Sets and Logic
MHF 3202
SPRING 19

Classroom: MAT 251

Instructor: Dr. Konstantina Christododoulopoulou

Office Location: 370 LIT

Office Hours: T5, W7, R6, and by appointment.

Open Door Policy: You are welcome to drop by to discuss any aspect of the course, anytime.

All course materials will be posted in e-Learning CANVAS https://lss.at.ufl.edu

Meeting Times: MWF 6

Office Phone: (352) 294- 2315

Email: kchristod@ufl.edu

Text: *How to prove it,* by Daniel J. Velleman, 2nd edition. We will cover most of Chapters $1-6$, plus additional material, time permitting.

Course content and objectives: The primary goal of this course is to help you develop independent mathematical thinking skills and to teach you how to do proofs. The main topics will be: sets, proof strategies, relations, functions, and mathematical induction. For most of you this may be the first time that you are required to read and write rigorous proofs and you may find it intimidating and challenging. However, many of the upper division mathematics courses you will be required to take in the future will involve proofs. In this course you will learn how to manipulate definitions, construct rigorous mathematical arguments, learn various methods of proof, and develop mathematical writing and presentation skills.

It is essential that you work on the material outside the classroom. Carefully read the textbook before coming to class and use pencil and paper to work through the material.

Reading: A tentative course calendar (subject to revision during the semester) is available at the end of the syllabus and also in the course homepage in CANVAS. There you can find which sections will be covered during each lecture. *It is expected that you have read the relevant textbook sections before each lecture, so that you will be able to better grasp the material presented. In addition, supplementary material not found in the textbook may be presented during lecture to complement your reading.*

Office Hours: I encourage you to take advantage of my office hours and my **open door** policy. You are welcome to drop by my office to talk about the course anytime I am in my office and my door is open. In addition, I will hold regular office hours for your convenience. If you cannot make my posted hours I will also be happy to set a meeting time that is convenient for the both of us.

Course Web Page: I will update CANVAS regularly with class announcements, homework assignments, and additional materials. All grades are posted in the Canvas gradebook. You are responsible for verifying that those grades are accurate. **You have one week after a score has been posted to contact me to resolve any grade concerns. We will not consider any grading disputes nor make any grade adjustments at the end of the semester. Be sure to save all original documents in case of grading questions.**

Grading:

Quizzes	15%
Homework	20%
Three Semester Exams	45% (15% each)
Cumulative Final Exam	20%

The following grading scale applies.

A	$\geq 90\%$	C	$\geq 70\%$
A$-$	$\geq 87\%$	C$-$	$\geq 67\%$
B+	$\geq 84\%$	D+	$\geq 64\%$
B	$\geq 80\%$	D	$\geq 60\%$
B$-$	$\geq 77\%$	D$-$	$\geq 56\%$
C+	$\geq 74\%$	E	$< 56\%$

Homework: I will regularly assign problems or proofs to be handed in by each individual. I expect all proofs to be written in full sentences and grammatically correct. Each proof or problem will be graded on the following scale:

5	Correct mathematical proof and very well written
4	Small mathematical errors and/or grammatical errors
3	Contains good ideas, but overall an incorrect mathematical proof
2	Significant mathematical errors
1	Come and see me for help!

If you receive a grade 3, 2, or 1 on any proof, you may turn that proof in again for an entirely new grade. I will keep only the highest score. Rewrites are due exactly one week from when I return homework. You may work with your peers to prepare problems but you must write up solutions individually. Do not turn in what are essentially Xerox copies of each other's homework. **No late homework will be accepted.**

Using the Web: Please refrain from searching for proofs on the internet or using someone's notes from a previous semester. Your job in this course is to learn how to prove things, not learn how to do a web search. Also, you will not have access to the internet on tests or quizzes. It is very obvious to me when you have a proof that you did not write yourself, and this will not help you succeed in the course. If you are having trouble with a proof ask your instructor or a classmate for help. In the end it is you who will have to explain your proof to your peers and your instructor. If you don't understand it, we will know.

Submitted work expectations: Submitted assignments should be neat, organized, and clearly presented. Homework must be on letter-size paper only and papers with multiple pages should be stapled. Papers not meeting these standards may have the scores reduced or may be returned ungraded.

Excused absences are consistent with university policies in the undergraduate catalog `https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx` and require appropriate documentation.

Quizzes: Short quizzes will be given regularly. Each quiz will be graded on the following scale:

5	Correct mathematical proof and well written
4	Small mathematical errors, but overall a correct proof
3	Contains some good ideas, but overall an incorrect proof
2	Significant mathematical errors
1	Present for the quiz, but no worthwhile mathematics turned in

Exams: Three mid-term exams and a cumulative final exam are scheduled for this course. The mid-term exams are tentatively scheduled for February 8, March 15, and April 12, all in class, and the final exam is scheduled for Monday, April 29, 10:00AM-12:00PM. **The exams cannot be rescheduled unless you meet the University requirements; see** `https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx`. Absolutely no collaboration on exams is allowed.

