

Recommended Computer Science Core Curriculum (BS) for Information Assurance and Cyber Security Career Focus

Required Core Courses (58 Units):

Discrete Structures (CS 130)
Intro to Computer Science (CS 140)
Intro to Programming and Problem-Solving (CS 141)
Computer Logic (CS 210)
Data Structures and Algorithms I (CS 240)
Data Structures and Algorithms II (CS 241)
C++ Programming (CS 256)
Computer Organization and Assembly Programming (CS 264)
Language Translation and Automata (CS 311)
Design and Analysis of Algorithms (CS 331)
Computer Architecture (CS 365)
Programming Languages (CS 408)
Operating Systems (CS 431)
Undergraduate Seminar (CS 463)
Software Engineering (CS 480)

Elective Core Courses (28 Units):

(All courses from the following list are required for the career focus)

Unix and Scripting (CS 260)
Computer Networks (CS 380)
Secure Communication (CS 460)
Wireless Security (CS 499/Chen)
Senior Project in Cyber Security (CS 461 & 462)

(Two courses from the following list are required for the career focus)

Parallel Processing (CS 370)
Artificial Intelligence (CS 420)
Database Systems (CS 435)
Mobile Computing (CS 499/Sun)
Big Data and Cloud Computing (CS 499/Yang)
Machine Learning (CS 499/Manna)

Note: These courses are in addition to the required support courses and GE requirements as described in the Degree Curriculum Sheet.