Math 3325 – 17088 (Spring 2018)
Transition to Advanced Mathematics *

Instructor:	Dr. Blerina Xhabli
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Course Homepage:	www.math.uh.edu/∼blerina
Lecture Time/Room:	1:00pm – 2:30pm TuTh / F 162
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Office Hours:	Tu/Th 11:45am – 12:45pm and/or by appointment

Prerequisites

Math 1431 (Calculus I) and Math 1432 (Calculus II).

Textbook

A Transition to Advanced Mathematics, Seventh Edition, by Douglas Smith, Maurice Eggen and Richard St. Andre.

Course Description/Objectives

This course is an introduction to proofs and the abstract approach that characterizes upper level mathematics courses. It serves as a transition into advanced mathematics, and should be taken after the initial calculus sequence and before (or concurrently with) mid-level mathematics courses. The goal is to give students the skills and techniques that they will need as they study any type of advanced mathematics, whether it be in pure mathematics, applied mathematics, or application-oriented courses. In particular, this course covers topics that are ubiquitous throughout mathematics (e.g. logic, sets, functions, relations) and helps prepare students for classes such as Real Analysis, Abstract Algebra, and Advanced Linear Algebra, that are required for math majors and math minors.

A major objective of the course is for students to learn to read, write, and understand proofs. Throughout the course students will be exposed to the notation,

*This course syllabus provides a general plan for the course; deviations may be necessary.

language, and methods used by mathematicians, and will gain practice using these in their own proofs. In addition, great emphasis will be placed on writing and communication.

Grading

The final grade for this class will be determined as follows:

Class Participation/Quizzes:	10%
Homework:	20%
Exam I:	20%
Exam II:	20%
Final Exam:	30%

Class Participation/Quizzes

Class participation is based on attendance and how engaged you are in class meetings. It is strongly recommended to attend every class meeting and pay attention, particularly since some lecture material might not appear in the text.
Questions on exams will be drawn from homework, reading, and lectures. If you have to miss class for school approved reasons (e.g., school sponsored events, major religious holidays) you need to let me know as soon as possible, and prior to the missed class, for it to not count against your grade.
To encourage the class participation, I will give ***in-class Quizzes without any prior notice*** whenever time permits. These quizzes will be about the material learned during that lecture day or prior to that. The quizzes will be open books/open notes and will be solved individually.
Please keep in mind that class participation is 10% of your final grade, which is significant; a 10% difference in your final score in the class can change your grade by an entire letter grade or more (e.g., an A- to a B-, or a C+ to a D+).

Homework

A list of homework problems will be given every week on the course homepage. Homework will be due on Thursdays and returned on Tuesdays. **Late homework is not permitted for any reason.** Your lowest homework score throughout the term will be dropped to allow for missed assignments. Expect to spend approximately three hours working on homework outside of class for every hour spent in class. There is a graduate student grader for the course. If you have any issues with the way the homework or a particular problem is graded, please contact me. Your turned-in homework grade will be based on the following guidelines:

- Homework without a name will not be accepted and/or graded.
- Homework will not be accepted by email.
- Write legibly and neatly. Provide space for the grader to make comments.
- Your homework should be stapled in the upper-left-hand corner.
- Homework should be written on standard-sized paper (8.5" $\times$ 11").
- Solutions to homework problems should be written in sequential order.
- You may discuss the problems with other classmates as you figure out how to do the problem or establish its truth, but the write-up should be done by you alone and in your own words.
- Homework is due at the beginning of class on Thursdays. Late homework will not be accepted. Homework is considered late once I have started lecturing.
- Homework that is not picked up within two weeks of the date it is handed back will be discarded.
- Your lowest homework score throughout the term will be dropped when calculating your final grade.

Exam Dates

There will be two exams and one final. All will be held in our usual classroom.

Exam 1 (§1.1–§2.6)	Thursday, February 22
Exam 2 (§3.1–§4.5)	Thursday, April 5
Final Exam	Thursday, May 10, 2:00pm – 5:00pm

Books and notes will not be allowed on all exams. Please bring your Student ID to exams. You may be asked to show it to prove that you are the student whose name is on the exam you turn in.

Makeup Policy

Not being present for an exam or turning in an assignment late results in a score of zero, and you will not be allowed to make up the work. Exceptions may be made in the case of extreme circumstances, such as a documented, serious illness. In the event that you cannot be present to take an exam on the day it is held you need to speak to me in advance and make every attempt to do the work before (and not after) the rest of the class.

