

INFORMATION TECHNOLOGY (B.S.)

This major focuses on working with designing, implementing and maintaining information systems.

120 credits of coursework is required for the baccalaureate degree.

2.8 overall GPA required for Information Technology major.

Students in the Computer Science or Information Technology majors must also successfully complete the following courses with a C- or higher by the end of their second semester in the major: CSIT 104, CSIT 111, and MATH 111 or MATH 122 or AMAT 120.

Please note: The above majors have a retention policy. Students must maintain a minimum 2.60 cumulative GPA during their first three semesters.

Degree Requirements Overview

| Code | Title | Credits |
|-------------------------|-------|------------|
| SEEDS General Education | | 24-27 |
| New Student Seminar | | 1 |
| Major Requirements | | 66 |
| Free Electives | | 29-26 |
| Total Credits | | 120 |

Major Requirements

| Code | Title | Credits |
|---|--|---------|
| Core Courses | | |
| CSIT 104 | Python Programming I | 3 |
| CSIT 111 | Fundamentals of Java Programming | 3 |
| CSIT 112 | Fundamentals of Programming II | 3 |
| CSIT 212 | Data Structures and Algorithms | 3 |
| CSIT 230 | Computer Systems | 3 |
| CSIT 231 | Systems Programming | 3 |
| CSIT 314 | Software Development Practices | 3 |
| CSIT 317 | System Analysis and Design | 3 |
| CSIT 335 | Introduction to Human-Computer Interaction (HCI) | 3 |
| CSIT 337 | Internet Computing | 3 |
| CSIT 340 | Computer Networks | 3 |
| CSIT 355 | Database Systems | 3 |
| CSIT 416 | IT Project Management | 3 |
| CSIT 432 | Systems Administration | 3 |
| CSIT 451 | Mobile Computing | 3 |
| CSIT 460 | Computer Security | 3 |
| Complete for 3 credits: | | 3 |
| CSIT 491 | Internship Education in Computing Technology | |
| Electives | | |
| Complete 9 credits from the list below. | | 9 |
| Required Math Courses | | |
| CSIT 170 | Discrete Mathematics | 3 |

| | | |
|----------------------|-----------------------------|-----------|
| STAT 230 | Data Science and Statistics | 3 |
| Total Credits | | 66 |

Electives

| Code | Title | Credits |
|----------|--|---------|
| CSIT 256 | Introduction to Data Science | 3 |
| CSIT 357 | Artificial Intelligence | 3 |
| CSIT 359 | Data Visualization | 3 |
| CSIT 360 | Advanced Techniques in Data Science | 3 |
| CSIT 365 | Artificial Intelligence (AI) for Cybersecurity | 3 |
| CSIT 379 | Computer Science Theory | 3 |
| CSIT 429 | Parallel and Distributed Computing | 3 |
| CSIT 431 | Introduction to Robotics | 3 |
| CSIT 437 | Web Services | 3 |
| CSIT 440 | Principles of Data Mining | 3 |
| CSIT 495 | Special Topics in Undergraduate Computer Science | 1-3 |
| CSIT 497 | Undergraduate Research I | 1-3 |
| CSIT 498 | Undergraduate Research II | 3 |

New Student Seminar

| Code | Title | Credits |
|--|---|---------|
| Students in the Adult Learner program must take GNED 100. | | |
| Complete one course from the following. Some courses may be restricted by major. Consult with an academic advisor. | | 1 |
| ADVS 198 | Pathways to Success | |
| CHEM 190 | Freshman Seminar in Chemistry | |
| FYS 100 | First Year Seminar | |
| GNED 100 | Adult Academic Success Seminar | |
| GNED 199 | New Student Seminar | |
| HPEM 199 | Freshman Seminar in Health and Physical Education | |
| IDS 155 | Pathways to Adult Learning | |
| JUST 199 | New Student Seminar | |
| MATH 102 | New Student Experience for Mathematical Sciences | |
| MUGN 199 | Freshman Seminar for Music Majors | |
| NURS 199 | Introduction to Nursing | |
| POLS 199 | Freshman Seminar in Political Science and Law | |

