Cybersecurity BS, Information Systems Emphasis

Students must choose one of the following emphasis areas at the time of application for admission.

- Computer Science (CS) Emphasis
- Information Systems and Technology (IST) Emphasis

Degree requirements vary depending on the chosen emphasis area (see common and emphasis area required courses and credit hours below).

General Education Requirements

Students must satisfy the university general education requirements. Many of the courses for the degree may be used to fulfill general education requirements. There is no foreign language requirement for this degree.

Satisfactory/Unsatisfactory Option

Courses required for the major may not be taken on a satisfactory/unsatisfactory basis.

Required Courses

The degree requires 24 credit hours of core coursework applicable to both emphasis areas. Emphasis specific required courses are listed below. Please see 4-year degree plans for recommend course sequences within each emphasis.

Required Core Courses

ENGL 3120	Business Writing	3
or ENGL 3130	Technical Writing	
CMP SCI 1250	Introduction to Computing	3
CMP SCI 2250	Programming and Data Structures	3
CMP SCI 2700	Computer Organization and Architecture	3
CMP SCI 2750	Linux Environment and Programming	3
INFSYS 3848	Introduction to Information Security	3
or CMP SCI 3702	Introduction to Cyber Threats and Defense	
INFSYS 3868	Secure Software Development	3
INFSYS 3878	Information Security Risk Management and Business Continuity	3
Total Hours		**24**

Emphasis Area Requirements

In addition to the 24 credit hours of core required coursework, the B.S. Cybersecurity degree with Information Systems and Technology emphasis requires 81 credit hours of emphasis specific coursework (45 general business + 36 program specific). Thus, candidates for the B.S. in Cybersecurity degree with Information Systems and Technology emphasis must complete a program of 105 (24 core + 81 emphasis specific) credit hours of required courses.

For the Information Systems and Technology emphasis all general degree requirements from the College of Business Administration apply.

INFSYS 3806	Managerial Applications of Object-Oriented Programming I	3
INFSYS 3820	Introduction to Systems Administration	3
INFSYS 3830	Data Programming	3
INFSYS 3842	Data Networks and Security	3
INFSYS 3845	Database Management Systems	3
INFSYS 3858	Advanced Security and Information Systems	3
INFSYS 3862	Artificial Intelligence Applications for Business	3
INFSYS 3864	Applied Cryptography for Business	3
INFSYS 3866	Cloud Security for Business	3
Electives		**9**
Choose three of the following:		
INFSYS 3807	Legacy Systems	
INFSYS 3815	Object-Oriented Applications in Business	
INFSYS 3816	Managerial Application of Object-Oriented Programming II	
INFSYS 3817	Advanced Legacy Systems	
INFSYS 3818	Management of Software Testing	
INFSYS 3818	Management of Software Testing	
INFSYS 3841	Enterprise Information Systems	
INFSYS 3844	Developing Business Applications in .NET	
INFSYS 3847	Web Design	
INFSYS 3860	Data Integration	
INFSYS 3890	Internship in Information Systems	
INFSYS 3898	Seminar in Information Systems [1]	
INFSYS 3899	Independent Study in Information Systems	
INFSYS 4847	IT Project Management	
or SCMA 4347	Introduction to Project Management	
CMP SCI 2261	Object-Oriented Programming	
CMP SCI 4700	Computer Forensics	
CMP SCI 4732	Introduction to Cryptography for Computer Security	
CMP SCI 4750	Introduction to Cloud Computing	
CMP SCI 4782	Information Security	
MATH 3000	Discrete Structures	
SCMA 3345	Predictive Analytics and Data Mining	
SCMA 4350	Prescriptive Analytics and Optimization	
SCMA 3376	Transportation Security and Risk	
Other electives upon approval of Information Systems and Technology department chair		
Total Hours		**36**

[1]

If course is offered and topic is approved by the Information Systems and Technology department chair

Learning Outcomes

Upon completion of the program, graduates will be able to:

- Analyze a complex cybersecurity problem and apply principles of cybersecurity and business decision making to identify potential solutions.
- Design, implement, and evaluate a cybersecurity-based solution to meet a given set of cybersecurity and business requirements.
- Communicate cybersecurity issues effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in cybersecurity practice based on legal and ethical principles.
- Function effectively as a member of a team engaged in activities appropriate to the cybersecurity discipline.
- Apply security principles and practices to maintain business operations in the presence of risks and threats.

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INTDSC 1003 is required only for first-time freshmen and transfer students with less than 24 college credits.

Please Note: This is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester. All requirements are subject to change.

Sample Four Year Plan

First Year

Fall	Hours	Spring	Hours
INTDSC 1003[1]	1	MATH 1100	3
MATH 1030	3	ECON 1001	3
ENGL 1100	3	PHIL 1160 or EXPLORE - HUMANITIES AND FINE ARTS	3
CRIMIN 1100 or CORE - US HISTORY AND GOVERNM	3	EXPLORE - Humanities and Fine Arts (non-philosophy Cultural Diversity course)	3
INFSYS 2800	3	CMP SCI 1250	3
PHIL 2254 or EXPLORE - HUMANITIES AND FINE A	3		
	16		**15**

Second Year

Fall	Hours	Spring	Hours
ACCTNG 2400	3	ACCTNG 2410	3
ECON 1002	3	BUS AD 2900	3
CMP SCI 2250	3	CMP SCI 2700	3
INFSYS 3820	3	COMM 2240	3
MATH 1105	3	INFSYS 3806	3
	15		**15**

Third Year

Fall	Hours	Spring	Hours
SCMA 3301	3	FINANCE 3500	3
MGMT 3600	3	MKTG 3700	3
CMP SCI 2750	3	INFSYS 3845	3
INFSYS 3842	3	ENGL 3120	3
SCMA 3300	3	INFSYS 3848	3
	15		**15**

Fourth Year

Fall	Hours	Spring	Hours
INFSYS 3858	3	MGMT 4219 & MGMT 4220	3
INFSYS 3868	3	INFSYS 3864	3
INFSYS 3830	3	INFSYS 3878	3
INFSYS 3866	3	SCMA 4347	3
Cybersecurity elective	3	Cybersecurity Elective	3
	15		**15**

Total Hours: 121