

INFORMATION TECHNOLOGY (B.S.) (COMBINED B.S./M.S. CYBERSECURITY)

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/>).

Program Requirements Overview

Code	Title	Credits
	General Education	36
	World Languages and Cultures	3-9
	Major Requirements	57
	Graduate Swing Courses	9
	Free Electives	15-9
	Total Credits	120

Major Requirements

Requirements for the graduate portion of this combined program can be found here. (<http://catalog.montclair.edu/programs/cybersecurity-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	3
CSIT 317	System Analysis and Design	3
CSIT 335	Introduction to Human-Computer Interaction (HCI)	3
CSIT 337	Internet Computing	3
CSIT 355	Database Systems	3
CSIT 416	IT Project Management	3
CSIT 432	Systems Administration	3
CSIT 451	Mobile Computing	3
	Complete for 3 credits:	3
CSIT 491	Cooperative Education in Computer Science and Information Technology	
Electives		
	Complete 6 credits from the list below.	6
Required Math Courses		
CSIT 170	Discrete Mathematics	3
STAT 230	Data Science and Statistics	3
	Total Credits	57

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	Information Assurance and Security	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

Graduate Swing Courses

A combined degree program allows students to complete 6-12 graduate credits ("graduate swing courses") while enrolled as an undergraduate. These courses count for both their bachelor and master's degrees.

Graduate swing courses will count toward undergraduate free electives, unless noted otherwise.

The Graduate Swing Courses for this program:

Code	Title	Credits
CSIT 540	Computer Networks	3
CSIT 561	Computer Security	3
CSIT 567	Cryptography	3
	Total Credits	9

General Education Requirements

Click here for a list of courses that fulfill General Education categories. (<http://catalog.montclair.edu/programs/general-education-requirements-ba-bs/>)

Code	Title	Credits
A. New Student Seminar		
	Complete a 1 credit New Student Seminar course.	1
C. Communication		
	1. Writing	3
	2. Literature	3
	3. Communication	3
D. Fine and Performing Arts		
	Complete a 3 credit Fine and Performing Arts course.	3
F. Humanities		
	1. <i>Great Works and Their Influences</i>	3
	2. Philosophical and Religious Perspectives	3
G. Computer Science		
CSIT 111	Fundamentals of Java Programming (Fulfilled in the major.)	
H. Mathematics		

CSIT 170	Discrete Mathematics (Fulfilled in the major.)	
I. Natural Science Laboratory		
Complete a 4 credit Natural Science Laboratory course.		4
J. Physical Education		
Complete a 1 credit Physical Education course.		1
K. Social Science		
1. American and European History		3
2. Global Cultural Perspectives		3
3. Social Science Perspectives		3
L. Interdisciplinary Studies		
Complete a 3 credit Interdisciplinary Studies course.		3
Total Credits		36

World Languages and Cultures Requirements

Click here for a list of courses that fulfill World Languages and Cultures categories. (<http://catalog.montclair.edu/programs/world-languages-and-cultures-requirements/>)

Code	Title	Credits
World Languages		
Based on language placement exam, complete one or two sequential courses in the same language. Requirement is automatically fulfilled by language major courses.		3-6
World Cultures		
Requirement may be fulfilled by course selected in General Education - Social Science: Global Cultural Perspectives. Requirement may also be fulfilled by major coursework. See list of courses.		0-3
Total Credits		3-9

Recommended Roadmap to Degree(s)

This recommended five-year plan is provided as an outline for students to follow in order to complete their degree requirements within five years. This plan is a recommendation and students should only use it in consultation with their academic advisor.

Fifth year courses are taken at the graduate level, after matriculation into the graduate portion of this combined degree program.

First Year			
Fall	Credits	Spring	Credits
GENERAL EDUCATION: (A) New Student Seminar	1	GENERAL EDUCATION: (C2) Literature	3
GENERAL EDUCATION: (C1) Writing	3	World Language 2	3
World Language 1	3	CSIT 111	3
CSIT 104	3	CSIT 170	3
GENERAL EDUCATION: (D) Fine and Performing Arts	3	Free Elective	3
	13		15

Second Year			
Fall	Credits	Spring	Credits
GENERAL EDUCATION: (C3) Communication		GENERAL EDUCATION: (F1) Humanities – Great Works and Their Influences	3
GENERAL EDUCATION: (K3) Social Science – Social Science Perspectives		GENERAL EDUCATION: (F2) Humanities – Philosophical and Religious Perspectives	3
GENERAL EDUCATION: (L) Interdisciplinary Studies		GENERAL EDUCATION: (K2) Social Science – Global Cultural Perspectives	3
CSIT 112	3	CSIT 212	3
CSIT 230	3	CSIT 231	3
	15		15

Third Year			
Fall	Credits	Spring	Credits
CSIT 317		GENERAL EDUCATION: (I) Natural Science Laboratory	4
CSIT 335		GENERAL EDUCATION: (K1) Social Science – American and European History	3
CSIT 355		World Cultures	3
STAT 230		CSIT 314	3
Major Elective		CSIT 337	3
	15		16

Fourth Year			
Fall	Credits	Spring	Credits
CSIT 416		GENERAL EDUCATION: (J) Physical Education	1
CSIT 540		CSIT 432	3
CSIT 567		CSIT 451	3
Major Elective		CSIT 491	3
Free Elective		CSIT 561	3
		Free Elective	3
	15		16

Total Credits 120

Fifth Year			
Fall	Credits	Spring	Credits
CSIT 547		CSIT 565	3
CSIT 696		CSIT 697 or 698	3
Graduate Elective		Graduate Elective	3
Graduate Elective		3	
	12		9

Total Credits 21