

# Formal Foundations of Linguistics

## LING 21020

Syllabus version: 1.1

Spring 2020

MWF 12:30–1:20pm Central Time | Zoom 425-825-906

**Instructor:** Marina Ermolaeva  
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Zoom PMI: 364-436-7095  
Office hours: WTh 3:00–4:00pm or by appointment | Zoom Chat

This syllabus is subject to change. New versions will be uploaded to the course’s Canvas site.

### Course description

This course aims to serve as a data-driven introduction to mathematical approaches to language. It explores the (extended) hierarchy of formal languages from a linguist’s point of view, with an emphasis on classes that are of special interest for describing natural language phenomena. We will study, in a hands-on way, a number of grammar formalisms commonly used to characterize patterns in phonology, morphology, and syntax. The only prerequisite is familiarity with the basic notions of linguistics; no programming experience or extensive mathematical background is required.

### Grade components

Homework 70%  
Final exam 30%

**Homework:** There will be roughly one assignment per week. You are welcome to collaborate on homework with other students in the class, as long as you indicate who you worked with. However, you must do the actual write-up on your own. All homework is to be submitted electronically via Canvas.

**Final exam:** There will be a take-home exam covering all material introduced in class.

**Attendance and participation:** For logistical reasons, attendance is not factored into the grade. However, I will offer up to 5% extra credit for participation. Opportunities for gaining this extra credit include, but are not limited to, actively participating in Zoom meetings, asking (and answering) questions on Canvas discussion boards, and attending online office hours.

## Letter grade distribution

$\geq 93.00$	A	77.00 - 79.99	C+
90.00 - 92.99	A-	73.00 - 76.99	C
87.00 - 89.99	B+	70.00 - 72.99	C-
83.00 - 86.99	B	60.00 - 69.99	D
80.00 - 82.99	B-	$\leq 59.99$	F

## Tentative course outline

- Week 1** April 6, 8, 10  
The Chomsky hierarchy. Regular languages. Finite-state phonology
- Week 2** April 13, 15, 17  
Regular languages (cont'd). Formalizing rewrite rules. Two-level morphology
- Week 3** April 20, 22, 24  
The Subregular Hypothesis for phonology
- Week 4** April 27, 29, May 1  
Subregular languages (cont'd)
- Week 5** May 4, 6, 8  
Formalizing syntax, take one. Context-free languages
- Week 6** May 11, 13, 15  
Beyond context-freeness. Multiple Context-Free Grammars
- Week 7** May 18, 20, 22  
Formalizing syntax, take two. Minimalist Grammars
- Week 8** May 25, 27, 29  
Minimalist Grammars (cont'd)
- Week 9** June 1, 3, 5  
Minimalist Grammars (cont'd). Wrap-up

## Late work policy

Unless you receive an extension from me ahead of the due date, you will lose 10% of the maximum grade on a homework for each day it is late. Please do not prioritize this course over your physical or mental health – let me know if you need an extension, as I'm very likely to grant it.

## Academic integrity

It is your responsibility to be familiar with the University's policy on academic honesty. Instances of academic dishonesty will be referred to the Office of the Provost for adjudication.

You are allowed to collaborate with other students in the class on the homework assignments. If you do so, your assignment should include a note indicating with whom you collaborated.

## Accessibility

If you need any special accommodations, please provide me with a (soft) copy of your Accommodation Determination Letter (provided to you by the Student Disability Services office) as soon as possible so that we may discuss how your accommodations may be implemented in this course. Regardless of your official status with Student Disability Services, please let me know if there is anything I should know about you to help you get the most out of this class.

## Spring Quarter 2020 Recording Policy

By attending course sessions, students acknowledge that:

- A. They will not: (i) record, share, or disseminate University of Chicago course sessions, videos, transcripts, audio, or chats; (ii) retain such materials after the end of the course; or (iii) use such materials for any purpose other than in connection with participation in the course.
- B. They will not share links to University of Chicago course sessions with any persons not authorized to be in the course session. Sharing course materials with persons authorized to be in the relevant course is permitted. Syllabi, handouts, slides, and other documents may be shared at the discretion of the instructor.
- C. Course recordings, content, and materials may be covered by copyrights held by the University, the instructor, or third parties. Any unauthorized use of such recordings or course materials may violate such copyrights.
- D. Any violation of this policy will be referred to the Area Dean of Students.