# Computer Science with Cyber Security Course Plan

## Catalog Year 2022-2023

---

**Legend**

**\* Major Requirement**
Must be taken to fulfill major requirements.

**† Major Elective**
Must be taken to fulfill major requirements, or replaced with an equivalent course.

**‡ Gen-Ed Requirement**
Must be taken to fulfill general education requirements.

**§ Elective**
Can be chosen from a selection of courses.

*See MyGFU for detailed academic requirements.*

---

## First Year

### Fall Semester

| | |
|---|---|
| Introduction to Computer Science I  (CSIS 201) * | 3 credits |
| Calculus I (MATH 201) * | 4 credits |
| Communication in Society (COMM 111) ‡ | 3 credits |
| Caring for Words (WRIT 111) ‡ | 3 credits |
| The Bible (THEO 101) ‡ | 3 credits |
| **Semester Total** | **16 credits** |
| **Cumulative Total** | **16 credits** |

### Spring Semester

| | |
|---|---|
| Introduction to Computer Science II (CSIS 202) * | 3 credits |
| Why Math Matters (MATH 170) ‡ | 3 credits |
| Personhood  (PSYC 100) ‡ | 3 credits |
| The Modern and Postmodern World ‡ | 3 credits |
| Christianity (THEO 102) ‡ | 3 credits |
| **Semester Total** | **15 credits** |
| **Cumulative Total** | **31 credits** |

## Second Year

### Fall Semester

| | |
|---|---|
| Data Structures (CSIS 310) * | 3 credits |
| Software Engineering (CSIS 321) * | 3 credits |
| Digital Logic (ENGE 220) * | 4 credits |
| Discrete Mathematics (MATH 260) * | 3 credits |
| Art and Global Culture (ARTP/V 120) ‡ | 3 credits |
| Internships: Finding & Landing (optional/recommended) (CPAS 216) § | 1 credits |
| **Semester Total** | **17 credits** |
| **Cumulative Total** | **48 credits** |

### Spring Semester

| | |
|---|---|
| Analysis of Algorithms (CSIS 430) * | 3 credits |
| Object-Oriented Analysis/Design (CSIS 370) * | 3 credits |
| Computer Security Digital Forensics (CSIS 312) * | 3 credits |
| Faith and Story (LITR 111) ‡ | 3 credits |
| Science and Faith (GSCI 170) ‡ | 3 credits |
| **Semester Total** | **15 credits** |
| **Cumulative Total** | **63 credits** |

## Third Year

### Fall Semester

| | |
|---|---|
| Database Systems (CSIS 340) * | 3 credits |
| Data Communications & Networking (CSIS 350) * | 3 credits |
| Computer Architecture/Assembly Language (CSIS 360) * | 3 credits |
| Emerging Mobile Technologies (CSIS 390) * | 3 credits |
| Servant Engineering I (ENGR 381) * | 2 credits |
| Justice (SSCI 100) ‡ | 3 credits |
| **Semester Total** | **17 credits** |
| **Cumulative Total** | **80 credits** |

### Spring Semester

| | |
|---|---|
| Secure Software (CSIS 473) * | 3 credits |
| Network Administration (CSIS 450) * | 3 credits |
| Operating Systems (CSIS 460) * | 3 credits |
| Servant Engineering II (CSIS 382) * | 2 credits |
| Elective or Juniors Abroad § | 3 credits |
| **Semester Total** | **14 credits** |
| **Cumulative Total** | **94 credits** |

# Fourth Year

## Fall Semester

| | |
|---|---|
| Parallel & Distributed Computing (CSIS 434) * | 3 credits |
| Advanced Cyber Security (CSIS 413) * | 3 credits |
| Programming Languages (CSIS 420) * | 3 credits |
| Senior Design I (ENGR 481) * | 1 credits |
| Ethics (THEO 380) ‡ | 3 credits |
| **Semester Total** | **13 credits** |
| **Cumulative Total** | **107 credits** |

## Spring Semester

| | |
|---|---|
| Cyber Defense  (CSIS 451) * | 4 credits |
| Senior Design II (ENGR 482) * | 3 credits |
| Elective Credits § | 6 credits |
| **Semester Total** | **13 credits** |
| **Cumulative Total** | **120 credits** |