BACHELOR OF SCIENCE IN CYBERSECURITY

The 🌐 icon appears in the title of traditional courses that are also available as a set of module courses.

Description and Outcomes

This program will equip you to master the foundational goals of cybersecurity. You will apply current technical tools and methodologies to solve security problems. Upon completion, you will be able to evaluate security trends, recognize best practices, and understand IT security products and threats.

You will explore the depth and breadth of materials to enable you to pursue many of the critical certifications recognized by the information assurance community and for Department of Defense (DoD) personnel, as mandated by DoD Directive 8570.1.

The following educational objectives are approved by information technology faculty and the Advisory Board:

- Our graduates demonstrate leadership skills and take on the challenge of emerging roles in the ever-changing landscape of the field of cybersecurity.
- Our graduates become thought leaders in the cybersecurity industry and develop innovative policies, services, and products.
- Our graduates continue to pursue additional academic and professional credentials with higher level degrees and industry certifications in the cybersecurity field.
- Our graduates remain current in the cybersecurity field and share their knowledge with the community and other aspiring professionals in the industry.

Purdue Global has been designated by the National Security Agency (NSA) and Department of Homeland Security as a National Center of Academic Excellence in Cyber Defense Education (https://www.nsa.gov/resources/students-educators/centers-academic-excellence/#defense) (CAE-CD) for the Bachelor of Science in Cybersecurity. More information can be found on the following website: https://www.nsa.gov/Academics/Centers-of-Academic-Excellence/.

This program is available in ExcelTrack. Speak with your University representative for any limitations. For more information on ExcelTrack, see Learning Paths in the Approach to Learning (https://catalog.purdueglobal.edu/policy-information/university-information/approach-to-learning/) section of the Catalog.

Concentrations

You can personalize your degree in cybersecurity by focusing electives on a particular concentration. Concentrations generally consist of three or more courses and allow you to concentrate on your individual career interests. When enrolling in the Bachelor of Science in Cybersecurity, you can select from the following concentrations: CISSP certification preparation, cloud computing, data management, game development, programming and analytics, software development using C#, software development using Java, software development using Python, software development using web languages, and supply chain management and logistics. You are not required to choose a concentration.

Graduate Program Pathways

If you are interested in earning both a bachelor's and master's degree, consider a graduate program pathway (https://catalog.purdueglobal.edu/undergraduate/graduate-program-pathways/).

Program Length

The Bachelor of Science in Cybersecurity program consists of a minimum of 180 quarter credit hours. Upon successful completion of the program, you will be awarded a bachelor of science degree.

Program Outcomes
Discipline-Specific Outcomes

1. Technology Skills: Analyze a complex computing problem to apply principles of computing and other relevant disciplines to identify solutions.
2. System Specifications: Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Professional Communication: Communicate effectively in a variety of professional contexts.
4. Professional Development: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Team Management: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Security Analysis: Apply security principles and practices to maintain operations in the presence of risks and threats.

General Education Literacies and Professional Competencies

In addition to the discipline-specific outcomes, general education literacies and professional competencies are integrated throughout your academic program. You can review the general education literacies and professional competencies associated with your academic program in the General Education and Professional Competency Requirements (https://catalog.purdueglobal.edu/undergraduate/general-education-professional-competency-requirements/) section of this Catalog.

Program Availability

For program availability, please refer to the U.S. State and Other Approvals (https://catalog.purdueglobal.edu/policy-information/university-information/accreditation-approvals-memberships/) section and Program Availability Information (https://www.purdueglobal.edu/catalog-program-availability-info.pdf).

Policies
Admissions Requirements

You must meet the following admission requirement in addition to the Purdue Global general requirements (https://catalog.purdueglobal.edu/policy-information/admissions/).

You must provide an official high school transcript, documentation of a high school diploma equivalent, an official college transcript, or another type of transcript eligible to be awarded college credit. Credit earned while previously enrolled at Purdue Global will exempt you from this requirement. If you are unable to provide any of these documents, you may submit alternative documentation and a written appeal to the program's Academic Dean to be considered for admission. If the credential or approval from the program's Dean cannot be officially

PURDUE GLOBAL™

verified by 2 days prior to the first day of your first term, you will need to enroll in a later term.

Certification, State Board, and National Board Exams

Certification and licensure boards have state-specific educational requirements for programs that lead to a license or certification that is a precondition for employment. Prospective and current students must review Purdue Global's State Licensure and Certifications (https://www.purdueglobal.edu/about/accreditation/licensure-state-authorizations/) site to view program and state-specific licensure information.

Licensure-track programs may limit enrollment to students in certain states; please see Purdue Global's Program Availability Information (https://www.purdueglobal.edu/catalog-program-availability-info.pdf) to determine enrollment eligibility.

You are responsible for understanding the requirements of optional certification exams. Such requirements may change during the course of your program. You are not automatically certified in any way upon program completion. Although certain programs are designed to prepare you to take various optional certification exams, Purdue Global cannot guarantee you will be eligible to take these exams or become certified. Your eligibility may depend on your work experience, completion of education and/or degree requirements, not having a criminal record, and meeting other certification requirements.

