


# CYBER FORENSICS AND SECURITY, B.S.














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.


 - General Education Course

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

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 <https://www.marshall.edu/gened/>.

## Course Requirements


Code	Title	Credit Hours
<b>Core Curriculum</b>		
<i>Core 1: Critical Thinking</i>		
FYS 100	First Yr Sem Critical Thinking	3
	Critical Thinking Course	5
	Critical Thinking Course	3
<i>Core 2</i>		
ENG 101  	Beginning Composition	3
ENG 201 	Advanced Composition	3
CMM 103 	Fund Speech-Communication	3
MTH 140  	Applied Calculus	3
FSC 224 	Intro to Forensic Science	4
	Core II Humanities	3
CJ 200 	Intro to Criminal Justice (Core II Social Science)	3
	Core II Fine Arts	3
<i>Additional University Requirements</i>		
CFS 440	Digital Evidence (Writing Intensive)	4
CFS 460	Applied Cyber Forensics (Writing Intensive)	4
	Multicultural or International	3
CFS 490 	Capstone	3
<b>Major-Specific</b>		
MTH 140  	Applied Calculus	3
FSC 224 	Intro to Forensic Science	4
	Physical/Natural Science Electives	7
CS 110	Computer Science I	3
CJ 200 	Intro to Criminal Justice	3
CJ 322	Criminal Law & Procedure	3
CFS 200	Introduction to CFS	3
CFS 261	Introduction to Linux	3
CFS 305	Open Source Intelligence	3

CFS 357	Network Penetration and Attack	4
CFS 400	Intro to Cyber Forensics	3
CFS 420	Incident Response	3
CFS 440	Digital Evidence	4
CFS 448	Multimedia Forensics	3
CFS 454	Network Defense	4
CFS 460	Applied Cyber Forensics	4
CFS 462	Network Forensics	4
CFS 467	Mobile Device Forensics	4
CFS 490 	Capstone	3
CFS Electives		6
Free Electives		21

## 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.



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## Semester Plan




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### First Year



First Semester		Credit Hours
UNI 100	Freshman First Class	1
FYS 100	First Yr Sem Critical Thinking	3
ENG 101	  Beginning Composition	3

CFS 200	Introduction to CFS	3
Multicultural or International		3
Core II Fine Arts		3
<b>Credit Hours</b>		<b>16</b>

**Second Semester**

CS 110	Computer Science I	3
CJ 200 	Intro to Criminal Justice	3
CMM 103 	Fund Speech-Communication	3
ENG 201 	Advanced Composition	3
Core II Humanities (CT)		3
<b>Credit Hours</b>		<b>15</b>

**Second Year****First Semester**

FSC 224 	Intro to Forensic Science	4
CFS 400	Intro to Cyber Forensics	3
MTH 140 	Applied Calculus	3
Free Elective		3
Free Elective		3
<b>Credit Hours</b>		<b>16</b>

**Second Semester**

CFS 261	Introduction to Linux	3
CFS 305	Open Source Intelligence	3
CJ 322	Criminal Law & Procedure	3
Physical/Natural Science Elective		4
Free Elective		3
<b>Credit Hours</b>		<b>16</b>

**Third Year****First Semester**

CFS 357	Network Penetration and Attack	4
CFS 460	Applied Cyber Forensics	4
Free Elective		3
Free Elective		3
<b>Credit Hours</b>		<b>14</b>

**Second Semester**


CFS 420	Incident Response	3
CFS 454	Network Defense	4
CFS 462	Network Forensics	4
Physical/Natural Science Elective		3
<b>Credit Hours</b>		<b>14</b>

**Fourth Year****First Semester**

CFS 440	Digital Evidence	4
CFS 448	Multimedia Forensics	3
CFS 467	Mobile Device Forensics	4
Select one of the following CFS Electives:		3
CFS 410	Collegiate Cyber Competition I	
CFS 411	Collegiate Cyber Comp II	
CFS 430	Exploit Development	
CFS 445	Mobile & Web Pen Testing	
CFS 461	Cyber Warfare	
CFS 464	Network Security	
CFS 470	Internship	

CFS 480	Special Topics	
CFS 485	Independent Study	
CFS 491	Research	
<b>Credit Hours</b>		<b>14</b>

**Second Semester**

CFS 490 	Capstone	3
Select one of the following CFS Electives:		3
CFS 410	Collegiate Cyber Competition I	
CFS 411	Collegiate Cyber Comp II	
CFS 430	Exploit Development	
CFS 445	Mobile & Web Pen Testing	
CFS 461	Cyber Warfare	
CFS 464	Network Security	
CFS 470	Internship	
CFS 480	Special Topics	
CFS 485	Independent Study	
CFS 491	Research	
Critical Thinking Course		3
Free Elective		3
Free Elective		3
<b>Credit Hours</b>		<b>15</b>
<b>Total Credit Hours</b>		<b>120</b>