COMPUTER AND INFORMATION 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	_____
MTH 229	Critical Thinking Course	● ◆	5	_____
_____	Critical Thinking Course	●	3	_____

Additional University Requirements

_____	Writing Intensive		3	_____
_____	Writing Intensive		3	_____
_____	Multicultural or International		3	_____
CYBR 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 229	Calculus I	● ◆	5	_____
_____	Core II Physical/Natural Science	●	4	_____
_____	Core II Humanities	●	3	_____
_____	Core II Social Science	●	3	_____
_____	Core II Fine Arts	●	3	_____

MAJOR-SPECIFIC

All Computer and Information Security majors are required to take the following courses:

CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
🐃 MTH 220	Discrete Structures	◆	3	_____	🐃 CYBR 210	Computer & Info Security Principle	◆	3	_____
🐃 MTH 229	Calculus I	● ◆	5	_____	CYBR 240	Information Security Policies	◆	3	_____
STA 225	Introductory Statistics or STA 345	◆	3	_____	CYBR 310	Intro to Cryptography	◆	3	_____
ENG 354	Scientific & Tech Writing	◆	3	_____	CYBR 330	Cybersecurity	◆	3	_____
CS 105	Explore the World of Computing	◆	3	_____	CYBR 350	Cyber System Administration	◆	3	_____
🐃 CS 110	Computer Science I	◆	3	_____	CYBR 360	Cyber Infrastructure Security	◆	3	_____
🐃 CS 120	Computer Science II	◆	3	_____	CYBR 400	Computer Security Design	◆	3	_____
🐃 CS 210	Data Structures & Algorithms	◆	3	_____	CYBR 435	Cyber Risk	◆	3	_____
CS 215	Adv Data Structures & Algorithms	◆	3	_____	CYBR 442	Cyber Operation	◆	3	_____
CS 305	Software Engineering I	◆	3	_____	CYBR 475	Internship	◆	3	_____
🐃 CS 320	Internetworking	◆	3	_____	CYBR 490	Senior Project (C)	◆	3	_____
CS 330	Operating Systems	◆	3	_____	_____	CIS Elective	◆	3	_____
CS 402	Computer Architecture	◆	3	_____	_____	Science w/ Lab	◆	4	_____
CS 410	Database Engineering	◆	3	_____	_____	Science w/ Lab	◆	4	_____
					_____	Free Elective		3	_____
					_____	Free Elective		3	_____
					_____	Free Elective		2	_____

Legend (left margin):
- ● Area of Emphasis
- ◆ Major Requirement
- ■ College Requirement
- ● General Education Requirement

MAJOR INFORMATION

- CS Elective may be met by completing any of the following courses: CYBR 480-485 (Special Topics), CYBR 486-489 (Independent Study), any 400 level CS course except CS 430 and CS 435, any 300-400 level CFS course.
- 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 prerequisities.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.

COMPUTER AND INFORMATION SECURITY

The Bachelor of Science in Computer and Information Security program prepares students for careers in computer and information security fields through a strong foundation in the theory and practice and the broad education gained by core curriculum. Computer and information security is an evolving discipline that involves the study of technology, strategy, policy, and standards regarding the security of and operations in cyberspace. The program introduces students to a variety of topics in computer and information security such as computer and network protection, penetration testing and prevention, security in mobile devices and Internet of Things (IoT), and more by using state-of-the-art security tools and technologies.

YEAR ONE

FALL SEMESTER

CODE	COURSE NAME		HRS	GRADE
CS 110	Computer Science I	♦	3	_____
MTH 229	Calculus I (CT)	●♦	5	_____
ENG 101	Beginning Composition	●	3	_____
FYS 100	First Year Sem Crit Thinking	●	3	_____
UNI 100	Freshman First Class		1	_____
TOTAL HOURS			**15**	

Summer Term (optional):

SPRING SEMESTER

CODE	COURSE NAME		HRS	GRADE
CS 105	Explore the World of Computing	♦	3	_____
CS 120	Computer Science II	♦	3	_____
ENG 201	Advanced Composition	●	3	_____
MTH 220	Discrete Structures	♦	3	_____
CMM 103	Fund Speech-Communication	●	3	_____
TOTAL HOURS			**15**	

YEAR TWO

FALL SEMESTER

CODE	COURSE NAME		HRS	GRADE
_____	Core II Fine Arts	●	3	_____
CYBR 210	Computer & Info Security Principles	♦	3	_____
STA 225	Introductory Statistics or STA 345	♦	3	_____
CS 210	Data Structures & Algorithms	♦	3	_____
_____	Core II Physical/Natural Science	●	4	_____
TOTAL HOURS			**16**	

Summer Term (optional):

SPRING SEMESTER

CODE	COURSE NAME		HRS	GRADE
_____	Core II Humanities (CT, WI)	●	3	_____
CYBR 240	Information Security Policies	♦	3	_____
CS 215	Adv Data Structures & Algorithms	♦	3	_____
_____	Core II Social Science (MC/I, WI)	●	3	_____
TOTAL HOURS			**12**	

YEAR THREE

FALL SEMESTER

CODE	COURSE NAME		HRS	GRADE
ENG 354	Scientific & Tech Writing	♦	3	_____
CS 320	Internetworking	♦	3	_____
CS 330	Operating Systems	♦	3	_____
_____	Science w/ Lab	♦	4	_____
TOTAL HOURS			**13**	

Summer Term (optional):

SPRING SEMESTER

CODE	COURSE NAME		HRS	GRADE
CYBR 310	Intro to Cryptography	♦	3	_____
CYBR 330	Cybersecurity	♦	3	_____
CS 410	Database Engineering	♦	3	_____
CYBR 360	Cyber Infrastructure Security	♦	3	_____
_____	CIS Elective	♦	3	_____
_____	Free Elective		2	_____
TOTAL HOURS			**17**	

YEAR FOUR

FALL SEMESTER

CODE	COURSE NAME		HRS	GRADE
CS 305	Software Engr. I	♦	3	_____
CYBR 400	Computer Security Design	♦	3	_____
CYBR 475	Internship	♦	3	_____
CYBR 350	Cyber System Administration	♦	3	_____
_____	Free Elective		3	_____
TOTAL HOURS			**15**	

Summer Term (optional):

SPRING SEMESTER

CODE	COURSE NAME		HRS	GRADE
CS 402	Computer Architecture	♦	3	_____
CYBR 490	Senior Project (C)	♦	3	_____
CYBR 435	Cyber Risk	♦	3	_____
CYBR 442	Cyber Operation	♦	3	_____
_____	Free Elective		3	_____
TOTAL HOURS			**15**	

Legend:
- ● 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 the importance of this course in your plan of study.