

Department of Computer Science and Information Systems



Department Chair: Rob Robertson

Electronic Learning Center 305 ~ (435) 865-8560

Administrative Assistant: Sheri Lopez

Electronic Learning Center 407 ~ (435) 586-5405

Academic Advisor: Sharon Brown

Engineering & Technology Building 118 ~ (435) 865-8702

brownsh@suu.edu

Website: <http://www.suu.edu/ciet/programs.html>

Faculty: *Associate Professors:* Florin Balasa, Michael Grady, Connie W. Nyman, Nasser Tadayon; *Assistant Professors:* Nathan Barker, Shalini Kesar, Robert Robertson, Manghui Tu, Dezhi Wu.

DEGREES OFFERED

Bachelor of Science (BS)

Computer Science Composite

Computer Science Composite – Forensic Science Emphasis

Information Systems Composite

Associate of Applied Science Degree (AAS)

Information Technology

Networking/Telecommunications Emphasis

Information Technology Emphasis

Computer and Information Systems Security Emphasis

Minor

Computer Science (Non-Teaching)

Computer Science Emphasis in Teacher Education

Computer Science Emphasis in Forensics

Information Systems (Non-Teaching)

DEPARTMENT STATEMENT

The Department of Computer Science and Information Systems (CSIS) supports the mission of the University and the College of Computing, Integrated Engineering, and Technology by providing a high quality graduate and undergraduate education to students through certificate, associate, baccalaureate, and master degree programs.

The mission of the CSIS Department is to provide a learning-centered environment that enables students, faculty, and staff to achieve their goals and to empower our students to compete on a global level for careers in government, industry, secondary education, and acceptance to graduate school.

The Department provides programs in computer science and information systems. The curricula are rich with opportunities for students to develop a sound understanding of fundamentals as well as specialized theories, practices, and ethics that enhance their learning.

The CSIS faculty is committed to providing high-quality education, individual guidance and assistance to students, helping them to develop the attributes of critical thinking, effective communication, lifelong learning, and individual integrity while pursuing their academic goals as well as engaging in scholarly activities to enhance our classes, involve students and, to assist in the economic development of the region through partnerships with industry, inventors, and entrepreneurs.

The goals of the department that support the mission are to:

1. Provide excellent (undergraduate, AAS, and minor) programs in Computer Science and Information Systems.
2. Prepare graduates for careers enabling them to compete on a global level in government, industry, secondary education, and acceptance to graduate school.
3. Provide excellent General Education and service to the degree programs of other Departments and the University community.
4. Engage in research and other scholarly activities that enhance, promote, and support our degree programs, our instructional activities, and the intellectual and professional growth of our students and our faculty.
5. Provide an environment that promotes collegiality, collaboration, and the joy of learning.
6. Recruit and retain highly qualified students to Computer Science and Information Systems.



All courses to be counted in the Computer Science and Information Systems Department majors and minors must be passed with a “C” or better. Students must take an approved comprehensive examination in computer science during their senior year, passing with a score at least in the 25th percentile.

Students who need to strengthen their mathematical backgrounds will need to select appropriate courses from MATH 1010, 1050, and 1060 before they can begin to take the required mathematical background courses.

BS IN COMPUTER SCIENCE COMPOSITE

Recommended for students who seek careers in computer science or who wish to pursue graduate education. This is a SUU composite degree (a minor is not required).

BS IN COMPUTER SCIENCE COMPOSITE – FORENSIC SCIENCE EMPHASIS

Recommended for computer science students with an interest in criminal justice and the applied field of computer forensics. This is a SUU composite degree (a minor is not required).

BS IN INFORMATION SYSTEMS COMPOSITE

Recommended for students who seek careers in information systems or who wish to pursue graduate education. This is a SUU composite degree (a minor is not required).

AAS DEGREE IN INFORMATION TECHNOLOGY: NETWORKING/ TELECOMMUNICATIONS EMPHASIS

This associate degree is recommended for students with an interest in network administration. This is a SUU 2-year Associate of Applied Science Degree.



AAS DEGREE IN INFORMATION TECHNOLOGY: INFORMATION TECHNOLOGY EMPHASIS


This associate degree is recommended for students with an interest in developing applications in the Web environment. This is a SUU 2-year Associate of Applied Science Degree.



**AAS DEGREE IN INFORMATION TECHNOLOGY:
COMPUTER & INFORMATION SYSTEMS SECURITY
EMPHASIS**










This associate degree is recommended for students with an interest in information systems security. This is a SUU 2-year Associate of Applied Science Degree.




