

COMPUTER INFORMATION SYSTEMS, BS

Department & Program Chair: Chris Bopp, Ph.D.

Faculty

C. Bopp, Ph.D.
A. Foerst, Ph.D.
B. Kellogg, M.S.

The Bachelor of Science in Computer Information Systems (CIS) is designed to focus on the design, implementation, integration, and support of information systems. CIS prepares students to understand not only how systems are built and secured, but also why they are deployed and how they function within larger human and institutional systems. By bridging technical knowledge with applied, real-world problem solving, the CIS program encourages ethical awareness, interdisciplinary thinking, and the responsible use of technology.

The program equips students with practical skills in systems analysis, databases, networking, server management, and user experience design. Overall, the CIS program provides a distinctive and applied degree pathway for students seeking technology-focused careers grounded in organizational impact.

The department maintains three computer labs to support the curriculum. The Software Development Laboratory supports the first three courses in the major sequence and several upper-division courses. The Network/Systems Administration lab supports a variety of introductory and advanced networking and server management courses. The Cybersecurity Lab offers workstations for conducting advanced security assessments. Finally, a virtual lab environment allows students to gain hands-on experience with virtual servers, giving them the ability to configure and deploy new services.

Together, the department faculty has published numerous articles and textbooks. With the addition of practicing professionals, the program faculty provides breadth and depth in the foundational - as well as emerging areas - of computing. Students often participate in research projects with faculty supervision, occasionally co-authoring papers with faculty members.

Code	Title	Credits
Computer Information Systems		
<i>Core Courses:</i>		45
CS-130 & CSL-130	INTRODUCTION TO PROGRAMMING IN PYTHON and INTRO TO PROGRAMMING IN PYTHON LAB	
CS-241	COMPUTERS, SOCIETY & ETHICS	
CS-254 & CSL-254	COMPUTER NETWORKS and COMPUTER NETWORKS LAB	
CS-255 & CSL-255	SERVER MANAGEMENT and SERVER MANAGEMENT LAB	
CS-257 & CSL-257	USER EXPERIENCE DESIGN and USER EXPERIENCE DESIGN LAB	
CS-401	SENIOR COMPREHENSIVE PROJECT I	
CS-402	SENIOR COMPREHENSIVE PROJECT II	
CS-491	INTERNSHIP IN COMPUTER SCI.	

CYB-101 & CYBL-101	INTRODUCTION TO INFORMATION SECURITY and INTRO TO INFORMATION SECURITY LAB	
CYB-354 & CYBL-354	INTRO TO NETWORK SECURITY and INTRO TO NETWORK SECURITY LAB	
DS-201 & DSL-201	DATA SCIENCE TOOLKIT and DATA SCIENCE TOOLKIT LAB	
	or DSAI-201 DATA SCIENCE II	
CS-243 & CSL-243	DATABASE AND BIG DATA and DATABASE AND BIG DATA LAB	
	or CS-243R POSTGRE SQL	
CS-346 & CSL-346	OPERATING SYSTEMS and OPERATING SYSTEMS LAB	
	or CS-346R OPERATING SYSTEMS & ARCHITECTURE	
<i>Mathematics Courses:</i>		6
MATH-107	INTRODUCTION TO STATISTICS	
MATH-207	DISCRETE MATHEMATICS I	
<i>Major Electives</i> ¹		12
<i>Foreign Language</i> ²		3
General Education Requirements (https://catalog.sbu.edu/undergraduate/degree-requirements/)		37
<i>General Electives (enough to reach 120 credits)</i>		17
Total Credits		120

¹ Students must take 12 credits from CS CYB or DSAI not listed above.

² The foreign language must be at the level of 202 or higher. Students not prepared to begin at this level will need to take additional courses in language.

First Year			
Fall	Credits	Spring	Credits
CYB-101 & CYBL-101	4	CS-254 & CSL-254	4
ENG-101	3	ENG-102	3
BONA-101	3	MATH-107	3
Foreign Language/General Education/General Elective	6	Foreign Language/General Education/General Elective	6
		16	16
Second Year			
Fall	Credits	Spring	Credits
CS-243 & CSL-243	4	CS-130 & CSL-130	4
CS-255 & CSL-255	4	CS-241	3
MATH-207	3	Major Elective	4
Foreign Language/General Education/General Elective	3	Foreign Language/General Education/General Elective	6
		14	17
Third Year			
Fall	Credits	Spring	Credits
DSAI-201 & DSL-201	4	CS-257 & CSL-257	4
Major Elective	4	CYB-354 & CYBL-354	4
General Education/General Elective	6	General Education/General Elective	6
		14	14
Fourth Year			
Fall	Credits	Spring	Credits
CS-401	2	CS-402	1
CS-491	3	CS-346 & CSL-346	4

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Major Elective	4	General Education/General Elective	9
General Education/General Elective	6		
	15		14
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Total Credits	120		