# Sample Schedule for BS in Information Technology
*(for students without an Associate Degree)*

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>15</td>
<td>ENGH 101 - Composition 3</td>
<td>Nonieh Natural Science 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST 100 - History of Western Civilization 3</td>
<td>Literature 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 101 - Introduction to Information Technology 3</td>
<td>COMM 100 - Public Speaking 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 103 - Introduction to Computing 3</td>
<td>IT 106 - Introduction to IT Problem Solving Using Computer Programming 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MATH 108 - Introductory Calculus with Business Applications 3</td>
<td>STAT 250 - Introductory Statistics I 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Hours</strong> 15</td>
<td><strong>Total Hours</strong> 15</td>
<td></td>
</tr>
<tr>
<td>Second Semester</td>
<td>16</td>
<td>Natural Science with Lab 4</td>
<td>Arts 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social/Behavioral Science 3</td>
<td>MATH 112 - Discrete Mathematics for IT 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 208 - Object Oriented Techniques for IT Problem Solving 3</td>
<td>IT 207 - Applied IT Programming 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 212 - Computer Hardware Fundamentals 3</td>
<td>IT 213 - Multimedia and Web Design 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 214 - Database Fundamentals 3</td>
<td>IT 223 - Information Security Fundamentals 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Hours</strong> 16</td>
<td>IT 293 - Applied IT: Junior Transition 1</td>
<td></td>
</tr>
<tr>
<td>Third Semester</td>
<td>15</td>
<td>Elective 3</td>
<td>IT Concentration Course 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENGH 300 - Advanced Composition (Bus/Nat Sci/Tech) 3</td>
<td>IT 300 - Modern Telecommunications 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 341 - Data Communications and Network Principles 3</td>
<td>IT 304 - IT in the Global Economy 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MSOM 300 - Managing Financial Resources 3</td>
<td>IT 343 - IT Resources Planning 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SYST 469 - Human Computer Interaction 3</td>
<td>MSOM 301 - Managing People and Organizations 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Hours</strong> 15</td>
<td><strong>Total Hours</strong> 15</td>
<td></td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>16</td>
<td>Elective 3</td>
<td>IT Concentration Course 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ENGH 302 - Advanced Composition (Bus/Nat Sci/Tech) 3</td>
<td>IT 300 - Modern Telecommunications 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>IT 341 - Data Communications and Network Principles 3</td>
<td>IT 304 - IT in the Global Economy 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MSOM 300 - Managing Financial Resources 3</td>
<td>IT 343 - IT Resources Planning 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SYST 469 - Human Computer Interaction 3</td>
<td>MSOM 301 - Managing People and Organizations 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Hours</strong> 16</td>
<td><strong>Total Hours</strong> 15</td>
<td></td>
</tr>
</tbody>
</table>

**Bachelor of Science in Information Technology (2011-2012)**

The BS in Information Technology program aims to meet the existing and emerging needs of industry by educating new IT workers in current IT principles and practices, and in its applications. The program focuses on equipping graduates with effective skills for interacting at the management level as well as the technical level. Graduates fill jobs that focus on the application of IT in an increasing number of emerging sub-disciplines, including network administration, information security, information systems, telecommunications, web development, computer graphics, and data management.

**Admission Requirements**

Students who meet Mason’s general eligibility requirements may apply for admission to the information technology major. Admission is based on the appropriateness of student’s academic objectives and the likelihood of the student benefiting from the program. Preference in admission is given to students who have four years of high school mathematics, including pre-calculus.

**Degree Requirements**

The IT program can be successfully completed in 8 full-time semesters with an average of 15 credits each semester, as shown in the sample schedule. It is also possible for students to complete the degree on a part-time basis. The 120-credit degree requirement consists of Mason general education requirements, IT foundation and core courses, and courses required for the chosen IT concentration area. Students must complete requirements for at least one of the following four IT concentration areas: Information Security, Networking and Telecommunications, Web Development and Multimedia, and Database Technology and Programming. The Applied Information Technology degree is based at the Prince William campus, although 100- and 200-level courses are also available at Fairfax.

At least 45 semester hours of the degree requirements must be level 300 or above, and at least 30 semester hours toward the BS degree must be earned at George Mason University. Students must earn a C or better in any course that satisfies a prerequisite for an IT course. To graduate with the BS degree in IT, students must have a GPA of 2.50 or better across the IT foundation, core, capstone, and concentration courses.

**IT Foundation, Core, Capstone, and Concentration Requirements**

In addition to Mason general education requirements, including humanities and social sciences as well as mathematics and basic sciences, the BS in Information Technology requires IT foundation, core, and concentration courses as described below. The IT major also requires a seven credit capstone design project, to be completed over a period of two consecutive semesters.

---

We invite requests for additional information
Advising Questions: aitadv@gmu.edu
Undergraduate Questions: baltinfo@gmu.edu
Website: alt.gmu.edu

Fairfax Campus
Nguyen Engineering Building, Rm. 5400
4400 University Dr., Fairfax, VA 22030, MSN 1G8
Phone (703) 993-3565 ; FAX (703) 993-2972

Prince William Campus
Bull Run Hall, Rm. 102
10900 University Blvd., Manassas, VA 20110, MSN 4F5
Phone (703) 993-8461 ; FAX (703) 993-8450

Revised 09/16/11
1. Foundation Courses:
- IT 101 Introduction to Information Technology (3)
- IT 103 Introduction to Computing (3)
- IT 108 Introduction to Problem Solving Using Computer Programming (3)
- IT 206 Object Oriented Techniques for IT Problem Solving (3)
- IT 212 Computer Hardware Fundamentals (3)
- STAT 250 Introductory Statistics I (3)

