

INFORMATION TECHNOLOGY UNDERGRADUATE CERTIFICATE

Banner Code: VS-CERB-INFT

Academic Advising

5400 Nguyen Engineering Building
Fairfax Campus
101 Bull Run Hall
Science and Technology Campus

Phone: 703-993-3565
Email: bsit@gmu.edu
Website: <http://ist.gmu.edu/programs/undergraduate-programs/>

This certificate is designed primarily for those students who have earned a bachelor's degree or current undergraduate students who desire deeper knowledge than what can be accomplished through the IT minor. It allows students to augment the knowledge gained through their major-related courses with a foundation of information technology (IT) topics and their application within organizations to achieve organizational objectives. Completing this undergraduate certificate provides students with the necessary skills to improve their attractiveness to employers in our technology-driven society. The certificate requires a minimum of 24 credits, including 15 credits of core courses. Beyond these requirements, students must select three additional IT courses (9 credits, at least 3 upper division credits). Students pursuing the IT undergraduate certificate should consult with an advisor to select their additional courses.

Students pursuing only the undergraduate certificate in information technology will not maintain full-time status which requires a minimum of 12 credits per semester.

Requirements

Certificate Requirements

Total credits: 24

Core Courses

IT 102	Discrete Structures	3
or MATH 125	Discrete Mathematics I (Mason Core)	
IT 104	Introduction to Computing (Mason Core)	3
IT 105	IT Architecture Fundamentals	3
IT 106	Introduction to IT Problem Solving Using Computer Programming	3
Select one from the following:		3
IT 206	Object Oriented Techniques for IT Problem Solving	
IT 207	Applied IT Programming	
IT 213	Multimedia and Web Design	
IT 214	Database Fundamentals	
IT 223	Information Security Fundamentals	
Total Credits		15

Technical Focus Courses

Select 9 credits from the approved list of technical focus courses; at least 3 of those credits must be at the upper division level

Total Credits 9

Students must satisfy all prerequisites and other requirements in order to take any of the courses listed below. Courses chosen for the technical focus must be chosen with a coordinator in the Information Sciences and Technology department. Not all courses are offered each semester.

Code	Title	Credits
IT 206	Object Oriented Techniques for IT Problem Solving	3
IT 207	Applied IT Programming	3
IT 213	Multimedia and Web Design	3
IT 214	Database Fundamentals	3
IT 223	Information Security Fundamentals	3
IT 300	Modern Telecommunications	3
IT 304	IT in the Global Economy (Mason Core)	3
IT 306	Program Design and Data Structures	3
IT 308	Event-Driven Programming	3
IT 314	Database Programming	3
IT 315	Mobile Development	3
IT 322	Health Data Challenges	3
IT 324	Health Information Technology Fundamentals	3
IT 328	Health Information Emerging Technologies	3
IT 331	Web I: Web Development	3
IT 332	Web Server Administration	3
IT 335	Web Development using Content Management Systems	3
IT 341	Data Communications and Network Principles	3
IT 344	Information Storage and Management Technologies	3
IT 353	Information Defense Technologies	3
IT 357	Computer Crime, Forensics, and Auditing	3
IT 366	Network Security I	3
IT 390	Rapid Development of Scalable Applications	3
IT 410	Web Programming	3
IT 413	Digital Media Editing	3
IT 414	Database Administration	3
IT 415	Information Visualization	3
IT 431	Web II: Advanced Web Development	3
IT 436	Agile Web Development with Open Source Frameworks	3
IT 441	Network Servers and Infrastructures	3
IT 445	Advanced Networking Principles	3

2 *Information Technology Undergraduate Certificate*

IT 455	Wireless Communications and Networking	3
IT 462	Information Security Principles	3
IT 465	Peer-to-Peer Systems and Overlay Networks	3
IT 466	Network Security II	3
IT 467	Network Defense	3
IT 484	Voice Communications Technologies	3
IT 488	Fundamentals of Satellite Communications	3