

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.

Educational Program Objectives

1. Be well prepared for a professional career or graduate studies in information technology.
2. Apply information technology principles to solve real-world problems.
3. Work effectively within an organization and function as contributing members of teams.
4. Demonstrate ethical, professional, and societal responsibilities related to the practice of their profession.
5. Engage in continuous learning and professional development throughout their careers.

Student Outcomes

Graduates of the program will have an ability to:

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Use systemic approaches to select, develop, apply, integrate, and administer secure computing technologies to accomplish user goals.

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

For details about this program, including program description, admission requirements, and contact information, click here (<https://www.montclair.edu/academics/programs/bs-information-technology/>).

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

Recommended Roadmap to Program of Study Completion

This recommended degree plan is provided as an outline for students to follow in order to complete their program of study 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	

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