

CYBER FORENSICS AND SECURITY

REQUIREMENTS

CORE CURRICULUM

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

CORE 1: CRITICAL THINKING

| CODE | COURSE NAME | HRS | GRADE |
|---|--------------------------------|-----|-------|
| FYS 100 | First Year Seminar | ● 3 | _____ |
| _____ | Critical Thinking Course | ● 3 | _____ |
| _____ | Critical Thinking Course | ● 3 | _____ |
| Additional University Requirements | | | |
| CFS 440 | Writing Intensive | 3 | _____ |
| CFS 460 | Writing Intensive | 3 | _____ |
| _____ | Multicultural or International | 3 | _____ |
| CFS 490 | Capstone | 3 | _____ |

CORE 2:

| CODE | COURSE NAME | HRS | GRADE |
|-----------|-------------------------------|-------|-------|
| 🌿 ENG 101 | Beginning Composition | ● 3 | _____ |
| ENG 201 | Advanced Composition | ● 3 | _____ |
| CMM 103 | Fund Speech-Communication | ● 3 | _____ |
| 🌿 MTH 140 | Core II Mathematics | ● ♦ 3 | _____ |
| IST 224 | Core II Physl/Natural Science | ● ♦ 4 | _____ |
| _____ | Core II Humanities | ● 3 | _____ |
| CJ 200 | Core II Social Science | ● ♦ 3 | _____ |
| _____ | Core II Fine Arts | ● 3 | _____ |

MAJOR-SPECIFIC

All Cyber Forensics and Security majors are required to take the following courses:

| CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
|-----------|----------------------------------|-------|-------|-----------|--------------------------------|-------|-------|
| NRRM 200 | Analytical Methods: Statistics | ♦ 4 | _____ | CFS 357 | Network Penetration and Attack | ♦ 4 | _____ |
| 🌿 MTH 140 | Applied Calculus | ● ♦ 3 | _____ | CFS 400 | Intro to Cyber Forensics | ♦ 3 | _____ |
| IST 224 | Intro to Forensic Science | ● ♦ 4 | _____ | CFS 440 | Digital Forensics (WI) | ♦ 4 | _____ |
| _____ | Phys/Nat Science Elec Sequence 1 | ♦ 4 | _____ | CFS 448 | Multimedia Forensics | ♦ 3 | _____ |
| _____ | Phys/Nat Science Elec Sequence 2 | ♦ 3 | _____ | CFS 454 | Network Defense | ♦ 4 | _____ |
| 🌿 CIT 163 | Intro to Programming C++ | ♦ 3 | _____ | CFS 460 | Applied Cyber Forensics (WI) | ♦ 4 | _____ |
| 🌿 CIT 263 | Web Programming I | ♦ 3 | _____ | CFS 462 | Network Forensics | ♦ 4 | _____ |
| CIT 352 | Network Protocols and Admin | ♦ 3 | _____ | 🌿 CFS 467 | Mobile Device Forensics | ♦ 4 | _____ |
| CIT 365 | Database Management | ♦ 3 | _____ | CFS ___ | CFS Technical Elective | ♦ 3 | _____ |
| CJ 200 | Intro to Criminal Justice | ● ♦ 3 | _____ | CFS ___ | CFS Technical Elective | ♦ 3 | _____ |
| CJ 314 | Crime Scene Investigation | ♦ 3 | _____ | CFS 490 | Senior Project | ● ♦ 3 | _____ |
| CJ 424 | Computer Crime | ♦ 3 | _____ | _____ | Free Elective | 3 | _____ |
| 🌿 CFS 200 | Introduction to CFS | ♦ 3 | _____ | _____ | Free Elective | 3 | _____ |
| CFS 261 | Intro to Linux | ♦ 3 | _____ | _____ | Free Elective | 3 | _____ |
| 🌿 CFS 305 | Open Source Intelligence | ♦ 3 | _____ | _____ | Free Elective | 2 | _____ |

MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- Coursework listed as "free elective" may vary for each student. Students are encouraged to use elective hours toward a minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements.
- Course offerings and course attributes are subject to change semesters. Please consult each semesters schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 24 or higher. Students with an ACT Mathematics score less than 24 will be placed in the appropriate mathematics and science courses.
- Prior to entering their junior year, students are required to pass a background check (no arrests or convictions) and supply two letters of reference that attest to the student's character. Under certain very limited circumstances, this requirement may be waived. That decision will be made by a review committee comprised of the university digital forensic and information assurance faculty along with the department chair. The background check is done at the student's expense.
- For the CFS technical elective students may choose between the following classes: CFS 420: Incident Response (3 cr.), CFS 430: Exploit Development (3 cr.), DFIA 445: Mobile and Web Pen Testing (3 cr.), CFS 461: Cyber Warfare (3 cr.), or CFS 464: Network Security and Cyber Crime (3 cr.) or CFS 480: Special Topics (3 cr.).

