MS in Computational Linguistics

Master of Science in Computational Linguistics

The STEM-designated MS in Computational Linguistics program draws on coursework from both Linguistics and Computer Science to prepare students for high-paying jobs in this growing field. Computational linguists work in a variety of industries, including technology, marketing, accounting and consulting firms.

Computational linguists work for high tech companies, creating and testing models for improving or developing new software in areas such as speech recognition, grammar checking, dictionary developing and more. They also work in research groups at universities and government research labs.

The program offers both fall and spring start dates.

$102,000 average salary for computational linguists in NJ-NY-PA metro area

2017 Burning Glass

#88 top public schools

U.S. News & World Report 2023, Top Public Colleges and Universities

> " What stands out the most to me about Montclair State University is the institution's strong emphasis and commitment to diversity, equity, and inclusion. The university boasts a remarkably diverse student body, creating an inclusive environment where individuals from various backgrounds and experiences are warmly welcomed into the campus community. Montclair is a wonderful place where you can not only pursue your academic interests but also explore your own identity and experience personal growth.

Shih-Chieh - Taiwan
PhD student

20 kilometers from New York City

120+ student clubs and organizations

Program Highlights

- STEM-designated (eligible for 3 years of OPT)
- First program of its kind in New Jersey
- Designed to accommodate students with varying educational backgrounds and levels of preparation
- 32-credit program
- Distinguished faculty
- Opportunities for hands-on research experience with faculty
- Proximity to NYC job market
- Access to our state-of-the-art Natural Language Processing Lab
- Access to our Experimental Linguistics Lab

Career Outcomes

Computational Linguistics graduates can go into a wide range of fields. Some of the most common career outcomes are:

- Analytical Linguist
- Applied Scientist
- Artificial Intelligence Engineer
- Big Data Software Engineer
- Chief Product Officer
- Computational Linguist
- Crowdsourcing Developer
- Chief Technology Officer

- Language Data Specialist
- Language Engineer
- Linguist
- Linguist Engineer
- Linguist Ontology and Dialogue Designer
- Machine Learning Engineer
- NLP Engineer/Scientist
- Research Engineer
- Researcher/Research Scientist
- Software Development Engineer

Admission Requirements

- Application
- Application fee
- A minimum undergraduate GPA of 3.0/4.0, or graduate GPA of 3.2/4.0
- NACES transcript evaluation
- English proficiency test score
- Personal statement
- Two letters of recommendation

NOTE: Our MS in Computational Linguistics program welcomes students from various academic backgrounds. Admitted students without a background in the field will take bridge coursework (prerequisites) as assigned by the department. You can be assigned anywhere from 4-11 credits of prerequisite work depending on your background.

Sample Courses

This **32-credit program** consists of many course options to choose from that will help you gain the skills and knowledge you need to help you succeed in your future career.

- Syntax
- Semantics and Pragmatics
- Phonetics and Phonology
- Computational Linguistics
- Special Topics in Natural Language Processing
- Big Data Analytics
- Database Systems

- Text Analysis Tools
- Data Structures with Python
- Machine Learning
- Quantitative Linguistics
- The Structure of American Sign Language
- Corpus Linguistics
- Data Mining
- Computer Algorithms and Analysis

- Linguistic Annotation
- Language and Mobile Communication
- Special Topics in Applied Linguistics
- Statistics for Data Science
- Exploratory Data Analysis and Visualization
- Introduction to Data Mining for Business
- Linear Algebra I

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