2. Core Courses:
- IT 207 Applied IT Programming (3)
- IT 213 Multimedia and Web Design (3)
- IT 214 Database Fundamentals I (3)
- IT 223 Information Security Fundamentals (3)
- IT 300 Modern Telecommunications (3)
- IT 304 IT in the Global Economy (3)
- IT 340 Introduction to Problem Solving Using Computer Programming (3)
- IT 341 Data Communications and Networking Principles (3)
- IT 343 OS Fundamentals (3)
- IT 345 Networking Principles II (3)
- IT 353 Information Warfare and Defense (3)
- IT 357/CRIM 304 Computer Crime, Forensics, and Auditing (3)
- IT 360 Network Security I (3)
- IT 365 Network Defense (3)
- IT 499-002 Security Certification of Information Technology (3)

3. Two-Semester Capstone Sequence:
- IT 492 Senior Design Project I (3)
- IT 493 Senior Design Project II (4)

4. Other Requirements:
- IT 293 Applied IT: Junior Transition (1)
- COMM 100 Public Speaking (3)
- MATH 106 Introductory Calculus with Business Applications (3)
- MATH 112 Discrete Math for BSIT (3)
- STAT 250 Introductory Statistics I (3)

5. Concentration Courses:
Students choose one of four concentrations from the list below. To fulfill the requirements for a concentration, students need 15 credits made up by four courses from their chosen concentration and a fifth course from any of the four concentrations. We are always working to improve our concentrations, so the selection of courses offered in a concentration can change over time. Students may take any new courses that become available in a concentration as part of their BSIT concentration.

Information Security (INFS)
- IT 352 Information Warfare and Defense
- IT 357/CRIM 304 Computer Crime, Forensics, and Auditing
- IT 360 Network Security I
- IT/INFS 462 Information Security Principles
- IT 465 Network Security II
- IT 499-002 Security Certification of Information Technology

Web Development and Multimedia (WDM)
- IT 331 Web I: Web Development
- IT 333 Web Site Administration
- IT 335 Web Development Using Content Management Systems
- IT 413 Digital Media Editing
- IT 415 Information Visualization
- IT 431 Web II: Advance Web Development
- IT 435 Applied Knowledge Technologies for the Semantic Web
- IT 499-301 Mobile Development

Networking and Telecommunications (NTEL)
- IT 366 Network Defense
- IT 441 Network Servers and Infrastructures
- IT 445 Networking Principles II
- IT 455 Introduction to Wireless Communications and Networking
- IT 471 Applications of Digital Technologies
- IT 481 Concepts of Multimedia Processing and Transmission
- IT 484 Voice Communications Technologies
- IT 488 Fundamentals of Satellite Communications

Database Technology and Programming (DBTP)
- ECE 301 Digital Electronics
- IT 342 OS Fundamentals
- IT 346 Cloud Computing
- IT 441 Network Servers and Infrastructures
- IT/INFS 414 Advanced Database
- IT 306 Program Design and Data Structures
- IT 308/INFS 310 Event-Driven Programming
- IT 314/INFS 311 Database Management
- IT 344 Information Storage and Management Technologies

Graduate Study: Students who plan to pursue advanced degrees are encouraged to take IT 306 or a comparable course in Data Structures. Check the degree requirements of the graduate program you wish to pursue.

4. Other Requirements:
- IT 293 Applied IT: Junior Transition (1)
- COMM 100 Public Speaking (3)
- MATH 106 Introductory Calculus with Business Applications (3)
- MATH 112 Discrete Math for BSIT (3)
- STAT 250 Introductory Statistics I (3)

5. Concentration Courses:
Students choose one of four concentrations from the list below. To fulfill the requirements for a concentration, students need 15 credits made up by four courses from their chosen concentration and a fifth course from any of the four concentrations. We are always working to improve our concentrations, so the selection of courses offered in a concentration can change over time. Students may take any new courses that become available in a concentration as part of their BSIT concentration.

Information Security (INFS)
- IT 352 Information Warfare and Defense
- IT 357/CRIM 304 Computer Crime, Forensics, and Auditing
- IT 360 Network Security I
- IT/INFS 462 Information Security Principles
- IT 465 Network Security II
- IT 499-002 Security Certification of Information Technology

Web Development and Multimedia (WDM)
- IT 331 Web I: Web Development
- IT 333 Web Site Administration
- IT 335 Web Development Using Content Management Systems
- IT 413 Digital Media Editing
- IT 415 Information Visualization
- IT 431 Web II: Advance Web Development
- IT 435 Applied Knowledge Technologies for the Semantic Web
- IT 499-301 Mobile Development

Networking and Telecommunications (NTEL)
- IT 366 Network Defense
- IT 441 Network Servers and Infrastructures
- IT 445 Networking Principles II
- IT 455 Introduction to Wireless Communications and Networking
- IT 471 Applications of Digital Technologies
- IT 481 Concepts of Multimedia Processing and Transmission
- IT 484 Voice Communications Technologies
- IT 488 Fundamentals of Satellite Communications

Database Technology and Programming (DBTP)
- ECE 301 Digital Electronics
- IT 342 OS Fundamentals
- IT 346 Cloud Computing
- IT 441 Network Servers and Infrastructures
- IT/INFS 414 Advanced Database
- IT 306 Program Design and Data Structures
- IT 308/INFS 310 Event-Driven Programming
- IT 314/INFS 311 Database Management
- IT 344 Information Storage and Management Technologies

Graduate Study: Students who plan to pursue advanced degrees are encouraged to take IT 306 or a comparable course in Data Structures. Check the degree requirements of the graduate program you wish to pursue.