SEEDS General Education Requirements

Click here for a list of courses that fulfill the SEEDS requirements. (<http://catalog.montclair.edu/programs/seeds-general-education-requirements/>)

| Code | Title | Credits |
|--|-------|---------|
| Foundations | | |
| <i>Effective Writing I</i> | | |
| Complete one Effective Writing I course. | | 3 |
| <i>Effective Writing II</i> | | |
| Complete one Effective Writing II course. | | 3 |
| <i>Interactive Communication</i> | | |
| Complete one Interactive Communication course. | | 3 |
| <i>Quantitative Reasoning</i> | | |

Fulfilled by CSIT 170 in the major.

| <i>Political and Civic Life</i> | |
|--|--------------|
| Complete one Political and Civic Life course. | 3 |
| <i>World Language</i> | |
| Complete two sequential classes in one World Language when starting at the Beginner I or Beginner II level. Complete one class when starting at the Intermediate/Advanced Level. | 3-6 |
| Exploration | |
| Complete one course from four different Exploration categories. | 9 |
| <i>Analyzing Cultures and Societies</i> | |
| <i>Creative Expression</i> | |
| <i>Ethical Inquiry</i> | |
| <i>Historical Thinking</i> | |
| <i>Literary and Artistic Analysis</i> | |
| <i>Scientific Reasoning</i> | |
| Fulfilled by CSIT 104 in the major. | |
| Total Credits | 24-27 |

Third Year

| Fall | Credits | Spring | Credits |
|---------------|---------|------------------|-----------|
| CSIT 314 | | 3 CSIT 416 | 3 |
| CSIT 317 | | 3 CSIT 451 | 3 |
| CSIT 337 | | 3 CSIT 432 | 3 |
| CSIT 355 | | 3 Major Elective | 3 |
| Free Elective | | 3 Free Elective | 3 |
| | | 15 | 15 |

Fourth Year

| Fall | Credits | Spring | Credits |
|----------------|---------|------------------|-----------|
| CSIT 460 | | 3 CSIT 491 | 3 |
| Major Elective | | 3 Major Elective | 3 |
| Free Elective | | 3 Free Elective | 3 |
| Free Elective | | 3 Free Elective | 3 |
| Free Elective | | 3 Free Elective | 3 |
| | | 15 | 15 |

Total Credits 120

Recommended Roadmap to Degree Completion

This recommended degree plan is provided as an outline for students to follow in order to complete their degree requirements within four years and 120 credits. This plan is a recommendation and MUST be used in consultation with their academic advisor. Important note: Students should be aware this plan assumes no pre-requisite coursework is required. If pre-requisite coursework is needed, students may have additional requirements to fulfill which do not appear on the plan.

First Year

| Fall | Credits | Spring | Credits |
|---|---------|---|-----------|
| New Student Seminar | | 1 SEEDS: Effective Writing II | 3 |
| SEEDS: Effective Writing I | | 3 CSIT 111 | 3 |
| SEEDS: World Language I | | 3 SEEDS: World Language II | 3 |
| CSIT 104 (Fulfills SEEDS Exploration 1: Scientific Reasoning) | | 3 SEEDS: Political and Civic Life | 3 |
| SEEDS: Interactive Communication | | 3 CSIT 170 (Fulfills SEEDS: Quantitative Reasoning) | 3 |
| Free Elective | | 2 | |
| | | 15 | 15 |

Second Year

| Fall | Credits | Spring | Credits |
|--------------------------------------|---------|-----------------------|-----------|
| CSIT 112 | | 3 SEEDS Exploration 4 | 3 |
| SEEDS Exploration 2: Ethical Inquiry | | 3 STAT 230 | 3 |
| CSIT 212 | | 3 CSIT 231 | 3 |
| CSIT 230 | | 3 CSIT 335 | 3 |
| SEEDS Exploration 3 | | 3 CSIT 340 | 3 |
| | | 15 | 15 |