Math3335, Section 001, Analysis 1, Fall 2014

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Office Hours: 1:00-2:00PM TTH

Section Information: Math3335, Section 001
Time and Place of Class Meetings: TTH 11 AM - 12:20 PM, 302 PKH

Course Prerequisites: Math 2326 (Calculus III) and Math 3300 (Introduction to Proofs)

Description of Course Content: This is an introductory undergraduate course in analysis. We will discuss key concepts and theorems in real numbers, sequences, series, limits of functions, continuity.

Student Learning Outcomes: This course will enable students to construct and think critically about concepts, definitions, and statements in analysis involving the real number system, sequences, limits, and continuity. In this endeavor, students will be able to

- decide whether statements involving the topics of the course are true or false,
- construct rigorous mathematical arguments to prove their conclusions,
- find and apply examples and counter-examples effectively, and
- exhibit confidence about the correctness of their mathematical arguments.

Required Textbooks and Other Course Materials: Understanding Analysis, by Stephen Abbott, published by Springer, ISBN 978-0-387-95060-0

Descriptions of major assignments and examinations: Except on testing days, classes will involve interactive work with classmates on True/False questions and Discovery Exercises in which we will develop the major concepts, check conceptual and practical under- standing, and present ideas and solutions to the class. Selected problems from the homework will be handed in as group work, to be written up and returned according to the guidelines below. These should be worked out with your group or on your own to help you learn the material and prepare for the exams. Discuss your work often with your peers and keep a neatly-written folder of your solutions to all the homework problems so that you will be well-prepared for the exams. Group homework is accepted only at the beginning or before the class at which it is due. Three tests and a final exam will be given to determine how you have mastered the material in the assigned homework (including group homework and homework that is not collected).

Aug 21	First class
Sept 11	Team Homework 1 due
Sept 18	Test 1
Oct 14	Team Homework 2 due
Oct 21	Test 2
Oct 29	Last day to drop
Nov 6	Team Homework 3 due
Nov 13	Test 3
Dec 4	Last class, Team Homework 4 due
Dec 9	Final Exam (Tuesday) 11 AM -- 1:30 PM

Attendance: Student must attend all lectures and discussions (15% of the grade).

Grading: Your work will be graded on correctness, completeness, and clarity.

Prepared Attendance and Participation:	15%
Team Homework:	15%
Three Tests:	45% (15% each)
Final Exam:	25%

Expectations for Out-of-Class Study: Between lectures, you are expected to review your notes, go through the appropriate section(s) in the book, understand all relevant examples in the book, meet with your group, and attempt all homework problems assigned for the section.

Instructions for Group Homework:

1. Hand in one set of instructions, prepared by the entire group.
2. All members of the group must work with the group on all the problems.
3. Written solutions must be read and agreed upon by each and every group member.
4. Groups are expected to hold at least three meetings, one hour or more in length, for each group assignment. More is likely necessary.
5. The cover page will consist of the clearly written name of each group member, each member must sign below her or his name. The signature indicates that the group members has worked on each problem and agrees with the final solution.
6. Every time you meet you will sign a form verifying that you attended and partici- pated. I will have these forms available for download from the class website. One page for each meeting.
7. Write out the complete problem before presenting the solution.
8. Work must be neat and clearly legible.
9. Include all steps and justifications that cannot be seen easily without writing them down. The ARGUMENTS are more important than the final answer.
10. Write on ONE SIDE OF THE PAPER ONLY.
11. Trim edges from paper torn from a spiral notebook.
12. Staple all pages in the upper left corner. NO PAPER CLIPS.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located to the right of room 302. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911.

MATH 3335 Analysis 1
Tentative Course Schedule/Assignment Sheet
Understanding Analysis, by Stephen Abbott

Aug. 21:	1.1: --
Aug. 25 to	1.2: (p11) #1, 2, 4, 6, 8, 10
Aug. 29:	1.3: (p17) #1, 3, 5, 6, 9
Sept. 1 to	1.4: (p27) #2, 3, 5, 8, 9, 11
Sept. 5	2.1-2.2: (p43) #1, 3, 4, 5, 7 (end of HW1)
Sept. 8 to	Problem discussion
Sept. 12	2.3: (p49) #2, 4, 5, 7, 11
Sept. 15 to	Review
Sept. 19	Test 1
Sept. 22 to	2.4: (p54) #1, 2, 4, 5
Sept. 26	2.5: (p57) #2, 3, 5
Sept. 29 to	2.6: (p61) # 1, 3, 4, 5
Oct. 3	2.7: (p67) #1, 3, 4, 6, 9 (end of HW 2)
Oct. 6 to	3.1:--
Oct. 10	Problem discussion
Oct. 13 to	3.2: (p82) #2, 3, 5, 7
Oct. 17	Review #2
Oct. 20 to	Test 2
Oct. 24	3.3: (p87) #1, 4, 5, 6
Oct. 27 to	--
Oct. 31	3.4: (p93) #1, 3, 4, 5 (end of HW 3)
Nov. 3 to	Problem discussion
Nov. 7	4.1--
Nov. 10 to	Review
Nov. 14	Test 3
Nov. 17	4.2: (p108) #1, 3, 5, 7
Nov. 21	4.3: (p113) #1, 3, 5, 7
Nov. 24 to	4.4: (p119) #1, 2, 4, 6
Nov. 28	4.5: (p124) #1, 2, 4, 8 (end of HW 4)
Dec. 1-5	Review

Supplemental problems might be added during the semester.