In addition to the degree requirements outlined above, students seeking the BS Computer Science/Computer Information Systems degree must also take 6 semester hours of 3000/4000 level electives within the Department of Computer Science. These electives may be chosen from the courses listed here or any other advisor-approved Computer Science elective. **Courses are grouped to show focus, students do not have to take both from a group.**

**Cybersecurity**
- CNT 4403 (3) - Com & Net Security
- CIS 4385 (3) - F - Ethical Hacking

**Information Systems**
- CIS 4368 (3) - F - Database Security
- CAP 4770 (3) FS - Data Mining

**Advanced Programming**
- COP 4027 (3) - Advanced Prog
- COP 4534 (3) - Data Struc & Alg II

**Intelligent Systems**
- CAP 4601 (3) - Artificial Intelligence
- CAP 4786 (3) - Big Data Analytics

**Special Topics**

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**Software Design and Development Curriculum**
**Prerequisite Flowchart**

*Catalog Years: 2018-2019*

Values in parenthesis indicate course hours.

(FSS – Fall, Spring, Summer / FS – Fall, Spring / F – Fall only / S – Spring only)*

*Final course offerings for any given semester may vary due to departmental resources.
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**Prerequisites**

- COP 3530 (3) - FS - Data Structs & Alg I
- COP 3022 (3) – FS - Intermediate Prog
- COP 3813 (3) - F - Server-Side Prog.
- COP 4864 (3) - S - Client-Side Prog.
- COP 4710 (3) FSS - Database Systems
- CDA 3101 (3) - S - FS - Computer Org.
- COP 4610 (3) FSS - Operating Systems
- CNT 4007C (3) FSS - T&F of Networks
- CEN 4053 (3) FSS - Mobile Programming
- CEN 4078 (3) S - Sec Software Dev
- CTS 4348 (3) S - Linux Sys Admin
- COP 3665 (3) - FS - Mobile Programming
- CEN 4607 (3) - FS - Software Eng Mgmt
- COT 3100 (3) - S - Discrete Structures
- COP 3530 (3) - FS - Data Structs & Alg I
- COP 3041 (3) - F - Alg. & Program Design
- COP 3022 (3) – FS - Intermediate Prog
- COP 4710 (3) FSS - Database Systems
- COP 4856 (3) - F - Dist Sotf Arch
- CEN 3031 (3) F - FS - Software Eng 1
- CEN 3032 (3) S - FS - Software Eng 2
- CIS 4595C (3) - FS - Capstone
- CEN 4075 (3) FSS - Software Eng Mgmt
- COP 4596 (3) - FS - Operating Systems
- COP 4610 (3) FSS - Operating Systems
- CNT 4007C (3) FSS - T&F of Networks
- CTS 4348 (3) S - Linux Sys Admin

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*Prereq = MAC 2311 OR MAC 2233
Prereq = COP 4634 OR COP 4610
Prereq = STA 4321
Prereq = COP 3022 and COP3530