DEGREE REQUIREMENTS

Computer Science Composite Bachelor of Science	
Course Number and Title	Credits
University Requirements	
BS Degree – Math or Science minimum requirement (12 hours)	
Program Prerequisite	
MATH 1050 and 1060 (prerequisite for MATH 1210)	7
General Education Requirements (see Chapter 14) (37 hours)	
Core Course Requirements (must take MATH 1210)	18
Knowledge Areas Requirements (must take CSIS 1010 and two approved courses in the Physical and Life Sciences)	19
CSIS Common Core (36 hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
CSIS 2600 Data Communications & Networking	3
CSIS 2810 Computer Organization & Architecture	3
CSIS 3100 Systems Analysis & Design	3
CSIS 3200 Database Design & Management	3
CSIS 3600 Operating Systems	3
CSIS 3650 Network Security	3
EET 2750 PC Hardware	3
EET 2780 Digital Electronics I	3
MATH 1630 Discrete Mathematics	3
CS Core Required (35 hours)	
CSIS 3000 Advanced Algorithms & Data Structures	3
CSIS 3150 C and C++ Programming	3
 CSIS 3550 Foundations of Computation Theory	3
 CSIS 4550 Programming Languages	3
CSIS 4800 CS Capstone Project	3
EET 3780 Applications of Microprocessors	3
MATH 1220 Calculus II	4
MATH 2270 Linear Algebra	3
MATH 3700 Probability & Statistics	5
Science courses to complete 12 credit hours of science, which must include one of the sequences: BIOL 1610, 1615, 1620, 1625, or CHEM 1210, 1215, 1220, 1225 or PHYS 2210, 2215, 2220, 2225.	5
CS Major Electives (9 hours)	
Choose 9 credits from the following: CSIS 3500 Advanced Computer Architecture (3) EET 3790 Computer Interfacing (3) CSIS 3400 Graphics Programming (3) CSIS 3700 Computer Forensics (3)	9

 CSIS 4540 Human-Computer Interfaces (3)	
CSIS 4700 Internet Forensics & Cyber Security (3)	
CS Free Electives (3 hours)	
Free Electives	3
Total Credits, B.S. degree	127
Computer Science Composite Forensic Science Emphasis Bachelor of Science	
Course Number and Title	Credits
University Requirements	
BS Degree – Math or Science minimum requirement (12 hours)	
Program Prerequisite (7 hours)	
MATH 1050 and 1060 (prerequisite for MATH 1210)	7
General Education Requirements (37 hours)	
Core Course Requirements (must take MATH 1210)	18
Knowledge Areas Requirements (must take CJ 1010 and CSIS 1010) and approved courses in the Physical and Life Sciences	19
CSIS Core (36 hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
CSIS 2600 Data Communications & Networking	3
CSIS 2810 Computer Organization & Architecture	3
CSIS 3100 Systems Analysis & Design	3
CSIS 3200 Database Design & Management	3
CSIS 3600 Operating System	3
CSIS 3650 Network Security	3
EET 2750 PC Hardware	3
EET 2780 Digital Circuits I	3
MATH 1630 Discrete Mathematics	3
Criminal Justice Core Required (12 hours)	
CJ 1340 Criminal Investigations	3
CJ 1350 Introduction to Forensic Science	3
CJ 2350 Laws of Evidence	3
CJ 3100 Advanced Criminalistics	3
CS Forensics Core Required (35 hours)	
CSIS 3000 Advanced Algorithms & Data Structures	3
CSIS 3150 C and C++ Programming	3
CSIS 3500 Advanced Computer Architecture	3
CSIS 3700 Computer Forensics	3
CSIS 4700 Internet Forensics & Cyber Security	3
EET 3780 Applications of Microprocessors	3
MATH 1220 Calculus II	4
MATH 2270 Linear Algebra	3
MATH 3700 Probability & Statistics	5
Science courses to complete 12 credit hours of science, which must include one of the sequences: BIOL 1610, 1615, 1620, 1625, or CHEM 1210, 1215, 1220, 1225 or PHYS 2210, 2215, 2220, 2225.	5

CS Forensic Electives (2 hours)	
2 Credit hours of electives in CSIS or Forensic related classes in the college of Science or the Department of Criminal Justice. The CIET advisor must approve course. These electives will need to be upper division to satisfy the required 40 hours of upper division work	2
Total Credits, B.S. degree	129
Information Systems Composite Bachelor of Science	
Course Number and Title	Credits
University Requirements	
BS Degree – Math or Science minimum requirement (12 hours)	
Program Prerequisite	
MATH 1050	4
General Education Requirements (see Chapter 14) (37 hours)	
Core Course Requirements (must take MATH 2040)	18
Knowledge Areas Requirements (must take CSIS 1010)	19
CSIS Common Core Required (36 Hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
CSIS 2600 Data Communications & Networking	3
CSIS 2810 Computer Organization & Architecture	3
CSIS 3100 Systems Analysis & Design	3
CSIS 3200 Database Design & Management	3
CSIS 3600 Operating Systems	3
CSIS 3650 Network Security	3
EET 2750 PC Hardware	3
EET 2780 Digital Electronics I	3
MATH 1630 Discrete Mathematics	3
IS Core Required (27 Hours)	
ACCT 2010 Accounting Principles	3
ACCT 2020 Managerial Accounting	3
MATH 1100 Business Calculus	3
CSIS 2000 Web Development	3
CSIS 2620 Network Administration I	3
 CSIS 2660 COURSE HAS BEEN DELETED	
 CSIS 2670 Information Security & Assurance	3
CSIS 3050 Environments of Information Systems	3
CSIS 4810 IS Capstone Project	3
MGMT 3180 Management & Organizations	3
IS Business Electives (6 Hours)	
Choose two of the following classes: FIN 3250 Managerial Finance I (3) MGMT 3050 International Business (3) MGMT 4100 Organizational Behavior & Leadership (3) MKTG 3010 Marketing Principles (3)	6
IS Major Electives (12 Hours)	
Choose 4 of the following classes: CSIS 3150 C and C++ Programming (3) CSIS 3620 Network Administration II (3)	12