● General Education Requirement
 ■ College Requirement
 ♦ Major Requirement
 ● Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss importance of this course in your plan of study.

CYBER FORENSICS AND SECURITY

The Bachelor of Science in Cyber Forensics and Security prepares students to meet the challenges of today's cyber threats. Cyber Forensics and Security skills are in high demand in law enforcement, business, government, defense, intelligence, and the private sector. The program has a solid foundation in science, technology, and communication skills. Students learn to conduct forensic analysis on a variety of devices and systems, defend a network, testify in court, and conduct penetration tests among other skills.

| FALL SEMESTER | | | | | SPRING SEMESTER | | | | | |
|-------------------------|--|-----|-------|-----------|--------------------|--|-----|-------|-----------|--|
| CODE | COURSE NAME | HRS | GRADE | | CODE | COURSE NAME | HRS | GRADE | | |
| ENG 101 | Beginning Composition | 3 | | | CIT 163 | Intro to Programming C++ | 3 | | | |
| FYS 100 | First Year Seminar | 3 | | | CJ 200 | Intro to Criminal Justice | 3 | | | |
| | Multicultural or International | 3 | | | ENG 201 | Advanced Composition | 3 | | | |
| | Core II Fine Arts | 3 | | | CFS 200 | Introduction to CFS | 3 | | | |
| | Free Elective | 3 | | | | Free Elective | 3 | | | |
| UNI 100 | Freshman First Class | 1 | | | | | | | | |
| TOTAL HOURS | | | | 16 | TOTAL HOURS | | | | 15 | |
| Summer Term (optional): | | | | | | | | | | |
| FALL SEMESTER | | | | | SPRING SEMESTER | | | | | |
| CODE | COURSE NAME | HRS | GRADE | | CODE | COURSE NAME | HRS | GRADE | | |
| CIT 352 | Network Protocols and Admin | 3 | | | CIT 263 | Web Programming I | 3 | | | |
| CFS 400 | Intro to Cyber Forensics | 3 | | | CFS 261 | Intro to Linux | 3 | | | |
| NRRM 200 | Analytical Methods: Statistics | 4 | | | CMM 103 | Fund Speech Communication | 3 | | | |
| | Physical/Natural Sci Elective - Seq 1 | 3 | | | MTH 140 | Applied Calculus | 3 | | | |
| | Core II Humanities (CT) | 3 | | | | Physical/Natural Sci Elective - Seq 2 | 4 | | | |
| TOTAL HOURS | | | | 16 | TOTAL HOURS | | | | 16 | |
| Summer Term (optional): | | | | | | | | | | |
| FALL SEMESTER | | | | | SPRING SEMESTER | | | | | |
| CODE | COURSE NAME | HRS | GRADE | | CODE | COURSE NAME | HRS | GRADE | | |
| CIT 365 | Database Management | 3 | | | CJ 424 | Computer Crime | 3 | | | |
| CFS 305 | Open Source Intelligence | 3 | | | CFS 454 | Network Defense | 4 | | | |
| CFS 357 | Network Penetration and Attack | 4 | | | CFS 462 | Network Forensics | 4 | | | |
| CFS 460 | App Dig Evidence and eDisc (WI) | 4 | | | | Free Elective | 3 | | | |
| | | | | | | Free Elective | 2 | | | |
| TOTAL HOURS | | | | 14 | TOTAL HOURS | | | | 16 | |
| Summer Term (optional): | | | | | | | | | | |
| FALL SEMESTER | | | | | SPRING SEMESTER | | | | | |
| CODE | COURSE NAME | HRS | GRADE | | CODE | COURSE NAME | HRS | GRADE | | |
| CJ 314 | Crime Scene Investigation | 3 | | | CFS 440 | Digital Forensics (WI) | 4 | | | |
| CFS 467 | Mobile Device Forensics | 4 | | | CFS 490 | Capstone | 3 | | | |
| CFS 448 | Multimedia Forensics | 3 | | | | CFS Technical Elective (CFS 420, 430, 461, 464, 480 or DFIA 445) | 3 | | | |
| IST 224 | Intro to Forensic Science | 4 | | | | | | | | |
| | CFS Technical Elective (CFS 420, 430, 461, 464, 480 or DFIA 445) | 3 | | | | | | | | |
| TOTAL HOURS | | | | 17 | TOTAL HOURS | | | | 10 | |
| Summer Term (optional): | | | | | | | | | | |

Area of Emphasis

Major Requirement

College Requirement

General Education Requirement

Milestone Course: This is a key success marker for your major. See your advisor to discuss importance of this course in your plan of study.