


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.

Accelerated Master's Degree Options

If you are interested in earning both a bachelor's degree and a master's degree, consider the accelerated options for either the Master of Science in Information Technology or Master of Science in Cybersecurity Management. Refer to Progression Requirements (<https://catalog.purdueglobal.edu/undergraduate/business-information-technology/>) for details.

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. 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 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

Certain state certification and licensure boards have specific educational requirements for programs to lead to a license or certification that is a precondition for employment in a recognized occupation. 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.












Unless otherwise specified, Purdue Global's programs are not designed to meet any specific state's licensure or certification requirements. 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
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
IT479	Bachelor's-Level Cybersecurity Internship	6
or IT497	Bachelor's Capstone in Cybersecurity	
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
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
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 Vendor Management	6
MT437	Strategic Warehouse Management	6
MT438	Supply Chain Analytics	6
TOTAL CREDITS		30