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.

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

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		
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
IT590	Legal and Ethical Issues in IT	4
MM555	Applied Statistics	4
IT599	Master's Capstone in Information Technology	4
Total Core Requirements		40
Open Elective Requirements		
IT Electives (see below)		20
Total Open Elective Requirements		20
TOTAL CREDITS		**60**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**

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
TOTAL CREDITS		**20**