# Linguistics 280: Language and Formal Reasoning

Scott Martin

Winter Quarter 2012

Meeting Times MW 1:30–3:18 PM Classroom Jennings Hall 160

**Instructor** Scott Martin

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**Readings** There is no textbook for this course. All material will be covered in class and summarized in handouts.

#### **Course Description**

We will use scientific methods to investigate how natural languages convey meaning. To do so, we will construct an artificial language that is unambiguous, well understood and well behaved, and use this language to systematically determine the conditions for validity of natural language sentences.

The pace of this course will be quick and the assignments will be relatively few. Regular attendance and participation is thus crucial for success; missing even a couple of days will leave you far behind in terms of comprehending the lectures and assignments.

This course satisfies the following GECs:

GEC 2.B 2-Quantitative and Logical Skills; B-Mathematical and Logical Analysis

Goals: Courses in Quantitative and Logical Skills develop students' quantitative literacy and logical reasoning, including the ability to identify valid arguments, use mathematical models, and draw conclusions and critically evaluate results based on data.

Mathematical and Logical Analysis–Expected learning outcomes: Students comprehend mathematical concepts and methods adequate to construct valid arguments, understand inductive and deductive reasoning, and increase their general problem solving skills. This course will meet the expected learning outcomes by introducing students to formal reasoning, translating natural language arguments into propositional logic, and proving theorems within the logic.

## Evaluation

Progress in the course will be evaluated based on periodic assignments. You are encouraged to collaborate with other students on these, but all submitted work must be done independently using your own words. All assignments are due at the beginning of class unless otherwise specified. Late assignments will not be accepted.

### Grade Components

- **Problem Sets (90%)** will be assigned roughly biweekly and you will generally have a week to complete them. There will be four problem sets in total.
- Attendance (10%) is rewarded as part of your grade. By "attending" I mean coming to class, paying attention, and participating (each class we will spend some time going over the exercises from the previous lecture together).

### Grading Scale

I use the OSU standard grading scale:

А	93 - 100	B+	87 - 89	C+	77 - 79	D+	67 - 69	Ε	0 - 59
A-	90 - 92	В	83-86	С	73 - 76	D	60-66		
		B-	80 - 82	С-	70 - 72				

# Academic Misconduct

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct (COAM). COAM's sanctions for any violations of the university's code of student conduct could include a failing grade in this course and suspension or dismissal from the university.

### Students with Disabilities

If you feel that you may need an accommodation based on the impact of your disability, you should contact me privately to discuss your specific needs. We'll work with the Ohio State Office for Disability Services (614-292-3307, 150 Pomerene Hall) to coordinate reasonable accommodations for you.