MATH 320-003: SYLLABUS SPRING 2012

PROFESSOR: Vera Zeidan.

OFFICE: D-312 Wells Hall, 353–0857.

OFFICE HOURS: MWF: 11:00- 12:00 noon, or by appointment.

EMAIL: zeidan@math.msu.edu

TIME AND PLACE: MWF: 1:50 –2:40 pm, WH–C 208

TEXTBOOK: Understanding Analysis by Stephen Abott, Springer 2001 (2nd printing 2002)

COURSE CONTENT: Chapters 1–6, and perhaps some additional topics, if time permits. The idea is to obtain a deep understanding of the theory that underlies the calculus you have already studied, and in process, to learn how to do rigorous mathematics.

PREREQUISITES: MATH 234 or MATH 254 or LBS 220. MATH 310 is recommended.

ATTENDANCE: You are expected to attend all class meetings. Any changes in this syllabus or in the schedule of exams, quizzes, etc will be announced during class meetings.

READING THE TEXT: Quickly read the section of the text to be covered before coming to class each day in order to have an idea of the material to be presented. Following the class period, read (and if possible rewrite) your class notes. Then read the text material thoroughly before attempting the assigned problems. To do well in this course you should expect to average 8–10 hours of study per week outside of class (about 3 hours for each scheduled class hour). Take care of your class notes. They can't be replaced. Your textbook can be.

CELLULAR PHONES: If you bring a cellular phone to class, make sure it is turned off.

HOMEWORK: This will be the most important part of your learning experience in this course! The homework (and the tests!) will consist largely of proofs, and your grade will depend upon both the correctness and clarity of your argument: proofs should be written in complete sentences, with appropriate use made of mathematical notation (your textbook will serve as a guide to how to do this); proofread what you have done to be sure that it is complete and makes sense; work on making your arguments clear and concise; pay attention to your handwriting (I will give a zero to work that I deem illegible). You may discuss any of the problems with others, if you wish, as long as you do the final work alone and use your own wording in writing up the homework to be handed in (see also the policy about academic integrity below). No late homework will be accepted. Tentative homework assignments are indicated in the attached sheet. Due dates for homework are January 25, February 22, March 28, and April 11. Problems collected will be chosen from the tentative list and will be announced more than one week before the due date. Total hw worth 200 pts.

TESTS: There will be three in-class tests. The tests will be worth 100 points apiece and are cumulative, with emphasis on the most recent material. Exams are closed book and closed notes. The tentative dates are: Wednesdays February 8, March 14, and April 18.

QUIZZES: There will 10–minute pop–quizzes in those weeks where there is no assignment due, nor a test. Each quiz will be worth 10 points and covers the material not covered in the previous assignment or test. Each quiz is worth 10 points, and 5 quizzes scores will be retained.

PLEASE TURN OVER

HANDOUTS: There will be several handouts and supplemental materials in addition to the hw from the textbook. All of those materials are availble at class page through the link
https://mathdata.msu.edu/CP/RW/S320_003.html
Homework or tests not picked up by a student on the day it is handed out will kept by Dr. Zeidan in her office.

MAKE-UPS: Make–ups will not be permitted except for a severe medical problem, dire family emergency, or a conflicting University activity that cannot be rescheduled. A written note from an appropriate person (doctor, parent, etc.) is required. If at all possible, you should contact Dr. Zeidan *before* the missed test. NO late homework will be accepted.

FINAL EXAM: Tuesday May 1, 12:45-2:45 p.m.
The final will be worth 200 points. It will cover material from the whole course.

HELP: You are welcome to see me in office hours, by appointment, or ask short questions via email. It is possible that the MLC will run some sessions to help with the writing of proofs. Also, you are encouraged to discuss with others. Explaining concepts and techniques to fellow classmates is an excellent way for you to better understand them yourself.

GRADING:

- Preliminary grade: This will depend solely on examinations and homework: 750 total points: 300 points for tests, 200 points for assignments, 50 points for quizzes, and 200 points for the final exam. To convert your score on a Test to a grade, use the following scale:

90–100%	4.0;	85–89%	3.5;	79–84%	3.0;	73–78%	2.5;
65-72%	2.0;	60–64%	1.5;	55–59%	1.0;	0–54%	0.0

- Final Grade: In most cases your preliminary grade will be your final grade. However, other factors, such as: exceptional effort, positive contributions to the classroom experience, improvement over time ..., can play a role in raising your preliminary grade, whereas negative factors such as lack of effort or declining performance can lead to failure in the course or dismissal from the class.

ACADEMIC,HONESTY: The University's policy concerning academic integrity is covered by the Spartan Life handbook in the General Student Regulations section. According to the handbook: "No student shall claim or submit the work of another as one's own."

IMPORTANT DATES:
Monday -1/09/12 - Classes begin
Friday 1/13/12 Online open add period for Spring semester ends at 8pm.
Monday 1/16/12 Martin Luther King, Jr. Day. No classes are held.
Friday 1/20/12 Last day to late add a course or change sections within a course. Last day to drop to a lower level course.
Friday 2/03/12 End of Tuition Refund
Wednesday 2/29/12 Middle of Semester. Last day to drop a course with no grade reported.
Monday 3/05/12 to Friday 03/09/12 Spring Break no classes.
Friday 4/27/12 Last day of classes.
Tuesday May 1: Final Exam, from 12:45– 2:45 pm

DISCLAIMER: The instructor reserves the right to make any changes she thinks academically advisable. Changes will be announced in class.

PLEASE TURN OVER

MATH 320–003: TENTATIVE HOMEWORK ASSIGNMENTS (SPRING 2012)

Sections	Exercises
1.1&1.2	Handout #1
1.2	3,5,6,9,10,11
1.3	2, 4–8
1.4	1–4, 5, 6, 7, 8 Handout #2,
1.5	3, 4
2.2	1–4, 6, 7, 8
2.3	1–4, 6, 7, 8–10
2.4	2–5, Handout #3, #4
2.5	1,3,4, 5
2.6	1,3, 4
2.7	1,2,3,4,5, 6,9,10,11
3.2	1–5, 7, 9, 11, 12
3.3	1, 3–5, 7
4.2	1,2,3,5,6,8
4.3	1,2,3,7,11,12
4.4	3, 4, 6, 7, 8, 9,10 Handout #5
4.5	2–5, 7 Show that every polynomial of odd degree has a real zero.
5.2	1–5, 8
5.3	1–5, 6, 8
6.2	1–4, 5, 7, 8, 9, 11
6.3	1,2, 3
6.4	3, 6, 7(a)
6.5	1(a) 2, 3, 5
Exercises from Supplemental materials 1-5.	

HOMEWORK GUIDELINES:

- Write up the problems in order, and neatly, using only one side of the page and leaving lots of space for me to write comments. Staple your sheets together.
- Begin each problem with a statement of that problem.
- Proofs should be written in complete sentences, with appropriate use made of mathematical notation (your textbook will serve as a guide to how to do this). Proofread what you have done to be sure that it is complete and makes sense. Work on making your arguments clear and concise. Make appropriate use of notation and diagrams.
- If you leave a small gap in a proof that you are not able to fill in, note this down. I will try to indicate how to fill it in my comments.
- Start early!
- If you work with others, you must write up your final solutions independently. Add a note to your solution listing the other people you consulted.