PHIL 2310: Introduction to Deductive Logic

TuTh 10:10–11:25am · Malott Hall 228

Prof:	**Arc Kocurek**	
Email:	awk78@cornell.edu	
Office:	Goldwin Smith Hall 237	
Office Hours:	W 2–3pm	
TAs:	**Erin Gerber**	**Libby Southgate**
Email:	ehg44@cornell.edu	ehs96@cornell.edu
Office:	Goldwin Smith Hall 344	Goldwin Smith Hall 223
Office Hours:	M 12–1pm	Th 2:15–3:15pm

Required Materials

The textbook we will use is called **forall x: Calgary Remix**. It is free and can be downloaded on Blackboard. All other readings will also be made available through Blackboard.

We will also sometimes use **Socrative** for in-lecture exercises. A free app is available for download on Apple or Android devices. You may also use Socrative through your web browser.

Grades

Problem Sets	40%	(5% each)
Quizzes	40%	(5% each)
Midterm	10%	
Final	10%	
Participation	3%	(bonus)

Assignments

Problem Sets

Due:	At 3pm on selected Fridays (see schedule).
Drop:	Your lowest two problem set grades will be dropped.
Late Policy:	No late assignments will be accepted. (That is what the drops are for!)
Groups:	You are welcome to work on the problem sets in groups. But if you do, you must (a) write your own answers to the problem set and (b) **write the names of your group members** on the top of the first page.
Format:	Your answers must be neatly handwritten or typed in LaTeX. (See http://www.actual.world/latex/setup-latex/ for resources on LaTeX).

Quizzes

When:	At the beginning of lecture on selected Tuesdays (see schedule).
Length:	You will have 30 minutes to complete each quiz.
Drop:	Your lowest two quiz grades will be dropped.
Make-up:	No make-up quizzes. (That is what the drops are for!)

Exams

When:	Midterm is **at 7:30pm on October 11** in Malott 228. Final is **at 9am on December 10** in McGraw 165.
Required:	Both the midterm and final are **required** in order to pass the class. If for some reason you are unable to attend an exam, you must let me know ASAP!

Participation

Your activity in lecture and in section can get you bonus points. Specifically, anything that you do in section that helps the students around you learn—asking and answering questions, making helpful comments, etc.—gets you bonus points (up to 3). Bonus points for participation will be at the discretion of your TA. Your TA might also take your activity on Piazza into account.

Piazza is an online platform for asking answering questions outside of class. You can ask and answer questions about the reading, the problem sets, or more general questions about the course material. You can also use Piazza to form study groups. Your posts can be anonymous to other students and even to instructors if you so choose. Access to Piazza is available on Blackboard.

There are only a few rules about asking and answering questions on Piazza:

1. **Don't just ask for the answer.**

   Bad question: "What is the answer to question 2 on the problem set?"

   Good question: "I am not sure how to start question 2. Any suggestions?"

2. **Don't just give away the answer to a problem.**

   Bad answer: "The answer is T,F,T,T."

   Good answer: "Slide 12 discusses the following strategy for filling out truth tables:. . . "

3. **Be polite.**

Remember: your answers to the problem set must still be written by *you*.

Academic Integrity

In this course, we will strictly adhere to the University Policy on Academic Integrity, as outlined in the Code of Academic Integrity (http://cuinfo.cornell.edu/aic.cfm). Any violation of this policy will be reported immediately. Violations will, at the very least, result in an F on the assignment in question, but may also to lead to an F in the class, suspension, or other penalties.

Schedule

Truth-Functional Logic

Date		Topic	Assignment	Reading
Week 1	08/23	Introduction		
Week 2	08/28	Arguments and Validity		Chp. 1–2
	08/30	Logical Concepts	PS1 due Friday	Chp. 3
Week 3	09/04	Symbolization	Quiz 1	Chp. 4 & 5
	09/06	Sentences of TFL	PS2 due Friday	Chp. 6
Week 4	09/11	Truth Tables	Quiz 2	Chp. 8 & 10
	09/13	Conditionals	PS3 due Friday	Chp. 5.4–5.5 & 9
Week 5	09/18	Semantic Concepts	Quiz 3	Chp. 11
	09/20	Expressive Completeness	PS4 due Friday	Chp. 37
Week 6	09/25	Natural Deduction	Quiz 4	Chp. 14 & 15.1–15.2
	09/27	Subproofs	PS5 due Monday	Chp. 15.3–15.6
Week 7	10/02	Negation and Other Rules		Chp. 15.7 & 16
	10/04	Proof-Theoretic Concepts	Quiz 5	Chp. 17
Week 8	10/09	∼∼Fall Break (no class)∼∼		
	10/11	Review	**MIDTERM**	

First-Order Logic

Date		Topic	Assignment	Reading
Week 9	10/16	Sets		*MML*:[1] Chp. 1
	10/18	Relations and Functions	PS6 due Friday	*MML*: Chp. 2.1-2.3 & 3.1–3.2
Week 10	10/23	Terms and Predicates	Quiz 6	Chp. 21.1–21.3
	10/25	Interpretations	PS7 due Friday	Chp. 27 & 28.1–28.2
Week 11	10/30	Quantifiers	Quiz 7	Chp. 21.4–21.5 & 26
	11/01	Symbolizing Quantifers	PS8 due Friday	Chp. 22
Week 12	11/06	Nested Quantifiers	Quiz 8	Chp. 23
	11/08	Interpreting Quantifiers	PS9 due **Monday**	Chp. 28.3
Week 13	11/13	Counting		Chp. 24
	11/15	Definite Descriptions	Quiz 9	Chp. 25
Week 14	11/20	Semantic Concepts		Chp. 29–31
	11/22	∼∼Thanksgiving (no class)∼∼		
Week 15	11/27	Easy Quantifier Rules		Chp. 32.1–32.3, 33, & 34
	11/29	Hard Quantifier Rules	PS10 due Friday	Chp. 32.4–32.5
Week 16	12/04	Beyond This Course	Quiz 10	
	12/06	Study period		
	12/10		**FINAL**	

[1] *MML = Mathematical Methods in Linguistics*.