MOUNT ST. JOSEPH UNIVERSITY
School of Behavioral and Natural Sciences, Department of Computer Science and Mathematics

NLP 105 Introduction to Linguistics for Computer Scientists

Credit Hours: 3
Location: Science Building 201. This is an in person class. The Mount is committed to in person education this year. In the unlikely event school remains in session but we can't meet in the classroom, I will send out a written announcement and we all will be on Zoom synchronously at the same times as the class would be in person.
Meeting Times: section 02--12:15 to 1:30 and section 01--1:40 to 2:55 Tuesdays and Thursdays--see your registration for your section's start/end time
Faculty: Preston Frasch
> *For the most convenient quickest response to small questions, email me. I normally respond within 24 hrs. You can also make an appointment to meet me on Zoom, in my office, or the innovation hub or simply hang out after class.*
> **Zoom:** My Zoom Room is
> https://us02web.zoom.us/j/4979205950?pwd=hZWxLFGdcJmU2stxmWuiMi6X72hTAa.1
> **Email:** preston.frasch@msj.edu
> **Office:** Science 300H.
> **Office Phone:** I am going to provide my office phone here: 513-244-4327. If needed, you can reach me on my cell phone at 248-568-4544 (please call twice so I know it's urgent). You can text too if needed, but your MSJ email is usually the best way to reach me, and I check it regularly. Seriously, if you need something, reach out!
> **Faculty Office Hours**: Officially, 1:00-4:00 on Wednesdays. I am also in my office before then on Wednesdays if you need anything or you can catch me around before or after lunch time--I'm usually in the computer science office or the dining hall near the welcome center. Be aware a lot of IT people work in the LIB building - so I may be around but not in my office. If you need an appointment, happy to do so - let me know. Mondays, I work from home, but I can still meet through zoom, and I'm less available on Fridays.

Pre-requisites: None
Co-requisites: None
Pre-requisites: None
Co-requisites: None
Required Texts: Genetti, C. (2019) *How Languages Work: An Introduction to Language and Linguistics (Second Edition*). Cambridge University Press. ISBN 978-1-1-08-45451-3
You can get the physical book or the e-book. You must get the second edition.

Course Description
In this class, we will explore common questions that linguistics answers such as: Where did English come from? Why do people have accents? If a baby hears two languages, will the baby be confused? The course will explore language structure (syntax), language in culture and use (pragmatics), word parts (morphology), and the sounds of human speech (phonetics and phonology). Expect to dive into fun projects, like teaching people to speak English, creating your own language, and finding out where you favorite words came from and why. This course

provides necessary conceptual background for students interested in corpus linguistics and natural language processing and is a prerequisite to Introduction to Language and Computers.

Learning Outcomes and Performance Indicators
The purpose of the Core Curriculum in an undergraduate education at the Mount is to provide students with a broad range of learning experiences in order to create a mind conducive to a lifetime of learning in a diverse society. The Learning Outcomes and Performance Indicators are listed below:

A. Communication: Effectively express ideas in oral and written formats
1. **Oral presentation:** Deliver an effective oral presentation designed to enlighten or persuade.
2. **Effective language and style:** Write using language that is clear, fluent, and consistent with conventions of Standard English.
3. **Use of sources:** Use and document sources appropriately.
4. **Content development:** Develop compelling content to fulfill the assignment.

B. Critical Thinking: Support claims and conclusions
1. **Problem definition:** Describe the complexities, factors, and scope of a problem.
2. **Information literacy:** Use appropriate scholarly evidence to support a position.
3. **Quantitative literacy:** Apply mathematical evidence or models to support a position.
4. **Scientific literacy:** Apply scientific evidence or models to support a position.
5. **Synthesis:** Formulate an opinion or draw a conclusion based on a questioning of assumptions, an analysis of relevant evidence, and a synthesis of scholarly perspectives.

C. Ethics: Reason about right and wrong
1. **Ethical Self‑Awareness:** Discuss one's core beliefs and their origins.
2. **Catholic Social Teaching:** Describe fundamental principles of Catholic Social Teaching.
3. **Ethical Analysis:** Recognize ethical issues within a complex context.
4. **Application of Ethical Perspectives:** Propose and defend a solution to an ethical dilemma.

D. Social Responsibility: Understand how civic engagement can promote the common good
1. **Charity heritage:** Describe the Sisters of Charity legacy of service.
2. **Social change:** Explain how social injustice is perpetuated and overcome.
3. **Civic Engagement:** Describe how individual actions can be personally and collectively beneficial.
4. **Global interdependence:** Examine your individual and communal responsibility for the global community.

E. Cultural Competence: Analyze the diversity of human cultures
1. **Cultural self‑awareness:** Articulate the norms and biases of one's own culture.
2. **Awareness of other cultures:** Demonstrate understanding of the values, beliefs, biases, and practices important to members of another culture.
3. **Global diversity:** Contrast the diversity of history, values, politics, and economic conditions in developing and developed nations.