Degree Plan

The 🌐 *icon appears in the title of traditional courses that are also available as a set of module courses. Module course availability may be limited to certain academic calendars. See* Course Types *(https://catalog.purdueglobal.edu/policy-information/university-information/approach-to-learning/) for information about module courses.*

Program Requirements

Code	Title	Credits
Core Requirements		
CM107	🌐 College Composition I	5
CM220	🌐 College Composition II	5
CS212	🌐 Communicating Professionalism	5
MM207	🌐 Statistics	5
MM212	🌐 College Algebra	5
MM250	🌐 Discrete Mathematics	5
100/200 Level	Arts and Humanities Requirement [1]	5
100/200 Level	Science Requirement [1]	5
100/200 Level	Social Science Requirement [1]	5
Total Core Requirements		45
Major Requirements		
IT104	🌐 Introduction to Cybersecurity	5
IN203	🌐 Networking With Microsoft Technologies	5
IN205	🌐 Routing and Switching I	5
IN206	🌐 Routing and Switching II	5
IT244	🌐 Python Programming	3
IT262	🌐 Certified Ethical Hacking I	5
IT273	🌐 Networking Concepts	5

Code	Title	Credits
IT275	🌐 Linux System Administration	5
IT286	🌐 Network Security Concepts	5
IT374	🌐 Linux Security	6
IT390	🌐 Intrusion Detection and Incident Response	6
IT395	🌐 Certified Ethical Hacking II	6
IT400	🌐 Ethics in Cybersecurity	6
IT411	🌐 Digital Forensics	6
IT484	🌐 Cybersecurity Policies	6
IT497	Bachelor's Capstone in Cybersecurity	6
Total Major Requirements		85
Open Elective Requirements		
Open Electives		50
Total Open Elective Requirements		50
TOTAL CREDITS		**180**

[1] For options to fulfill this requirement, see the corresponding literacy in General Education and Professional Competency Requirements (https://catalog.purdueglobal.edu/undergraduate/general-education-professional-competency-requirements/).

Concentration Requirements

Concentration courses are completed within the open electives requirement of the degree plan.

Students in this program are not required to select a concentration.

CISSP Certification Preparation

Code	Title	Credits
IT277	🌐 Certified Information Systems Security Professional I	5
IT279	🌐 Certified Information Systems Security Professional II	5
IT410	🌐 Certified Information Systems Security Professional III	6
TOTAL CREDITS		**16**

Cloud Computing

Code	Title	Credits
IT222	🌐 Introduction to Cloud Computing	5
IT227	🌐 Cloud Infrastructure Administration	5
IT303	🌐 Cloud Architecture Concepts and Design	6
IT304	🌐 Application Development and Scripting in the Cloud	6
IT403	🌐 Cloud Security	6
TOTAL CREDITS		**28**

Data Management

Code	Title	Credits
IT163	🌐 Database Concepts Using Microsoft Access	5
IT234	🌐 Database Concepts	5
IN303	🌐 Data Mining and Data Warehousing	5

Code	Title	Credits
IT350	🌐 Advanced Database Concepts	6
TOTAL CREDITS		**21**

Game Development

Code	Title	Credits
IN240	🌐 Game Design and Mechanics	5
IN241	🌐 Game Programming	5
IN242	🌐 Game Art and Animation	5
IN251	🌐 Software Development Concepts Using C#	5
IN255	🌐 Software Design and Development Concepts Using C#	5
TOTAL CREDITS		**25**

Programming and Analytics

Code	Title	Credits
IN300	🌐 Programming for Data Analysis (Python, R, and Java)	5
IN301	🌐 Securing Data	5
IN302	🌐 Reporting and Visualization	5
TOTAL CREDITS		**15**

Software Development Using C#

Code	Title	Credits
IT117	🌐 Website Development	5
IT163	🌐 Database Concepts Using Microsoft Access	5
IN251	🌐 Software Development Concepts Using C#	5
IN255	🌐 Software Design and Development Concepts Using C#	5
IN351	🌐 Advanced Software Development Including Web and Mobility Using C#	6
IN451	🌐 Advanced Software Development Using C#	6
IT488	🌐 Software Product Development Using Agile	6
TOTAL CREDITS		**38**

Software Development Using Java

Code	Title	Credits
IT117	🌐 Website Development	5
IT163	🌐 Database Concepts Using Microsoft Access	5
IN252	🌐 Software Development Concepts Using Java	5
IN256	🌐 Software Design and Development Concepts Using Java	5
IN352	🌐 Advanced Software Development Including Web and Mobility Using Java	6
IN452	🌐 Advanced Software Development Using Java	6

Code	Title	Credits
IT488	🌐 Software Product Development Using Agile	6
TOTAL CREDITS		**38**

Software Development Using Python

Code	Title	Credits
IT117	🌐 Website Development	5
IT163	🌐 Database Concepts Using Microsoft Access	5
IN250	🌐 Software Development Concepts Using Python	5
IN254	🌐 Software Design and Development Concepts Using Python	5
IN350	🌐 Advanced Software Development Including Web and Mobility Using Python	6
IN450	🌐 Advanced Software Development Using Python	6
IT488	🌐 Software Product Development Using Agile	6
TOTAL CREDITS		**38**

Software Development Using Web Languages

Code	Title	Credits
IT117	🌐 Website Development	5
IT163	🌐 Database Concepts Using Microsoft Access	5
IN253	🌐 Software Development Concepts Using JavaScript and PHP	5
IN257	🌐 Software Design and Development Concepts Using JavaScript and PHP	5
IN353	🌐 Advanced Software Development Including Web and Mobility Using JavaScript and PHP	6
IN453	🌐 Advanced Software Development Using JavaScript and PHP	6
IT488	🌐 Software Product Development Using Agile	6
TOTAL CREDITS		**38**

Supply Chain Management and Logistics

Code	Title	Credits
MT433	Global Supply Chain Management	6
MT434	Logistics and Distribution Management	6
MT436	Purchasing and Supply Chain Management	6
MT437	Strategic Warehouse Management	6
MT438	Supply Chain Analytics	6
TOTAL CREDITS		**30**