Make-up policy: You may arrange to make-up a missed exam or quiz for excused absences. Acceptable absences include but are not limited to the following: you are participating in a UF-sponsored event and provide me with documentation at least a week in advance; you were verifiably ill during the exam and notified me within 24 hours of its conclusion; you are observing a religious holiday and have notified me of this during the first two weeks of classes; you have a court-ordered obligation and have provided me documentation a week in advance. Please note that "I just didn't feel well" without documentation, travel plans, and personal schedule conflicts are NOT excused.

Class guidelines: It is expected that everyone in our class will act in a respectful manner:

- Please be respectful of your classmates and me while in class or office hours.
- I expect that you are committed to learning and will not miss class. Arriving late (after we have started class) or leaving early is disruptive and disrespectful. If however, you cannot avoid it, please arrange it in advance with me.
- Turn off all cell phones before the start of class.
- Laptops are not to be used in class.

Students with learning disabilities: Students requesting class and exam accommodations must first register with the Dean of Students Office Disability Resource Center(DRC), `www.dso.ufl.edu/drc/`. That office will provide a documentation letter to the student to present to the instructor, Dr. Christodoulopoulou in Little 370. This must be done as early as possible in the semester, **at least 7 business days before the first exam**, so there is adequate time to make proper accommodations.

Academic honesty: Remember that you committed yourself to academic honesty when you registered at the University of Florida. All students are bound to

The Honor Pledge
We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:
"On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Academic Honesty Guidelines: "All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct."

In addition, we remind you that *lectures and the course materials given in this class are the property of the University/faculty member and may not be taped/shared without prior permission from the lecturer and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.*

6. ONLINE COURSE EVALUATION

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at `https://evaluations.ufl.edu`.

Tips for the Course:

- *Mathematics is not a spectator sport.* Your participation and engagement with the material is essential.
- Discuss the topics with your classmates.
- Take advantage of my office hours. This time is set aside for us to help you.
- Don't hesitate to ask questions in class.
- Be reminded that 2 student hours devoted to assignments and preparation for every hour of classroom time is a reasonable expectation for an average student.
- Barring unforeseen medical or other serious conditions, I expect you to be in class on time every day. If you must miss a class, please let me know as soon as possible and be sure to contact a classmate to find out what you missed.
- If you are in trouble see me immediately. If you think you are in danger of failing (or of getting a grade that you do not want) you should see me immediately. I will not give you an extra credit assignment or an incomplete to help you avoid failing, but I can make recommendations regarding drops, study habits, test taking skills, future courses, etc.

Counseling and Wellness Center Contact information for the Counseling and Wellness Center:

http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

This syllabus is subject to change. You will be notified if any changes are made.

Version 1

SPRING 2019 –MHF 3202 Calendar

Exam 1-Friday, February 8
Exam 2-Friday, March 15
Exam 3-Friday, April 12
Cumulative Final Exam- Monday, April 29, 10:00AM-12:00PM

Monday	Wednesday	Friday
Jan 7 Sections 1.1-1.2	**9** Section 1.2	**11** Sections 1.3-1.4
14 Section 1.4	**16** Section 1.5	**18** Catch-up/ **Quiz 1**
21 MLK Holiday **No class**	**23** Section 2.1	**25** Section 2.2/**Quiz 2**
28 Section 2.3	**30** Section 3.1	**Feb 1** Section 3.2/**Quiz 3**
4 Catch-up	**6** Review/Catch-up	**8** **Exam 1**
11 Section 3.3	**13** Section 3.4	**15** Section 3.5
18 Section 3.6	**20** Section 3.7/**Quiz 4**	**22** Section 3.7
25 Catch-up	**27** Section 4.1/**Quiz 5**	**Mar 1** Section 4.2
4 HAPPY **No class**	**6 SPRING** **No class**	**8 BREAK** **No class**
11 Catch-up/Review	**13** Catch-up/Review	**15** **Exam 2**
18 Section 4.3	**20** Section 4.4	**22** Section 4.6
25 Section 4.6	**27** Section 5.1	**29** Section 5.2/**Quiz 6**
Apr 1 Section 5.3	**3** Section 6.1	**5** Section 6.1/**Quiz 7**
8 Catch-up/Review	**10** Catch-up/Review	**12** **Exam 3**
15 Section 6.3	**17** Section 6.4	**19** Section 6.4
22 Catch-up/Review	**24** Catch-up/Review	**26 Reading Day** **No Class**