Cybersecurity, B.S.

Program Requirements

Racial and Ethnic Studies (6 credits*)

Three credits must be selected from RES-A.

> Course Selective 1 :
>
> Course Selective 2 :
>
> [After]   *Students can select courses that count for more than one requirement within General Education (GE), Racial and Ethnic Studies (RES), and Global Perspectives (GLP).

Global Perspectives (6 credits*)

Complete a program of university-approved work or study abroad or 6 credits of global perspective approved courses.

> Course Selective 1 :
>
> Course Selective 2 :
>
> [After]   *Students can select courses that count for more than one requirement within General Education (GE), Racial and Ethnic Studies (RES), and Global Perspectives (GLP).

General Education (40 credits)

Communication Skills (9 credits)

ENGL 101 Composition 1	(3 cr.)
[Right] or	
ENGL 111 Honors Composition 1	(3 cr.)
[After]	
ENGL 102 Composition 2	(3 cr.)
[Right] or	
ENGL 113 Honors Composition 2: Honors Seminar	(3 cr.)
[After]	
COMST 100 Fundamentals of Speech	(3 cr.)

Analytic Reasoning and Natural Sciences (10-14 credits)

CS 144 Computer Science I	(4 cr.)
MATH 151 Calculus with Precalculus B	(5 cr.)
[Right] or	
MATH 153 Calculus I	(4 cr.)
[Right] or	
MATH 156 Calculus and Analytic Geometry I	(5 cr.)
[After]	
Course Selective 1 :	
[After] Natural Science course with lab	

Arts and Humanities (6 credits)

Courses must be from two or more areas including art history/music & theater appreciation, creative/performing arts, foreign language and culture, history, literature, and philosophy.

Course Selective 1 :
Course Selective 2 :

Social and Behavioral Sciences (6 credits)

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Course Selective 1 :
Course Selective 2 :

Cross-disciplinary Issues (3 credits)

ICT-103 contains knowledge units required by NSA/DHS designation as a National Center of Academic Excellence in Cyber Defense Education

ICT 103 Information and Communication Technologies	(3 cr.)

Social Responsibility and Ethical Reasoning (3 credits)

Computer Ethics is required by ABET accreditation.

ICT 215 Cybertechnology Ethics	(3 cr.)

General Education Elective (0-3 credits)

Major Studies (80 credits)

Required Courses (65 credits)

CNIT 133 Networking Fundamentals I	(3 cr.)
CNIT 134 Networking Fundamentals II	(3 cr.)
CNIT 201 Cybersecurity Operations	(3 cr.)
CNIT 301 Linux Systems & Network Administration	(3 cr.)
CNIT 361 Workstation And Server	(3 cr.)
CNIT 371 Cloud Computing Design, Implementation, & Security	(3 cr.)
CNIT 382 Network Systems Design	(3 cr.)
CNIT 383 Introduction to Network Security	(3 cr.)
CNIT 391 Wireless Systems	(3 cr.)
CNIT 445 Firewall Technologies	(3 cr.)
CNIT 484 Advanced Network Security and Auditing	(3 cr.)
CS 125 Python Scripting	(2 cr.)
CS 145 Computer Science II	(4 cr.)
CS 244 Data Structures	(4 cr.)
CS 248 Web and Internet Programming	(3 cr.)
CS 324 Database Systems Manipulation and Design	(3 cr.)
CS 358 Software Engineering Principles	(3 cr.)
CS 480 Introduction to Computer Security	(3 cr.)
MATH 270 Discrete Mathematics	(3 cr.)
MSCS 396 Applied Cryptography	4
STAT 320 Statistical Methods	(3 cr.)
[Right] or higher level statistics course	

Work Experience (1 credit)

Choose 1 work experience course from:

CNIT 449 Cooperative Education Experience	(1 cr.)
CS 449 Cooperative Education Experience	(1-8 cr.)
CS 498 Field Experience	(1 cr.)
MSCS 449 Cooperative Education Experience	(1-8 cr.)

Capstone (3-4 credits)

Choose 1 capstone course from:

CNIT 490 Information Technology Management Capstone	(3 cr.)
CS 458 Software Engineering Practicum	(4 cr.)
MSCS 351 Mathematical Modeling (4 cr)	

Selectives (11 credits)

Select 11 credits from CEE, CNIT, CS, ICT, INMGT, MATH, MSCS, or STAT