

Professor	Contact me	Email	Phone
Susan Tolman	Use DM on Campuswire.	tolman@illinois.edu	(217) 244-6260

Section	Time	Office Hours	Final time	Zoom Room	Zoom Password
E1	MWF 1:00 PM	TBA	7:00 PM Thursday, Dec. 17	928 4320 5075	480442

Technical requirements:

Students must have reliable internet access with a tablet or computer, be able to scan and upload documents (for this), and be available during class time. Please contact me immediately if you are not able to fulfill these requirements. You should also have some way of showing their written work to other students in real time. This could be a tablet or a phone (ideally with a stand and light).

Required Text:

[Introduction to Abstract Mathematics, by Donaldson and Pantano, Jan. 20, 2020](#)

The course packet is available at the Illini Union Bookstore, and only costs around \$10. I strongly recommend this book, so that you can take note in it. We will cover all of the topics in this book and will cover other topics in class.

Zoom:

Please sign in to zoom through your University of Illinois account. The link is:

<https://illinois.zoom.us/j/92843205075?pwd=bFJKTzNQM2x2UkwzRmpvQm05MjFuQT09>

Communications/Campuswire:

All course communication will be handled through [Campuswire](#). The course coded is 7544. Please DM me for any confidential information. All other questions should be posted to the class feed. The board is restricted to posts related to the course. We consider all of mathematics to be related to this course. Your participation grade will be based in part on your communication. During the week, I will respond to all communication within 24 hours; however, I may not be available on weekends.

Grader:

Ramon Ivan Garcia Alvarez. He can be contacted by DM on campuswire.

Teaching Assistants:

In addition to my office hours, there are Math 347 TA's who will be available to help all Math 347 students. Please check the information here when it is available.

Course Description:

This is an introduction to mathematical language, rigorous mathematical thinking, fundamental mathematical concepts, and the art of proof. Topics include logic, set theory, induction, equivalence relations, functions, number theory, and more. We will view this class as a community -- and my goal is to help you learn some important and beautiful mathematics.

Grades:

Material in this class will be presented in recorded lectures, which are posted online under that day in the calendar. For these lectures are posted on Moodle under that day on the appropriate "Week" tab. I recommend printing them out on a tablet, and stopping the lecture and trying to fill in the boxes yourself before continuing with the lecture.

Quizzes:

There will be a short quiz after most lectures, to reinforce your learning with practice. You can take the quiz multiple times, but you must take it before the class meeting. Please let me know if your grade is not correct, and I will correct it.

Class meetings:

These will all be conducted online. Notes for these meetings are posted on Moodle under that day on the calendar. I recommend printing them or uploading them to a tablet, and filling in the boxes yourself during our meetings.

- Monday: Office hours/discussion (not mandatory).
 - Discuss issues/questions of common interest proposed by students.
 - Work on homework or review for exams.
- Wednesday: Meet with me in smaller groups (about half the class).
 - Discuss any issues of common interest.
 - Practice skills individually and in small groups of about 4 students.
- Friday: Meet as a group.
 - Discuss any issue of common interest
 - Present proofs and work on problems in small groups of about 4 students.

Rubric for Grading Proofs:

5	Correct and well written in complete mathematical sentences. Proof begins with a stated claim; clearly notes definitions, and prior results are used, and ends with a concluding statement.
4	Solution is mostly correct, with some small mathematical errors or a small gap in the proof which is noted. The writing has some small flaws, such as an uncited theorem, a missing concluding statement, or poor punctuation.
3	Solution has some more serious flaws, such as a large gap in the proof, or a small gap which is not noted. Serious flaws, e.g., it's not written in sentences.
2	Solution has more serious flaws in writing and/or correctness.
1	Solution is largely incomplete, but demonstrates some knowledge and effort.
0	Solution is not submitted, or doesn't demonstrate any knowledge and effort.

Warning/Promise:

I have been teaching math mathematics for nearly 30 years but this is my first online course. I thought I could handle this course over this summer, but I am sure issues will arise that I haven't thought of. Unfortunately, I am a bit rusty with the technology we are using. Just let me know if you are having problems, and I promise that I will correct your grade as soon as possible.

Academic integrity:

Violations of academic integrity will be taken seriously, and will be handled under the procedures of [Ar](#)

Week 1

August 24-28

Introduction, logical connectives, truth tables, implications, converse and contrapositive, and elementary n

Homework:

- [Homework 1](#) is due Tuesday, September 1 at 5:00 PM.
-

Mon. Aug. 24

Lesson 1.1: Introduction

Objectives:

- Understand course structure
- Describe the role of theorems, proofs, definitions, and conjectures in mathematics.

Before class:

- Read Section 1 (Introduction) in the [textbook](#).
- Review the Syllabus. (This is the first tab.)
- Watch [The Sorcerer's Apprentice](#).
- Sign up for [Campuswire](#).

Class Meeting:

- We will meet as a class to discuss the course policies and goals.
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Wed. Aug. 26

Lesson 2.1: Compound Statements

Objectives:

- Define and recognize statements.
- Translate freely between English and compound statements containing disjunction, conjunction, negation.
- Construct and use truth tables.
- Form the converse and contrapositive of a conditional.

Before class:

- Read Section 2.1 through page 14 in the [textbook](#).
- Watch [Lesson 2.1](#).
- Take [Quiz 2.1](#).
- List **all** the times that you are available in a **typical** week in [this poll](#).

Class meeting:



[Quiz 2.2](#)



[Lesson 1.1: Introduction](#)



[Homework 1](#)

Week 2

August 31–September 4

Methods of proof, quantifiers, negations, introduction to sets.

Monday, August 31
Methods of Proof II

Tuesday, September 1

Turn in [Homework 1.1](#) by 5:00 PM.

Hidden from students



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