Computer Science Major Requirements
Catalog Year: 2014-15
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 Structures 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:

☐ ____________ ☐ ____________ ☐ ____________

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
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<tr>
<th>Course Code</th>
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<th>Prerequisites</th>
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<tr>
<td>CSCI 459</td>
<td>Service-Oriented Programming (3) PR: CSCI 221; CSCI 230 or CSCI 315</td>
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<tr>
<td>CSCI 470</td>
<td>Principles of Artificial Intelligence (3) PR: CSCI 230, MATH 307</td>
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<td>CSCI 480</td>
<td>Principles of Computer Graphics (3) PR: CSCI 230, MATH 220, MATH 307</td>
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<td>CSCI 490</td>
<td>Special Topics (3) PR: Instructor permission</td>
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<td>CSCI 499</td>
<td>Bachelor's Essay (6) PR: A project proposal must be submitted in writing and approved by the department prior to registration for the course.</td>
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**Math Requirement**

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<tr>
<td>MATH 120</td>
<td>Introductory Calculus (4) PR: Placement or C- or better in MATH 111</td>
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<tr>
<td>MATH 207</td>
<td>Discrete Structures I (3) PR: MATH 105, MATH 111, or MATH 120</td>
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<td>MATH 307</td>
<td>Discrete Structures II (3) PR: MATH 207 or MATH 295 or instructor permission</td>
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**Communication Requirement**

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<tr>
<td>COMM 104</td>
<td>Public Speaking (3) PR: None</td>
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