

INFORMATION ASSURANCE	Choose 6 hours:	
	CS 315 C and the Unix Environment	3
	CY 410 Web Applications Security	3
	CY 420 Computer Forensics	3
	EP 305 Digital System Design	3
	ET 245 Logic Circuits	3
	ET 366 Microcontrollers	3
	TN 375 Network Rout Protocols/ Concepts	3
	TN 435 Network Security	3
	Required Minor: Cybersecurity	

NETWORKING	Required Courses:	
	CS 155 Computer Science I	4
	CS 265 Computer Science II	4
	CS 300 Computer Science III	4
	CS 315 C & the Unix Environment	3
	CS 480 Data Communications	3
Required Minor: Computer Networking		

MULTIMEDIA PROGRAMMING	Required Courses:	
	CS 155 Computer Science I	4
	CS 265 Computer Science II	4
	CS 300 Computer Science III	4
	CS 440 Database	3
	MC 221 Media Elements	3
	Additional Requirements: Choose 12 hours	
	AR 104 2D Design	3
	AR 323 Art & New Technology	3
	CS 315 C & the Unix Environment	3
	CS 331 Application Programming	3
CS 403 Information Retrieval	3	
GM 180 Intro to Technical Graphics	3	
GM 200 Vector & Bitmapped Graphics	3	
MC 310 Advertising Analysis/ Strategy	3	

SCIENCE	Choose 10-15 hours, depending on minor chosen:		
	CS 155 Computer Science I	4	
	CS 265 Computer Science II	4	
	CS 300 Computer Science III	4	
	CS 2xx	3	
	CS 3xx	3	
	CS 4xx	3	
	Required Minor (Choose One):	Engineering Physics Biology Chemistry Electronics Technology	Industrial Management Mathematics Physics

WEB PROGRAMMING	Required Courses:	
	CS 155 Computer Science I	4
	CS 265 Computer Science II	4
	CS 300 Computer Science III	4
	AR 323 Art & New Technology	3
	CS 331 Application Programming	3
	CS 403 Information Retrieval	3
	CS 440 Database	3
	GM 180 Intro to Technical Graphics	3
	IS 440 Web Design for Electronic Commerce	3

WEB PAGE DESIGN & MULTIMEDIA COMPUTING	Required Courses:	
	AR 104 2D Design	3
	GM 180 Intro to Technical Graphics	3
	IS 440 Web Design for Elec Commerce	3
	MC 221 Media Elements	3
	PG 284 Photography Fundamentals	3
	Additional Requirements: Choose 15 hours	
	AR 323 Art & New Technology	3
	GM 200 Vector & Bitmapped Graphics	3
	GM 282 Vector Graphics	3
	GM 380 3D Modeling/ Animation Production	3
	GM 386 Interactive Multimedia/ Animation	3
	GM 480 3D Animation Pipeline	3
	MC 310 Advertising Analysis & Strategy	3
MC 312 Advertising Creative Concepts	3	
MC 318 Advertising Digital Applications	3	

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

To explore
the College
of Science, Technology and
Agriculture online, visit
www.semo.edu/costa

For advising
Center for Academic Advising - North
(573) 651-5090
www.semo.edu/advising