



Volgenau School of Engineering

INFORMATION TECHNOLOGY, MINOR

2021 - 2022

Purpose of Program

The Information Technology (IT) minor is designed for students who desire to augment the knowledge gained through their major-related courses with a foundation of IT topics and their application within organizations to achieve organizational objectives. Completing this minor provides students with the necessary skills to improve their attractiveness to employers in our technology-driven society. The minor requires a minimum of 18credits, including 12credits of core courses. Beyond these requirements, students must select two additional IT technical focus courses(6 credits)at least one of which must be at the upper 300-or 400-level. Students pursuing the IT minor should consult with an advisor to select their technical focus courses.

Declaration Criteria

In order to declare the IT Minor, students must earn a minimum 2.5 GPA in completed 100 and 200 level IT core courses required for the minor (from IT 102 or MATH 125, IT 104, IT 105, IT 106 or IT 109 or CS 112, and any technical focus courses being applied to the IT minor), and a minimum C in IT 106 or IT 109 or CS 112 and CS 211. Grades in approved course substitutions taken at Mason will be included. Note: IT courses at the 300-and 400-level are restricted to students who have declared an IT major, minor, or undergraduate certificate, and to students in the BAS or BIS program. IT 293 Applied IT: Junior Transition and IT 343 IT Project Management are restricted to students who have declared an IT major. Students who have declared an IT Minor will not be permitted to take IT 293 or IT 343

IT Minor Requirements (18 credits)

The IT minor requires 12semester hours of core courses and six semester hours of technical focus courses. Students must earn a minimum grade of C in all IT courses for the minor. Technical focus courses selected for the IT minor must be selected from the courses listed in the University catalog. A minimum of 8 credits must be unique to the IT minor.

Require Core Courses (12 credits)

| | Credits |
|---|---------|
| IT 102 Discrete Structures <u>or</u> MATH 125 Discrete Mathematics | 3 |
| IT 104 Introduction to Computing | 3 |
| IT 105 IT Architecture Fundamentals | 3 |
| IT 106 Introduction to IT Problem Solving Using Computer Programming <u>or</u> IT 109 Introduction to Computer Programming | 3 |

Technical Focus Courses (6 credits)

Select 6 credits from Technical Focus Courses (at least 3 upper division credits)

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| IT 206 Object Oriented Techniques for IT Problem Solving <u>or</u> IT 209 Introduction to Object Oriented Programming | 3 | IT 335 Web Development using Content Management Systems | 3 |
| IT 207 Applied IT Programming | 3 | IT 332 Web Server Administration | 3 |
| IT 213 Multimedia and Web Design | 3 | IT 341 Data Communications and Network Principles | 3 |
| IT 214 Database Fundamentals | 3 | IT 352 Security Administration of Linux Systems | 3 |
| IT 223 Information Security Fundamentals | 3 | IT 353 Information Defense Technologies | 3 |
| IT 300 Modern Telecommunications | 3 | IT 357 Computer Crime, Forensics, and Auditing | 3 |
| IT 306 Program Design and Data Structures <u>or</u> IT 309 Data Structures and Algorithms in Python | 3 | IT 366 Network Security I | 3 |
| IT 314 Database Programming | 3 | IT 369 Data and Application Security | 3 |
| IT 315 Mobile Development | 3 | IT 390 Rapid Development of Scalable Applications | 3 |
| IT 322 Health Data Challenges | 3 | IT 410 Web Programming | 3 |
| IT 324 Health Information Technology Fundamentals | 3 | IT 413 Digital Media Editing | 3 |
| IT 328 Health Information Emerging Technologies | 3 | IT 414 Database Administration | 3 |
| IT 331 Web I: Web Development | 3 | IT 415 Information Visualization | 3 |
| IT 442 Cloud Infrastructure | 3 | IT 429 Security Accreditation of Information Systems | 3 |
| IT 445 Advanced Networking Principles | 3 | IT 431 Web II: Advanced Web Development | 3 |
| IT 451 Cloud Services Management | 3 | IT 466 Network Security II | 3 |
| IT 455 Wireless Communications and Networking | 3 | IT 467 Network Defense | 3 |
| IT 461 Application Development in Cloud | 3 | IT 471 Big Data on Cloud Systems | 3 |
| IT 462 Information Security Principles | 3 | IT 481 Cloud Security | 3 |
| | | IT 484 Voice Communications Technologies | 3 |
| | | IT 488 Fundamentals of Satellite Communications | 3 |

Program Questions? Email: bsit@gmu.edu; Website: <http://ist.gmu.edu>; Advising Appointments: <http://ist.gmu.edu/go/advising>

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