

COMPUTATIONAL LINGUISTICS (B.S.)

Unless otherwise noted, 120 credits of coursework is required for a baccalaureate degree with a minimum 2.0 overall GPA, and a minimum 2.0 major GPA.

Degree Requirements Overview

Code	Title	Credits
New Student Seminar		1
SEEDS General Education Requirements		24-27
Major Requirements		80
Free Electives		15-12
Total Credits		120

Major Requirements

Code	Title	Credits
Major Core		
AMAT 240	Introduction to Linear Algebra	4
CSIT 104	Python Programming I	3
CSIT 114	Python Programming II	3
CSIT 170	Discrete Mathematics	3
CSIT 213	Data Structures and Algorithms in Python	3
CSIT 256	Introduction to Data Science	3
CSIT 359	Data Visualization	3
CSIT 455	Machine Learning	3
CSIT 457	Deep Learning	3
LNGN 120	Language and Computers	3
LNGN 210	Introduction to General Linguistics	3
LNGN 300	Syntax	3
LNGN 301	Semantics	3
or LNGN 302	Pragmatics	
LNGN 330	Scripting Tools for Text Analysis	3
LNGN 331	Phonetics	3
LNGN 332	Phonology	3
LNGN 340	Linguistic Annotation	3
LNGN 445	Natural Language Processing	3
LNGN 490	Project in Computational Linguistics	3
MATH 111	Applied Precalculus	4
STAT 230	Data Science and Statistics	3
Major Electives		
Complete 15 credits from the list below.		15
Total Credits		80

Major Electives

Code	Title	Credits
CSIT 315	Principles of Software Design	3
CSIT 317	System Analysis and Design	3
CSIT 321	Introduction to Numerical Computing	3
CSIT 335	Introduction to Human-Computer Interaction (HCI)	3
CSIT 337	Internet Computing	3

CSIT 355	Database Systems	3
CSIT 357	Artificial Intelligence	3
CSIT 360	Advanced Techniques in Data Science	3
CSIT 365	Artificial Intelligence (AI) for Cybersecurity	3
CSIT 379	Computer Science Theory	3
CSIT 415	Software Reliability, Verification and Validation	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 460	Computer Security	3
CSIT 491	Internship Education in Computing Technology	3-9
CSIT 495	Special Topics in Undergraduate Computer Science	1-3
CSIT 497	Undergraduate Research I	1-3
CSIT 498	Undergraduate Research II	3
LNGN 130	Speech Processing	4
LNGN 230	Language in Society	3
LNGN 240	Languages of the World	3
LNGN 245	Language and Culture	3
LNGN 250	Language of Propaganda	3
LNGN 255	Language and Gender	3
LNGN 260	Dialectology	3
LNGN 280	Bilingualism	3
LNGN 284	History of the English Language	3
LNGN 288	Introduction to Cognitive Science	3
LNGN 301	Semantics	3
LNGN 302	Pragmatics	3
LNGN 304	Principles of Discourse Analysis	3
LNGN 310	Morphology	3
LNGN 320	Quantitative Linguistics	3
LNGN 325	Principles of Second Language Learning	3
LNGN 350	Linguistics of American Sign Language and Other Signed Languages	3
LNGN 351	Gesture, Sign, and Speech: The Multi-Modality of Communication	3
LNGN 370	Comparative and Historical Linguistics	3
LNGN 380	Corpus Linguistics	3
LNGN 420	Language and the Mind	3
LNGN 430	Field Methods	3
LNGN 450	Special Topics in Linguistics	3
LNGN 478	Independent Study	3
LNGN 488	Seminar in Cognitive Science	3
PSYC 348	Psycholinguistics	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
Interactive Communication		
	Complete one Interactive Communication course.	3
<i>Quantitative Reasoning</i>		
	Fulfilled by LNGN 210 in the major.	
<i>Political and Civic Life</i>		
	Complete one Political and Civic Life course.	3
<i>World Languages</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 SEEDS: Political and Civic Life	3
SEEDS: Interactive Communication	3 MATH 111	4
LNGN 210 (Fulfills SEEDS: Quantitative Reasoning)	3 CSIT 104 (Fulfills SEEDS: Exploration 1 - Scientific Reasoning)	3
LNGN 210	3 SEEDS: Exploration 2	3
	13	16
Second Year		
Fall	Credits Spring	Credits
LNGN 331	3 LNGN 332	3
CSIT 114	3 SEEDS: Exploration 3	3
LNGN 300	3 LNGN 301 or 302	3
CSIT 170	3 LNGN 340	3
LNGN 330	3 AMAT 240	4
	15	16
Third Year		
Fall	Credits Spring	Credits
SEEDS: World Language 1	3 SEEDS: World Language 2 or Free Elective	3
LNGN 445	3 SEEDS: Exploration 4	3
CSIT 213	3 STAT 230	3
Major Elective 1	3 CSIT 455	3
CSIT 256	3 Free Elective	3
	15	15
Fourth Year		
Fall	Credits Spring	Credits
Major Elective 2	3 Major Elective 4	3
Major Elective 3	3 Major Elective 5	3
CSIT 457	3 LNGN 490	3
Free Elective	3 CSIT 359	3
Free Elective	3 Free Elective	3
	15	15
Total Credits 120		