Computer Science Major Requirements  
Catalog Year: 2013-14  
Degree: Bachelor of Arts  
Credit Hours: 47+

“PR” indicates a pre-requisite. “CO” indicates a co-requisite.

Courses within this major may also satisfy general education requirements. Please consult http://registrar.cofc.edu/general-edu for more information.

Required Courses

☐ CSCI 220  Computer Programming I (3) PR: CSCI 120 or CSCI 180 or CSCI 210 or MATH 111; CO: CSCI 220L
☐ CSCI 220L  Computer Programming I Lab (1) CO: CSCI 220
☐ CSCI 221  Computer Programming II (3) PR: CSCI 220, CSCI 220L; CO or PR: MATH 207
☐ CSCI 230  Data Structure and Algorithms (3) PR: CSCI 221, MATH 207
☐ CSCI 250  Introduction to Computer Organization and Assembly Language Programming (3) PR: CSCI 220 and CSCI 220L; CO or PR: MATH 207
☐ CSCI 320  Programming Language Concepts (3) PR: CSCI 221, MATH 207
☐ CSCI 340  Operating Systems (3) PR: CSCI, 230, CSCI 250, MATH 207
☐ CSCI 360  Software Architecture and Design (3) PR: CSCI 230, MATH 207; CO: COMM 104
☐ CSCI 462  Software Engineering Practicum (3) PR: CSCI 230, CSCI 360 or CSCI 362; COMM 104

Elective Requirements: 9 credit hours from the following:

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- CSCI 310  Advanced Algorithms (3) PR: CSCI 230, MATH 207
- CSCI 315  Service-Side Web Programming (3) PR: CSCI 215, CSCI 221
- CSCI 325  Functional and Logic Programming (3) PR: CSCI 221, MATH 207
- CSCI 332  Database Concepts (3) PR: CSCI 221, MATH 207
- CSCI 334  Data Mining (3) PR: CSCI 221, MATH 207, MATH 250
- CSCI 350  Digital Logic and Computer Organization (3) PR: CSCI 250; PR or CO: MATH 307
- CSCI 362  Software Engineering (3) PR: CSCI 221, MATH 207; CO: COMM 104
- CSCI 380  User Interface Development (3) PR: CSCI 221, MATH 207, or instructor permission
- CSCI 392  Seminar on Computing and Society (3) PR: CSCI 221
- CSCI 397  Research Experience in Computer Science (0) PR: Declared CSCI majors only, instructor permission, department chair permission
- CSCI 399  Tutorial (3, Repeatable up to 12) PR: Junior standing, tutor permission, department chair permission
- CSCI 410  Automata and Formal Language (3) PR: MATH 207
- CSCI 420  Principles of Compiler Design (3) PR: CSCI 230, CSCI 320, MATH 307
- CSCI 432  Concepts of Database Implementation (3) PR: CSCI 332, MATH 307
- CSCI 440  Computer Networks (3) PR: CSCI 340, MATH 250, MATH 307
- CSCI 450  Architecture of Advanced Computer Systems (3) PR: CSCI 340 or CSCI 350
CSCI 459  Service-Oriented Programming (3) PR: CSCI 221; CSCI 230 or CSCI 315
CSCI 470  Principles of Artificial Intelligence (3) PR: CSCI 230, MATH 307
CSCI 480  Principles of Computer Graphics (3) PR: CSCI 230, MATH 220, MATH 307
CSCI 490  Special Topics (3) PR: Instructor permission
CSCI 499  Bachelor’s Essay (6) PR: A project proposal must be submitted in writing and approved by the department prior to registration for the course.

Math Requirement

☐ MATH 120  Introductory Calculus (4) PR: Placement or C or better in MATH 111
☐ MATH 207  Discrete Structures I (3) PR: MATH 105, MATH 111, or MATH 120
☐ MATH 307  Discrete Structures II (3) PR: MATH 207 or MATH 295 or instructor permission

Communication Requirement

☐ COMM 104  Public Speaking (3) PR: None