F. Integrative Learning: Integrate life and learning to create meaning and value
1. **Blending experience and knowledge:** Connect experiences inside and outside the classroom.
2. **Connections across disciplines:** Apply knowledge from more than one discipline to address a complex issue.
3. **Self‑reflection:** Reflect on how a liberal arts education has enriched your understanding of life's big questions.

Even though Introduction to Linguistics for Computer Scientists is not part of the core curriculum, there are several course objectives that deal directly with these performance indicators. They are indicated in the course objectives.

Course objectives
Successful completion of Introduction to Linguistics for Computer Scientists requires that students:
- Articulate core concepts from the fields of phonetics and phonology as they would apply to natural language processing, language acquisition and/or speech pathology (A1, A2, A3, A4, B1,
- B2)
- Discuss the major fields and theories surrounding language structure, namely syntax and morphology (B1, B2, B5)
- Apply psycholinguistic theories and principles to problems in areas such as language acquisition and cross-cultural communication (A2, A3, A4, B1, B5, F2)
- Explore how linguistic concepts are exemplified in current virtual and physical discourse communities (D3, F2)

Learning Strategies
Content will be presented in a variety of ways including: Lecture/demonstration; small group activities; role playing; audiovisual aids; interactive classroom discussions of assigned case studies/readings; and independent and faculty-guided practice of assessment and techniques. These activities will assist the learner in clarifying the concepts/theories addressed, and will further the development of critical thinking skills. Throughout the course students will be encouraged to reflect on the content and bring together multiple concepts in order to enhance student learning. Students will be encouraged to be open-minded in their thinking, which allows for personal growth and increased awareness of others. Students will be expected to complete assigned readings and assignments prior to coming to class/lab. Students will be responsible for any information presented in class (verbal, written, AV material, and online information), and the required readings.

Methods for Evaluating Achievement of Outcomes:
Evaluation methods are weighted as follows:

Participation (in person, or Zoom if the class meets online)	20%
Quizzes	30%
2 Assignments	2 x 10% each = 20%
Final exam (oral, website)	10%
Final Ignite Presentation	20%

The Grading Scale Used in the NLP Program:
    90% - 100%   A
    80% - 89%   B
    70% - 79%   C
    60% - 69%   D
    Below 60%   F

Attendance

Attendance is mandatory. Students who know they will miss/have missed a meeting should email their instructor. Your attendance grade will be calculated based on your attendance to the scheduled class meetings; points will be deducted from the attendance grade proportional to the number of absences.

If we have Zoom (This was a more likely possibility during the covid pandemic)

This is an in person class. The class will be in person unless the university changes their policy, in which case, I will make an announcement. In case needed, the following are expected class etiquette tips for Zoom meetings.

- If you have difficulties connecting, please let the instructor know by emailing her and then contacting ISS Help Desk for assistance (you can reach them via Mount Roar).
- Mute your microphone when not speaking.
- Please run your camera. If you have a personal situation that is not conducive to the camera being on, please email the instructor to discuss/so arrangements can be made.
- If you have to briefly step away from the meeting to meet personal needs, please turn off your camera, mute your microphone, and chat the instructor a brief message about when you expect to return to class.
- The instructor reserves the right to count a student as absent if s/he is being persistently disruptive or non-responsive on Zoom.
- Please remember to participate in the Zoom meeting - the Zoom meetings are intended to be interactive.
- Any classroom recording is to be used only for the personal academic use of the individual student, where personal academic use is restricted to the personal study use of the individual. Mount St. Joseph University prohibits sharing, distributing, or publishing classroom recordings in any manner.

Policy on Group Work

There will be group work in this class. Aside from documented emergencies/accommodations (which will be accommodated appropriately), if you are non-responsive to your group/instructor emails for a period of three days or more, the instructor may, at his/her discretion, grant the group members permission to continue to the group assignment without your participation and you may not earn points for that assignment. As a courtesy to all, groups are responsible for emailing non-responsive group mates before contacting the instructor. Groups must receive written permission from the instructor to complete assignments without the participation of all group members.

Late Policies

Any documented accommodations will of course, be honored. Outside of cases where there is a documented accommodation, timeliness will be taken into account when assessing the quality/grade of the overall work. The instructor reserves that right not to accept late work. Often times, it may not be feasible to make up late group work (i.e. lack of participation in your group on time may result in an "zero" for that assignment).

COLLEGE POLICIES

Policy on Attendance
Attendance in class is mandatory. The faculty understands that at times students become ill or have personal or family emergencies that preclude them from attending class. Students will be asked to sign an attendance sheet daily to document their presence in class. It is the student's responsibility to make sure he/she signs the attendance record. If a student is absent he/she is responsible for obtaining information/notes/handouts from another student. If a student misses more than three classes in courses that meet twice weekly, or more than two classes in courses that meet once a week, then he/she will be asked to complete an alternative assignment. The alternative assignment needs to be completed before a final grade can be entered for the course.

