

Bachelor of Science in **Cyber Security Systems**

School of Mathematics, Science and Engineering

PROGRAM OVERVIEW

The Bachelor of Science (B.S.) in Cyber Security Systems at the School of Math, Science and Engineering at the University of the Incarnate Word provides its students with a broad base of theoretical and experiential knowledge and skills that responds to the rapid changes in the field.

The Cyber Security Systems (CSEC) course curriculum incorporates the best guidance from government agencies and the best features of nationally recognized security programs and security-related degrees at universities and colleges in San Antonio. We continue to upgrade the curriculum when needed to include new and emerging technologies and best practices in the cybersecurity domain.

QUICK FACTS

- UIW's Cyber Security Systems (CSEC) program is the only traditionally delivered Bachelor of Science degree in cybersecurity offered in San Antonio.
- The course curriculum was carefully designed to provide students with a broad exposure to cybersecurity concepts and practices, while meeting or exceeding specifications defined by the National Initiative on Cybersecurity Education (NICE) and the National Security Agency Center of Academic Excellence in Cyber Defense (NSA CAE-CD).
- As such, our program has been designated an Intelligence Community Center of Academic Excellence (IC-CAE).

PREREQUISITES AND COURSES

- CSEC 2300 Foundations of Cyber Security
- CSEC 3320 Network Security Management
- CSEC 3355 Cyber Systems and Components
- CSEC 3370 Law and Ethics in Cyber Security
- CSEC 4300 Malware Analysis
- CSEC 4320 Risk Management and Policy
- ECON 2301 Macroeconomics (as Behavioral Science course)
- PHIL 3312 Logic (as Advanced Philosophy course)

CONTACT

UIW Admissions
(210) 829-6005
admission@uiwtx.edu

B.S. in Cyber Security Systems

FRESHMAN YEAR

Fall

FYES 1211: First Year Experience Seminar (2 hours)
 CIS 2340: Intro to Operating Systems (3 hours)
 CIS 2328: Hardware and Systems Software (3 hours)
 MATH 1304/1308/1310 or Higher (3 hours)
 ENGL 1311: Composition I (3 hours)
 Modern Language I (3 hours)

Total Hours: 17

Spring

CIS 1100: Orientation to CIS (1 hour)
 CIS 2330: Programming Languages I (3 hours)
 CIS 2335: Computer Networks (3 hours)
 CIS 2350: UNIX/Linux Operating System (3 hours)
 ENGL 1312: Composition II (3 hours)
 Modern Language II (3 hours)

Total Hours: 16

SOPHOMORE YEAR

Fall

CSEC 2300: Foundations of Cyber Security (3 hours)
 CIS 1333: Scripting Languages (3 hours)
 CIS 2368: Website Development I (3 hours)
 CIS 3367: Networks/Telecommunications (3 hours)
 PHIL 1381: Introduction to Philosophy (3 hours)

Total Hours: 15

Spring

CSEC 3355: Cyber Systems and Components (3 hours)
 CIS 3340: Windows Client-Server Network (3 hours)
 CIS 3325: Linux Networking (3 hours)
 ENGL 2310: World Literature Studies (3 hours)
 PHIL 3312: Logic (3 hours)

Total Hours: 15

JUNIOR YEAR

Fall

CIS 3353: Computer Systems Security (3 hours)
 CSEC 3370: Law and Ethics in Cyber Security (3 hours)
 CIS 3362: Systems Analysis and Design (3 hours)
 ECON 2301: Macroeconomics (3 hours)
 HIST 1311, 1312, 1321 or 1322 (3 hours)

Total Hours: 15

Spring

CIS 3335: Cryptography (3 hours)
 CIS 4355: Cloud Computing (3 hours)
 CIS 3310: Database Management Systems (3 hours)
 CSEC 3319: Internship/Cyber Security (3 hours)
 Fine Arts (3 hours)

Total Hours: 15

SENIOR YEAR

Fall

CIS 3345: Digital Forensics (3 hours)
 CIS 3370: Intrusion Detection Systems (3 hours)
 CSEC 3320: Network Security Management (3 hours)
 Science Course with Lab (4 hours)
 PEHP Physical Fitness Course (1 hour)

Total Hours: 14

Spring

CSEC 4300: Malware Analysis (3 hours)
 CSEC 4320: Risk Management and Policy (3 hours)
 CIS 4370: Network Penetration Testing (3 hours)
 CSEC 4390 (or 43RCH): Practicum in CSEC (3 hours)
 RELS Religious Studies (3 hours)

Total Hours: 15

122 hours needed to complete the B.S. in Cyber Security Systems

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