INFORMATION TECHNOLOGY (B.S.) (COMBINED B.S./M.S. DATA SCIENCE)

A Combined Degree program enables undergraduate students to enroll in graduate courses in their senior year, which can be counted towards the completion of both their Bachelor's and Master's degree requirements.

The ability to take these "swing courses" allows students to earn both their Bachelor's and Master's degrees in a shortened period of time, typically within five years. Undergraduate students interested in this option can find more information regarding program requirements on the University's Combined Programs website (https://www.montclair.edu/combined-programs/programs-of-study/).

Degree Requirements Overview

Code	Title	Credits
New Student Seminar		1
SEEDS General Education Requirements		24-27
Major Requirements (including Graduate Swing courses)		66
Free Electives		29-26
Total Credits		**120**

Major Requirements

Requirements for the graduate portion of this combined program can be found here. (http://catalog.montclair.edu/programs/data-science-ms/)

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 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 one course from the list below.		3
Required Math Courses		
CSIT 170	Discrete Mathematics	3
STAT 230	Data Science and Statistics	3
Graduate Swing Courses		
CSIT 528	Statistics for Data Science	3
CSIT 555	Database Systems	3
CSIT 558	Data Mining	3
Total Credits		**66**

Electives

Code	Title	Credits
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 451	Mobile Computing	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		
Effective Writing I		
Complete one Effective Writing I course.		3
Effective Writing II		
Complete one Effective Writing II course.		3
Interactive Communication		
Complete one Interactive Communication course.		3
Quantitative Reasoning		

Fulfilled by CSIT 170 in the major.	
Political and Civic Life	
Complete one Political and Civic Life course.	3
World Language	
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
Analyzing Cultures and Societies	
Creative Expression	
Ethical Inquiry	
Historical Thinking	
Literary and Artistic Analysis	
Scientific Reasoning	
Fulfilled by CSIT 104 in the major.	
Total Credits	**24-27**