CYBERSECURITY - MINOR

This minor provides cybersecurity fundamentals, including programming and ethics, tailored to various student interests and majors.

The Cybersecurity Minor is designed to appeal to both less technically-oriented and more technically-oriented undergraduate students, across multiple departments, in multiple colleges. All students who enroll in the minor will acquire a basic understanding of programming, and a firmly grounded understanding of cybersecurity, to include cyber ethics. The inclusion of these courses in the minor will allow students to specialize in the area of cybersecurity that is most closely aligned with their respective interests and their degree plans.

Program Requirements

Select one of the following tracks:

Code	Title	Semester Credit Hours
Engineering Track		
CSCE 313	Introduction to Computer Systems	4
CSCE 410	Operating Systems	3
CSCE 465	Computer and Network Security	3
Select 6 hours from the following:		6
CSCE 402	Law and Policy in Cybersecurity	
CSCE 451	Software Reverse Engineering	
CSCE 463	Networks and Distributed Processing	
CSCE 485	Directed Studies [1]	
CYBR 403/ CSCE 477	Cybersecurity Risk	
CYBR 484	Professional Internship [1]	
CYBR 485	Directed Studies [1]	
CYBR 491	Research [1]	
ECEN 424	Fundamentals of Networking	
ECEN 484	Professional Internship [1]	
ECEN 485	Directed Studies [1]	
Total Semester Credit Hours		**16**

Code	Title	Semester Credit Hours
Interdisciplinary Track		
CSCE 402 or ITSV 308	Law and Policy in Cybersecurity or Cybersecurity and Digital Ethics	3
Select one of the following:		4
CSCE 110	Programming I	
CSCE 111	Introduction to Computer Science Concepts and Programming	
CSCE 121	Introduction to Program Design and Concepts	
ESET 269	Embedded Systems Development in C	
Select 9 hours from the following:		9
BMEN 428/CSCE 461	Embedded Systems for Medical Applications	
CSCE 402	Law and Policy in Cybersecurity [2]	
CSCE 436	Computer-Human Interaction	
CSCE 465	Computer and Network Security	
CYBR 403/ CSCE 477	Cybersecurity Risk	
ECEN 424	Fundamentals of Networking	
ESET 315	Local-and-Metropolitan-Area Networks	
ESET 349	Microcontroller Architecture	
ESET 415	Advanced Network Systems and Security	
ESET 455	Wireless Transmission Systems	
FIVS 123	Forensic Investigations	
FIVS 205	Introduction to Forensic and Investigative Sciences	
GEOG 392	GIS Programming	
ISTM 310	Network Communications and Infrastructure	
ISTM 315	Database Programming	
ISTM 320	Business Systems Analysis and Design	
MATH 470	Communications and Cryptography	
MATH 471	Communications and Cryptography II	
POLS 447	National Security Policy	
ITSV 303	Unix System Administration Practices	
ITSV 308	Cybersecurity and Digital Ethics [2]	
ITSV 316	Database Systems Administration and Application	
Total Semester Credit Hours		**16**

Code	Title	Semester Credit Hours
Technology track		
ITSV 308	Cybersecurity and Digital Ethics	3
Select 13 hours from the following:		13
CSCE 402	Law and Policy in Cybersecurity	
CYBR 403/ CSCE 477	Cybersecurity Risk	
ESET 269	Embedded Systems Development in C	
ESET 315	Local-and-Metropolitan-Area Networks	
ESET 349	Microcontroller Architecture	
ESET 415	Advanced Network Systems and Security	
ESET 419	Engineering Technology Capstone I [1]	
ESET 420	Engineering Technology Capstone II [1]	
ESET 456	Embedded Sensors and Internet of Things (IoT) Systems	
ITSV 303	Unix System Administration Practices	

ITSV 316	Database Systems Administration and Application	
TCMG 476	Technical Network Capstone [1]	

Total Semester Credit Hours **16**

[1] Course must be approved by the Director of Interdisciplinary Engineering for inclusion in the minor and include applications in cybersecurity .

[2] Course may be applied to latter category only if it is not applied above.

Minimum required GPA to declare minor is a 2.5.

Must make a grade of C or better in each course used towards minor.

Must achieve an overall GPA of 2.5 in approved minor coursework.

Minimum of 6 hours at 300-400 level.