CLAYTON STATE UNIVERSITY CENTER FOR ADVISING & RETENTION (CAR)

COMPUTER SCIENCE

CORE CURRICULUM REQUIREMENTS

Area A: Essential Skills
A1: Two Courses
A2: MATH 1112 *or* MATH 1113 *or* higher *(Recommended)*

Area B: Critical Thinking & Communication
B1: One Course
B2: One to Two Courses

Area C: Humanities
C1: One Course
C2: One Course

Area D: Natural Sciences, Mathematics & Technology
D1: Two Sciences & Two Labs
D2: MATH 1501 *or* higher *(Recommended)*

Area E: Social Sciences
E1: One Course
E2: One Course
E3: One Course
E4: One Course

For more detailed information on Core Curriculum requirements related to this major, review the associated Core Curriculum overview sheet or DegreeWorks.

AREA F: LOWER DIVISION MAJOR REQUIREMENTS (18 HOURS)

CSCI 1100:	Applied Computing
CSCI 1301:	Computer Science I
CSCI 1302:	Computer Science II
CSCI 2302:	Data Structures & Algorithms
CSCI 2305:	Computer Organization & Architecture
MATH 2020:	Discrete Mathematics

UPPER DIVISION MAJOR REQUIREMENTS (24 HOURS)

CSCI 3300:	Professional Development & Ethics
CSCI 3305:	Operating Systems
CSCI 3306:	Computer Networks & Security
CSCI 3310:	Database Design & Implementation
CSCI 3320:	Software Engineering Design
CSCI 3333:	Programming Languages
CSCI 4333 or 4334:	Theory of Computation or Algorithm Design
CSCI 4320:	Software Engineering Practicum
OR	
CSCI 4360 or 4370:	Computer Science Research or Internship in Computer Science

TECHNICAL WRITING (3 HOURS)

ENGL 3900: Technical Writing

FREE ELECTIVE (3-6 HOURS)

MAJOR CONCENTRATION – SELECT ONE CONCENTRATION (15 HOURS)

Big Data Concentration (9 hours)

CSCI 4201:	Adv. Topics in Database
CSCI 4202:	Data & Visual Analytics
CSCI 4307:	Artificial Intelligence
CSCI 4308:	Adv. Topics in Parallel & Dist. Comp.
MATH 3220 or 4350:	Applied Statistics or Graph Theory

Cybersecurity Concentration (15 hours)

CSCI 3601 or ITFN 3316:	SW Security, Testing & Quality Assurance
CSCI 4317 or ITFN 4601:	OS Security, Programming & Administration
ITNW 4501:	Network Planning & Design
ITNW 4502:	Secure Networks & Comm. Protocol
ITMM 4423:	Security for E-Commerce

Games Design and Programming Concentration

CSCI 3301:	Game Design & Programming I
CSCI 4301:	Game Design & Programming II
CSCI 4304:	Computer Graphics
CSCI 4307:	Artificial Intelligence
CSCI 4315 or 4601:	HCI or Mobile SW Development

SPECIAL NOTES

- Take MATH 1501 in Area D2 and MATH 2020 for Area F
- Take 15 credit hours each semester
- Create a Pre-Advising Sheet before you attend an advising session

This is an unofficial checklist for the 2018-2019 catalog year degree requirements and are subject to change. Students should refer to the academic catalog for specific requirements.

Why become a Computer Science Major?

Bachelor of Computer Science

The Bachelor of Computer Science (BSCS) is a 120-credit program that immerses students in problem-solving experiences through algorithmic design and software development using computing and networking technologies.

BSCS program attracts students seeking to pursue a career in any field related to computing and networking technologies including but not limited to software development, cybersecurity, games design, development and data analytics.

Minors and Concentrations

Big Data | Cybersecurity | Game Design

Industry Outlook

Computer Science careers can be found in a number of organizations including government, business, education and healthcare.

The U.S. Department of Labor projected in a 2015 outlook report about computer and information technology occupations a growth of 12 percent in the industry that will add 488,500 new jobs between 2014 and 2024.

BSCS program attracts students seeking to pursue a career in any field related to computing and networking technologies including but not limited to software development, cybersecurity, games design and development, and data analytics.

Career Opportunities

- Computer Installation and Tech. Specialist
- Data Control Administrator
- Data Processing Manager
- Database Manager
- Game Developer
- Network Programmer
- Research Analyst
- Risk Analyst
- Robotics Programmer
- Satellite Communications Specialist
- Systems Analyst
- Technical Sales Representative
- Technical Support Representative
- Technical Writer

CLAYTON STATE UNIVERSITY

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