Academic Honesty Policy
This course is conducted in accordance with the Academic Honesty Policy of the University. When we use the information and language of others to enrich our reflection and research papers we must:
- Tell the reader when we are quoting and indicate the source (person, book, article, etc.)
- Tell the reader when we are paraphrasing and indicate the source (person, book, article, etc.) of that information.

Quoting or paraphrasing the information and/or language of a source without naming the source is plagiarism. Plagiarism is unacceptable in an academic institution and is subject to penalty. Please consult the University Catalog and the Student Handbook for additional information and policies regarding academic honesty.http://registrar.msj.edu/undergraduate-catalog/rights-policies/academic-policies/academic-honesty/

Physical Disability:
Students with documented disabilities are encouraged to speak to course faculty at the beginning of the semester. In compliance with Section 504 of the Rehabilitation Act of 1973, the Mount St. Joseph University provides academic adjustments and auxiliary aids for students with physical or mental impairments that substantially limit or restrict one or more major life activities such as walking, seeing, hearing, or learning. Students with disabilities should contact Meghann Littrell, the Director of Learning Center & Disability Services, to present documentation and develop individualized accommodation plans (244-4524, Meghann.Littrell@msj.edu, Learning Center, Room 156 Seton). Students who have already registered with MSJ Disability Services are encouraged to discuss their accommodations with their course faculty at the beginning of each semester. Additional information can be found at http://www.msj.edu/academics/disability-services/

Please note the University policy regarding Temporary Illness, Injury, or Pregnancy can be found at the following link:
https://mymount.msj.edu/ICS/icsfs/Temporary_Illness_Injury_Pregnancy_Policy_FINAL_Au.pdf?target=e89f1ea4-0fdd-4140-90e6-39ee805108b5

*Please note the following information regarding drop/withdrawal dates for this course***:**

https://mymount.msj.edu/ICS/MSJAcademics/Catalogs.jnz?portlet=Semester_Policies

*Please note the University policy regarding receiving an "incomplete" in this course may be found at the following link:*http://registrar.msj.edu/undergraduate-catalog/rights-policies/academic-policies/incomplete-grades/

Inclement Weather: The university is currently updating its inclement weather policy for in*sync and online only classes. Normally, aside from severe events that may involve power outages or other adverse conditions, in*sync and online classes are not normally impacted by weather.

Delay: When a delay is announced, a start time will always be announced with it. Faculty, students and staff should come to campus at the announced start time. Classes that are 50-75 minutes long that are scheduled to begin before the start time are canceled and offices are closed until the start time. Classes scheduled to begin at or after the start time will begin at their regular time. Classes that are longer than 75 minutes, and scheduled to begin before the start time, will meet for a shortened class period, beginning at the start time. For example, if the University opens at 10:00 a.m.:
- A 50-75 minute class scheduled prior to 10:00 a.m. will not be held.
- A 120 minute class scheduled to meet from 9:00 -10:50 will begin at 10:00 and meet for 50 minutes.
- A 50 minute class scheduled to meet at 10:00 would begin meeting at 10:00 and meet for the full time scheduled.

Covid Policy:

The Mount St. Joseph University (University or Mount) COVID-19 Safety Guidelines (Guidelines) are a University policy that applies to all students, employees, and visitors and to all aspects of campus operations. The Guidelines are intended to reduce the spread of COVID-19 in the University community and beyond. They are predicated on the individual responsibility all persons have to monitor their health and to take precautions in the time of COVID-19. The current version of the Guidelines are available on myMount under the Policies tab. All students are encouraged to read the COVID-19 Safety Guidelines in their entirety.

Tentative Course Schedule:

Week 1 INTRODUCTION: WHAT IS LINGUISTICS?

PART I
Weeks 2-8 LANGUAGE SYSTEM AND STRUCTURE
   Sounds of Language: Phonetics and Phonology
   Structure of Words: Morphology
   Words in a Language: Lexicon
   Structure of Phrases: Syntax

PART II
Weeks 9-12 LANGUAGE IN USE
   Sociolinguistics: Language in its social context
   Discourse: Language creating meanings and realities
   First and Second Language Acquisition: How we learn language
   Languages in Contact: Language diversity, language loss, language policy

PART III
Weeks 13-14 CURRENT ISSUES AND APPLICATIONS IN LINGUISTICS
   Clinical Linguistics: Language and healthcare
   Computational Linguistics: Language, computers, and artificial intelligence

PART IV
Week 15 WRAP UP, REVIEW, ASSESSMENT AND PRESENTATIONS