CSIS 3660 Network Design & Implementation (3) CSIS 3700 Computer Forensics (3)	
 CSIS 4540 Human-Computer Interfaces (3) CSIS 4700 Internet Forensics & Cyber Security (3) CSIS 4750 e-Business Systems (3)	
 EET 2730 COURSE HAS BEEN DELETED	
 ART 3250 Web Design I	
 ART 4250 Web Design II	
Total Credits, B.S. degree	122
Information Technology All Emphases Associate of Applied Science	
Course Number and Title	Credits
General Education Requirements (see Chapter 14) (21 hours)	
Core Course Requirements (must take MATH 2040)	12
Knowledge Areas Requirements (must take CSIS 1010)	9
Common Core (27 Hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
 CSIS 2010 Computer Applications or CSIS 2810 Computer Architecture	3
CSIS 2600 Data Communications & Networking	3
CSIS 3100 Systems Analysis & Design	3
CSIS 3200 Database Design & Management	3
CSIS 3650 Network Security	3
EET 2750 PC Hardware	3
Each student must pass at least one approved industry certification appropriate to his/her emphasis	
Select one of the three following emphases:	
Networking/Telecommunications Emphasis (18 Hours)	
CSIS 2620 Networking Administration I	3
 CSIS 2660 COURSE HAS BEEN DELETED	
 CSIS 2670 Information Security & Assurance	3
CSIS 3600 Operating Systems	3
CSIS 3620 Network Administration II	3
CSIS 3660 Network Design & Implementation	3
 EET 2730 COURSE HAS BEEN DELETED	
 Any CSIS Elective	3
Information Technology Emphasis (18 hours)	
ACCT 2010 Accounting Principles	3
ART 2210 Digital Imaging	3
ART 3230 Graphic Design I	3
CSIS 2000 Web Development	3
Any CSIS Elective	3
CSIS 3050 Environments of Information Systems	3

Computer and Information Systems Security Emphasis (18 Hours)	
CSIS 2620 Network Administration I	3
CSIS 3600 Operating Systems	3
CSIS 3660 Network Design & Implementation	3
CSIS 4700 Internet Forensics & Cyber Security	3
 EET 2730 COURSE HAS BEEN DELETED	
 EET 2740 COURSE HAS BEEN DELETED	
 Any CSIS Electives	6
Total Credits (either emphasis)	66

CSIS 4700 Internet Forensics & Cyber Security	3
CJ 2350 Laws of Evidence	3
Total Credits	21

Computer Science Minor (Non-Teaching)	
Course Number and Title	Credits
Required Courses (21 hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
EET 2780 Digital Electronics I	3
CSIS 3000 Advanced Algorithms & Data Structures	3
CSIS 3600 Operating Systems	3
Elective (any approved CSIS course)	3
Total Credits	21

Information Systems Minor (Non-Teaching)	
Course Number and Title	Credits
Required Courses (21 hours)	
CSIS 2000 Web Development	3
CSIS 2010 Computer Applications	3
CSIS 2600 Data Communications & Networking	3
CSIS 3050 Environments of Information Systems	3
CSIS 3100 Systems Analysis & Design	3
CSIS 3200 Database Design & Management	3
Elective (any approved CSIS course)	3
Total Credits	21

Computer Science Minor Emphasis in Teacher Education	
Course Number and Title	Credits
Required Courses (21 Hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
EET 2780 Digital Electronics I	3
CSIS 2000 Web Development	3
CSIS 4900 Methods in CS & IS Education	3
Elective (any approved CSIS course)	3
Total Credits	21

Computer Science Minor Emphasis in Forensics	
Course Number and Title	Credits
Required General Education Course (3 Hours)	
CJ 1010 Introduction to Criminal Justice	3
Required Courses (18 Hours)	
CSIS 1400 Fundamentals of Programming	3
CSIS 1410 Object Oriented Programming	3
CSIS 2420 Intro to Algorithms & Data Structures	3
CSIS 3700 Computer Forensics	3

