


# MASTER OF SCIENCE IN INFORMATION TECHNOLOGY

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

## Description and Outcomes

If you have a bachelor's degree in information technology, computer science, information systems, management of information systems, or a similar field of study, the Master of Science in Information Technology could help you take the next step in your career. Alternatively, if you are changing careers, this program provides the background you need to shift your profession to an information technology role.

## Concentrations

The program provides you with the option of selecting a concentration, in addition to the core curriculum requirements. The concentrations include Amazon Web Services (AWS) cloud technologies, blockchain technologies and apps, critical infrastructure security, cybersecurity, data analytics, enterprise architecture systems, project management, and secure software development and quality assurance.

## Program Length

The Master of Science in Information Technology program consists of a minimum of 60 quarter credit hours. Upon successful completion of the program, you will be awarded a master of science degree.

## Program Outcomes

1. Decision Analysis and Project Leadership: Analyze information technology opportunities to determine the necessary scope, schedule, resources, and stakeholders to produce the optimal solution.
2. Design Secure Systems: Develop efficient and effective systems solutions to safely secure digital assets and intellectual property.
3. Critical and Analytical Thinking: Apply best practices and recent theories to support implementation, modification, and review.
4. Ethical Theories and Practices: Evaluate information systems' legal, ethical, social, and global implications to justify decisions and optimize social outcomes.

## Professional Competencies

In addition to the discipline-specific outcomes, professional competencies are integrated throughout your academic program. You can review the professional competencies associated with your academic program in the Professional Competencies (<https://catalog.purdueglobal.edu/graduate/professional-competencies/>) 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 below admissions requirements in addition to Purdue Global's general requirements (<https://catalog.purdueglobal.edu/policy-information/admissions/>).

### Secure Software Development and Quality Assurance Concentration

To enroll in the secure software development and quality assurance concentration, you must have completed a prior degree in information technology or a related field and have a minimum of 2 years of programming or software development experience.

### Accelerated Master of Science in Information Technology Option

If you are a graduate of the University's Bachelor of Science in Analytics, Bachelor of Science in Cloud Computing and Solutions, Bachelor of Science in Cybersecurity, or Bachelor of Science in Information Technology, are granted admission to the Master of Science in Information Technology, and meet the requirements for the accelerated Master of Science in Information Technology option, you may have up to three courses waived to matriculate into a shortened program.

In order to qualify for the graduate course waivers, you must meet the following criteria:

1. Complete your bachelor's degree with a minimum cumulative GPA of 3.2.
2. Obtain a grade of "B" or above in each of the undergraduate courses required for the graduate course waiver (defined below).

Waived Graduate Course	Undergraduate Courses Required for Graduate Course Waiver
IT510	IT460
IT511	IT301 and IT401
IT526	IT234 and IT350
IT530	IT278, IT375, and either IT283 or IN203
IT542	IT262 and IT395
IT550	IT316 and IT411

## Progression Requirements

If, for any reason, you are required to complete additional capstone hours during your program, you may complete them during the normal course of study or you may contact your Student Advisor to secure an extension. IT596 IT Graduate Capstone Extension Course is taken after IT599 Master's Capstone in Information Technology and is for the specific purpose of providing a means for capstone project completion. Approval of the Dean or the Department Chair is required for enrollment in IT596 IT Graduate Capstone Extension Course. If an extension is granted, the University will not charge tuition for the extension course; however, you will be required to pay the normal resource fee.

## 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
<b>Core Requirements</b>		
IT510	 Systems Analysis and Design	4
IT511	 Information Systems Project Management	4
IT513	 Research and Writing for the IT Professional	4
IT525	 Database Design and Data Modeling	4
IT527	 Foundations in Data Analytics	4
IT530	 Computer Networks	4
IT540	 Management of Information Security	4
IN555	Statistics for Analytics	4
IT590	 Legal and Ethical Issues in IT	4
IT599	Master's Capstone in Information Technology	4
Total Core Requirements		40
<b>Open Elective Requirements</b>		
IT Electives (see below)		20
Total Open Elective Requirements		20
<b>TOTAL CREDITS</b>		<b>60</b>

## 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.

## Amazon Web Services (AWS) Cloud Technologies

Code	Title	Credits
IN515	AWS Academy Cloud Foundations	4
IN516	AWS Academy Cloud Architecting	4
IN517	AWS Academy Cloud Developing	4
IN518	AWS Academy Data Analytics Lab	4
IN519	AWS Academy Cloud Operations	4
<b>TOTAL CREDITS</b>		<b>20</b>






## Blockchain Technologies and Apps

Code	Title	Credits
IN530	Introduction to Blockchain	4
IN531	Blockchain Technologies and Applications	4
IN532	Blockchain Application Development (dApps)	4
IT543	 Cryptography Concepts and Techniques	4
IT Elective		4
<b>TOTAL CREDITS</b>		<b>20</b>

## Critical Infrastructure Security

Code	Title	Credits
IN554	Introduction to Critical Infrastructure Security	4
IN562	Cyber Threat Intelligence	4
IN563	Secure Supply Chain	4
IN564	Critical Infrastructure Sector Security	4
IN565	Critical Urban Infrastructure Security	4
<b>TOTAL CREDITS</b>		<b>20</b>


## Cybersecurity

Code	Title	Credits
IT537	 Introduction to Cybersecurity	4
IT542	 Ethical Hacking and Network Defense	4
IT543	 Cryptography Concepts and Techniques	4
IT550	 Computer Forensics and Investigations	4
IT591	 IT Security Auditing and Assessments	4
<b>TOTAL CREDITS</b>		<b>20</b>

## Data Analytics

Code	Title	Credits
IN500	Survey of Modern Data Analytics	4
IN501	Fundamentals of Computer Programming	4
IN502	Python Statistical Tools	4
IN504	Advanced Applications of Python	4
IT Elective		4
<b>TOTAL CREDITS</b>		<b>20</b>

## Enterprise Architecture Systems

Code	Title	Credits
IT537	 Introduction to Cybersecurity	4
IN560	Open Source Operating System Administration	4

IN561	Cloud Computing	4
IT Electives		8
<b>TOTAL CREDITS</b>		<b>20</b>

## Project Management

Code	Title	Credits
GM591	Strategic Project Selection and Initiation	4
GM592	Project Planning and the Project Plan	4
GM593	Project Execution With Monitoring and Control	4
GM594	Project Closing, Ethics, and Professional Responsibilities	4
IT Elective		4
<b>TOTAL CREDITS</b>		<b>20</b>

## Secure Software Development and Quality Assurance

Code	Title	Credits
IN510	Secure Software Design	4
IN511	Secure Coding	4
IN512	Advanced Secure Coding	4
IN513	System and Security Testing	4
IN514	Secure Development and Operations - SecDevOps	4
<b>TOTAL CREDITS</b>		<b>20</b>