Reading Assignments

Reading assignments will be given weekly on the course homepage. Completing the reading assignments is just as critical as doing the written homework. You should read the assigned sections *before* we cover them in classes, so you are prepared to answer questions or ask about material you do not understand.

Tutoring

The Math Department is offering tutoring for 3000-level and 4000-level courses in the Mathematics Undergraduate Student Lounge (MUSL), located in Fleming Basement, Room 11. The Math Department has set up a schedule for tutoring of different courses throughout the semester by qualified math majors tutors.
Although any of the MUSL tutors will be able to help you with Math 3325 material, Jose Pedro Roderiguez Ayllon(the grader/tutor) will be familiar with our particular section of Math 3325 and be ready to answer questions about our homework or quizzes. He will be particularly focused on helping this section and up-to-date on what we are covering.

Academic Honesty

Plagiarism and cheating are serious offences. University of Houston students are expected to adhere to the Academic Honesty Policy as described in the Student Handbook. In this course this shall mean the following: Exams shall be worked on independently and without the use of your textbook, homework, calculators, or class notes. Homework and Written Proofs may be discussed with others, but the write-up must be done on the student's own and in the student's own words, without the help of other people or outside sources. If you are aware of anyone who is cheating or receiving unfair outside assistance, you are honor bound to inform the professor of what is occurring, and you will be considered an accomplice if you do not. Anyone caught cheating will receive a failing grade in the course and be turned over to the department chair and dean for further disciplinary action.

UH CAPS Statement

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless.
You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments if you or someone you know is in crisis.
No appointment is necessary for the Let's Talk program, a drop-in consultation

service at convenient locations and hours around campus. For more information about this program, please visit http://www.uh.edu/caps/outreach/lets_talk.html

Classroom Environment

As your professor, I hold the fundamental belief that everyone has a right to learn and deserves unrestricted access to education. I also believe that everyone in this class is fully capable of mastering the material. I value diversity, social justice, inclusion, and equality. I am therefore committed to creating a classroom environment that welcomes all students, regardless of race, gender, social class, religious beliefs, etc. If there is anything causing barriers to your inclusion or achievement, please come talk to me. Likewise, any student with a disability or chronic health problem should talk to me about the types of assistance that might be offered.

CSD Accommodations

Any student with a disability or chronic health problem for whom special accommodations would be helpful is encouraged to discuss with the instructor the types of assistance that might be offered. If you have forms from CSD that need to be filled out, you should come to my office to discuss the accommodations being made, and to fill out the required forms.

Withdrawal

- *Wednesday 01/31/2018*: the last day to drop a course or withdraw without receiving a grade.
- *Friday 04/03/2018*: the last day to drop a course or withdraw with a 'W'.

Policy on Incompletes

Incompletes are given only in very unusual circumstances, and never just to prevent a bad grade or provide the student with more time to prepare for an exam.

Schedule

The following is a tentative schedule which might be updated throughout the semester. Mostly we will cover two to three sections per week.

Table 1: Tentative Calendar for Math.3325 – Spring 2018

	Tuesday	**Thursday**
Week 1	Introduction	§1.2
1/16-1/18	§1.1	
Week 2	§1.3	§1.4
1/23-1/25	§1.4	§1.5
Week 3	§1.5	§1.6
1/30-2/1	§1.6	§1.7
Week 4	§2.1	§2.2
2/6-2/8	§2.2	§2.3
Week 5	§2.4	§2.5
2/13-2/15	§2.5	§2.6*
Week 6	Review	Exam I
2/20-2/22	Session I	(§1.1 – §2.6)
Week 7	§3.1	§3.2
2/27-3/1	§3.2	§3.3
Week 8	§3.3	§3.4
3/6-3/8	§3.4	§3.5*
Week 9	SPRING	BREAK
3/13-3/15		
Week 10	§4.1	§4.2
3/20-3/22	§4.2	§4.3
Week 11	§4.3	§4.4
3/27-3/29	§4.4	§4.5
Week 12	Review	Exam II
4/3-4/5	Session II	(§3.1 – §4.5)
Week 13	§5.1	§5.2
4/10-4/12	§5.2	§5.3
Week 14	§5.3	§5.4
4/17-4/19	§5.4	§5.5
Week 15	§5.5	Final
4/24-4/26		Review
Week 15	Optional	
5/1-5/3	Review	
Final Exam	**Thursday,**	**May 10, 2:00 – 5:00pm.**