

LINGUISTICS 384

LANGUAGE AND COMPUTERS



Winter 2011
Tu/Th 11:30–1:18 pm
Tu: Derby Hall 29, Th: University Hall 47

Instructors	Dennis Mehay & Jon Dehdari	Website	ling.osu.edu/~jonsafari/ling384
Office	201 Oxley Hall	GEC	1B2 <i>Mathematical & Logical Analysis</i> (Old: 2B)
Office Hours	Tue. 10:00–11:00 Thu. 1:30–2:30 By appointment	Course- Coordinator	Dr. Hope Dawson dawson.165@osu.edu 222a Oxley Hall (614) 688-3109
Email	mehay.2 or dehdari.2	Textbooks	None
Mailbox	225 Oxley Hall		
Phone	(614) 688-3108		

1 What's the Point of this Class?

In this course we will study language scientifically and learn to create tools to work with language.

This course fulfills the Mathematical & Logical Analysis GEC requirement, which has you comprehend mathematical concepts and methods adequate to construct valid arguments, understand inductive and deductive reasoning, and increase your general problem solving skills. In accomplishing this we will apply various mathematical concepts to analyzing language, and think methodically about processing language. We happen to use computers for this task simply because they are faster than working out our ideas about language on paper. But we will work them out on paper occasionally in this class, just for fun. And sometimes we'll use gummi bears.

This course does not cover many statistical methods, nor does it include topics relating to (audio) speech. A nice complement to this course is Linguistics 286 "Analyzing the Sounds of Language", which covers both these topics, and fulfills another GEC.

2 Tentative Schedule

Week	Date	Topic	Due by class
1	Tue, Jan. 4 Th, Jan. 6	Intro, R basics R practice	HW 1
2	Tue, Jan. 11 Th, Jan. 13	Programming basics Programming cont'd	HW 2
3	Tue, Jan. 18 Th, Jan. 20	Data structures Programming practice	HW 3
4	Tue, Jan. 25 Th, Jan. 27	Strings (and FL basics) Regexes	HW 4
5	Tue, Feb. 1 Th, Feb. 3	Language Models Midterm	HW 5
6	Tue, Feb. 8 Th, Feb. 10	Part-of-speech tagging Project overview / catch-up	HW 6
7	Tue, Feb. 15 Th, Feb. 17	Evaluation Machine Translation	HW 7
8	Tue, Feb. 22 Th, Feb. 24	Search Engines Search Engines & Stemming (time permitting)	HW 8
9	Tue, Mar. 1 Th, Mar. 3	Speech Recognition (time permitting) TBA	
10	Tue, Mar. 8 Th, Mar. 10	Bake-off Review	Project
12	Wed., Mar. 16	Final: 11:30–1:18pm	

3 Project

In order to make concrete the things you're learning in this class, you're going to be involved in a final project. Many of the homeworks will directly help prepare you for the final project.

To add to the fun, we're going to have a bake-off (competition) to see who gets the highest accuracy. The winner will get bragging rights and 5% added to their overall grade. Everyone else will still have the chance to get extra credit as well; We'll give the details in class.

4 Quizzes

We will have a short two-question quiz at the beginning of Thursday classes. It will usually cover the topics from the previous two lectures. Your lowest two quiz scores will be dropped.

5 Exams

We will have a short in-class midterm on Thursday Feb. 3rd, which will consist of short-answer questions. The final exam will be cumulative, will also consist of short-answer questions.

6 Participation

You will be expected to be an active part of the class. The other people in the class are in the same boat as you, and probably have the same questions you do, so don't be afraid to raise your hand—we won't bite your head off! If you regularly participate in discussions, ask questions when you don't understand something, and help out others, you'll get full participation points.

7 Grading

Homework	30%	A:	$\geq 93\%$
Quizzes (lowest two dropped)	15%	A-:	$\geq 90\%, < 93\%$
Class Participation	5%	B+:	$\geq 87\%, < 90\%$
Midterm	10%	B:	$\geq 83\%, < 87\%$
Final Project	25%	B-:	$\geq 80\%, < 83\%$
Final Exam	15%	C+:	$\geq 77\%, < 80\%$
		C:	$\geq 73\%, < 77\%$
		C-:	$\geq 70\%, < 73\%$
		D+:	$\geq 67\%, < 70\%$
		D:	$\geq 60\%, < 67\%$
		E:	$< 60\%$

8 Homework Submission

Homework is due at the beginning of class. Non-code writeups must be submitted in paper format in class. All code submissions must be submitted in Carmen (talk to us if you're not familiar with Carmen).

Late writeups (see below) must be submitted in either of our mailboxes (225 Oxley).

9 Late Policy

Late homeworks are docked 20% if they are turned in within 24 hours of the deadline. You can have one no-penalty late day for homeworks 1–4, and another one for homeworks 5–8. The late days are 24 hours long, can't be rolled-over, and can't be split-up into multiple smaller units.

10 How to Not Get on our Bad Side

If you don't want to get on our bad side, don't do the following in class: **text** in class, forget to turn off cell phones, surf web in class, read newspapers, pack up early, leave food/drink wrappers around, text in class, bring baby orangutans to class. If you have a legitimate exception to any of these things (eg. you're expecting a call about lab results), let us know *before* class, and we'll be a lot more understanding.

11 Boiler Plate

11.1 Academic Misconduct

As with any class at this university, students are required to follow the Ohio State Code of Student Conduct. In particular, note that students are not allowed to, among other things, submit plagiarized (copied but unacknowledged) work for credit. All code submissions must be written by you. If any suspected academic misconduct occurs, the instructor is *required* to report the possible violation to the Council on Academic Misconduct.

11.2 Students with Disabilities

Any student who feels they may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614-292-3307 in room 150 Pomerene Hall to coordinate reasonable accommodations for students with documented disabilities.