MA251 Fall 2017: Calculus I Syllabus

MA251.02: 10:00 MWF: B01 KH, 9:25-10:40 Th: 005 KH

Dr. Lisa Oberbroeckling (o-burr-brek-ling)

Office: 312 Knott Hall **Phone:** 410-617-2516
Piazza: `https://piazza.com/loyola/fall2017/17fama25102/home` **GET THE APP!**
E-mail: `loberbro"at"loyola"dot"edu` OR `loberbroeckling"at"loyola"dot"edu`
WeBWorK: `https://webwork.loyola.edu/webwork2/MA251-FA17-OBER/`
Class webpage: `http://math.loyola.edu/~loberbro/ma251/index.html`

Office Hours: Wednesdays 1-2 and Thursdays 1-2:30. Also by appointment (see my schedule available online).

Course Description: A rigorous approach to Calculus for all majors. Topics include limits, definition, interpretation, and applications of the derivative; differentiation rules; antiderivatives; definition of definite and indefinite integrals; and the Fundamental Theorem of Calculus. *Degree credit will not be given for both MA151 and MA251.*

Learning Goals:

- Find limits numerically and/or algebraically.
- Find the derivative of a function numerically, from the definition, and/or algebraically.
- Demonstrate an understanding of the derivative through applications and theoretical properties.
- Approximate a definite integral numerically.
- Demonstrate an understanding of the Fundamental Theorem of Calculus.

In addition, this course follows the broader University Learning Aims and the Natural and Applied Sciences Learning Aims.

Text: Required: *Single Variable Calculus: Early Transcendentals, 8th Edition* by James Stewart. The student solutions manual is not required but you may find it useful. We will cover most of Chapters 1-5. More detailed information can be found on Piazza.

Calculators: A graphing calculator is not required but may be useful FOR HOMEWORK. You need nothing fancier than a TI-83 or its equivalent. DESMOS.COM is just as useful for homework. **YOU MAY NOT USE GRAPHING CALCULATORS ON QUIZZES OR EXAMS.**

Grading:

Based on:	
WeBWorK	15%
Quizzes	15%
2 Exams	20% & 23%
(higher exam is worth 23%)	
Final exam	27%

Basic Scale		
A	90-100%	I give +/- grades, the cutoffs being at the
B	80-89%	7's and 3's, respectively.
C	70-79%	Thus 80-82.9 = B-, 83-86.9 = B, and
D	60-60%	87-89.9 = B+.
F	0-59%	

Homework and WeBWorK: This course will emphasize problem solving and some applications of mathematics. Homework problems will be assigned from each section that we cover and posted on the homework webpage. Also, you will be asked to do homework on the computer through WeBWorK. *The WeBWorK counts towards your grade. Even though I will not be collecting the homework assigned from the book, it is important for you to be able to do all of the problems and understand the concepts behind them.*

Quizzes: There will be short quizzes every Friday at the end of class unless told otherwise. They will cover the material on the week's homework problems (both textbook and WeBWorK problems) and examples done during class. *I will only answer brief questions before the quiz;* questions should be taken care of in previous classes or office hours. There are no make-ups on quizzes. **The lowest quiz score will be dropped.**

Exams: There will be 2 in-class exams during the term. They are tentatively scheduled on Thursday, October 6 and Thursday, November 10. Other information about the exams will be announced in class as each exam approaches.

Final Exam: The final exams is cumulative. Specific information will be given later.
MA251.02: **Saturday, December 16 at 9 AM**.

Extra Credit: Do not count on extra credit in this course to boost your grade. I make it a policy to not give extra credit on an individual basis so do not ask for it, especially at the end of the semester.

Attendance Policy: I do not take attendance very day, but I do pay attention to who shows up. If you must miss class, it is your responsibility to find out what you missed. It is best to get notes from a classmate; my notes will not be useful to you. If you cannot make it to an exam because of illness or family emergency, let me know **in advance** by phone or e-mail. Make-ups will be given only under these circumstances. Don't abuse this. No changes can be made to the date and time of the final exams.

Classroom Etiquette: When you come to class, I expect you to not only be in attendance physically but also mentally. That means no cell phones, no leaving class during lecture, no extraneous chatter, etc. If you know you must leave class, sit by the door to minimize the disruption. If cell phones and texting become a problem, I will confiscate the phone.

The goals of this course are best accomplished when in a setting of mutual respect. The study of mathematics does not usually lead to much controversy. That being said, we must all work to provide a safe environment that is conducive to learning. All are welcomed and encouraged to actively participate in the learning of analysis, regardless of gender, race, nationality, native language, sexual orientation, gender identity, political ideology, and especially personal mathematical history. Any student who feels she or he is experiencing a hostile environment should speak with me immediately.

