www.sbu.edu/admissions • admissions@sbu.edu • 800-462-5050

B.S. in Cybersecurity

www.sbu.edu/cybersecurity • Brian Kellogg, Chair • bkellogg@sbu.edu • (716) 375-2044

Prepare For an Exciting Career

Cybersecurity is a dynamic field that offers students the opportunity to use their education to detect, investigate, and prevent technology related crimes.

The Bachelor of Science in cybersecurity prepares students with the sophisticated tools necessary to pursue careers in computer crime investigation, information assurance, and digital forensics.

Early Assurance in our Master's Program

Our Early Assurance Cybersecurity program guarantees qualified high school seniors placement in our master's degree in cybersecurity. Students who successfully complete the program earn their bachelor's and master's degrees.

Early Assurance program students may begin taking graduate-level courses during their senior year of undergraduate studies. This not only provides a financial savings on the overall cost of the master's degree, but because the master's program is entirely online, it provides the opportunity to work and earn a salary while completing the degree.

Program Highlights

- Emphasis in the technical and managerial sides of cybersecurity prepares students for careers in business, government, and law enforcement.
- Ethics content is integrated at all levels of the curriculum to prepare students for the challenges of technology leadership.
- Small classes: 11:1 student to faculty ratio.
- Gain practical, hands-on experience with the latest hardware and systems.
- Innovative curriculum aligned with ABET accreditation. (Expected to be accredited in 2024; only 14 programs nationally have been accredited as of January 2021.)
- Highly qualified program aligned with the National Security Agency and Department of Homeland Security. (Expected to be designated in 2022.)
- Program faculty include accomplished professors of cybersecurity and computer science as well as those with professional industry experience.
- Cybersecurity students gain the knowledge required to pass industry recognized cybersecurity certifications such as the ComptTIA Network+, ComptTIA Security+ and Certified Ethical Hacker (CEH), and various CISCO examinations.
- Our graduates have the option of continuing their studies in our master's program and strengthening their skills in offensive, defensive and enterprise security, as well as machine learning and data mining, as applied to cybersecurity.
- St. Bonaventure is the home of the WNY Cybersecurity Center, affording students the opportunity to gain valuable knowledge and experience.
- Students may graduate with double majors in cybersecurity and computer science by completing the requirements for each program.
- Students are allowed to take graduate courses from our 100% Master of Cybersecurity Program (maximum of 2 courses with departmental approval).
- Cybersecurity students gain knowledge required by industry recognized cybersecurity certifications such as the ComptTIA Network+, ComptTIA Security+ and Certified Ethical Hacker (CEH), various CISCO examinations, and Offensive Security (OffSec) certifications.

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Cybersecurity Careers

Cybersecurity jobs are in high demand. Students at St. Bonaventure are prepared for high-paying careers including:

- intelligence analyst
- computer crimes special investigator
- information assurance specialist
- credit card fraud investigator
- health insurance special investigator
- money laundering analyst
- network administrator
- bank security compliance officer
- compliance, risk management and fraud supervisor
- digital forensics examiner
- Security Analyst
- DevSecOps Roles
- Vulnerability Analyst
- Penetration Tester
- Systems Administrator

Why Cybersecurity?

- Average starting annual salary of $95,700 for information assurance specialists.
  — CNN/Money
- Demand for cybersecurity experts is expected to rise to 6 million globally by the end of 2019, with a projected shortfall of 1.5 million. (This is expected to increase to 3 million by 2021.)
  — Michael Brown, CEO at Symantec
- Security analyst is ranked third among the best technology jobs, eighth among the top 100 professions and 15th among the highest paying jobs.
  — U.S. News & World Report
- Between 2019 and 2029, information security analyst positions will grow at a rate of 31%.
  — Bureau of Labor Statistics

Requirements

CYBERSECURITY REQUIREMENTS	CREDITS
CYB 101. Intro to Information Security	3
CYB 202. Cybersecurity Ethics	3
CS/CSL 131. Computer Science I	4
CS/CSL 254. Computer Networks	4
CS/CSL 255. Server Management	4
CS/CSL 346. Operating Systems	4
CYB/CYBL 354. Intro to Network Security	4
CYB 333. Information Security	3
CYB 355. Computer Crime	3
CYB 491. Internship in Cybersecurity	3
CYB/CYBL 411. Penetration Testing	4
Two Cybersecurity Electives*	6-8
Major Total	**45-47**
Math 107. Introduction to Statistics	3
Math 207. Discrete Mathematics	3
Math Total	**6**
Foreign Language**	3
General Education Requirements	34
General Electives	30-32
Total	**120**

** Must be taken from the following: CS/CSL 101 before taking CS/CSL 131, CS/CSL132 (may only use either CS/CSL 101* ***or*** *CS/CSL 132 as a selected elective), CS/CSL 243, CYB 360, CYB380, CYB 410, CS/CSL 490, CYB 492, CS 380 or any 2 graduate courses from CYB501-CYB510.*

*** Foreign language must be taken up to the 202 level or at least 3 credits at 202 or higher.*

For more information about cybersecurity at SBU, email Brian Kellogg, interim program director, at bkellogg@sbu.edu or 716-375-4092. Visit us on the web at http://www.sbu.edu/cybersecurity.