Student Athletes: If you are a student athlete, please provide me with your travel and game schedule indicating when you will need to miss class to participate in athletic events. While travel for athletics is an excused absence, you will need to make up any missed work. Absences only on the travel letter will be accommodated.

Students needing Accommodations: To request academic accommodations due to a disability, please contact Disability Support Services (DSS), Newman Towers West 107, at DSS@loyola.edu or call 410-617-2750/2062. If you already registered with DSS and requested an accommodations letter (and DSS has sent the letter to your professors via email), please schedule a brief meeting to discuss the accommodations you might need in this class. Please contact Marcia Wiedefeld, Director of DSS, if you have any questions at mwiedfeld@loyola.edu or 410-617-2062.

Honor Code: All students of the University are expected to understand the meaning of the Loyola University Honor Code. Ignorance of the Code is not a valid reason for committing an act of academic dishonesty. The following constitute violations of the Code and are defined in the Community Standards Handbook: cheating, stealing, lying, forgery, plagiarism and the failure to report a violation.

I expect you to work with others on homework (by collaborating, not copying!). I will ask you to sign a pledge on exams but not on other turned-in work (like quizzes) although I will expect the same honesty on all of them. Any questions or concerns should be directed immediately to me.

Basic WeBWorK Information

- LOGIN NAME: Your login name is the same as your Loyola e-mail user ID (for example, mine is loberbroeckling).
- PASSWORD: Your initial password is your Loyola student ID number without leading zeroes. You should change this password to something more secure and something you can remember.
- RANDOMIZATION: something about each problem is randomized. It could be the numbers used in the problem, the order of a matching problem, etc. This is so when you work with others, the *process* or *concept* of the problem are stressed, not the arithmetic. After five attempts on a problem, the problem rerandomizes, so ASK QUESTIONS.
- DATES: There are two important dates, the Reduced Scoring Date and the Due Date. The Reduced Scoring Date should really be thought of as the due date. After that, you can get up to 50% on any problem you complete correctly until the official Due Date. Think of the Reduced Scoring Period (the period between the Reduced Scoring Date and the Due Date as a "last chance" period for partial credit.
- SUBMITTING: Hitting the submit button for each problem is how the scores are stored; there is no global "now submit this assignment" process you need to do.
- ATTEMPTS: Most homework problems have a maximum of 10 attempts, others (such as matching or multiple choice) will have fewer. ASK FOR HELP IF YOU'VE TRIED FOUR TIMES. As mentioned above, after five attempts, many problems will re-randomize the problem.
- I also designate textbook problems on the class homework website are for further practice or to review in the future. I will never collect these problems.
- If you are logged on to WeBWorK for longer than a certain amount of minutes (10? 30?) without any activity, you will be asked to log in again. This is a security measure. You can resume your work after you logged back in. All your submitted results from the last log in will be saved.

WeBWorK Advice

- If you have problems with WeBWorK, contact me through Piazza, email, phone or in person right away.
- Download and print the generated PDF hardcopies of the problem sets.
- Keep your work in a notebook or some other organized way as if you were turning it in.
- Read and do the Intro problem set.
- Don't guess; it's neither efficient nor effective.
- Give exact values or 4 or 5 significant digits for (floating point) numerical answers.
- If I go through a problem in class or you are working with others, **don't just go through and try and change the numbers in yours to match my or your friend's numbers.**
- Use Preview Answers.
- Keep track of the time and date due!
- Form a study group.

General Advice

- This course will test your study and time management skills. The **homework/WeBWorK exercises WILL be time consuming** until you get the hang of them, so DO NOT put off the homework until the night before they are due. I cannot and will not give extensions on these due dates.
- Organize your work for WeBWorK in a folder or notebook, clearly labeled.
- Don't use the fact that I don't collect the book homework and I drop a quiz to blow them off. You might need that drop later on in case you get sick or do not do well. You will also need to know that material for the exams and later material!
- Participate in class, ASK QUESTIONS, **make use of my office hours**. If you get behind or stuck, see me or work with other students RIGHT AWAY.
- Form a study group. Learning math is best as a social activity. Working together on homework is allowed, as long as everyone contributes. I've also found that the best way to learn material is to try and explain it to someone else (SHAMELESS PLUG: become a tutor!). And hopefully that someone else can then explain another problem to you.
- READ THE BOOK. Lectures will be much more understandable. It will be important to READ the book, not just look at the highlighted boxes because I will not be able to cover all of the details or show nearly enough examples in class.
- If you think you'll need extra help, get it as soon as possible. Do not wait until right before an exam! There are tutoring services available – most are FREE.