CALCULUS
MATH 1550
SECTION 27

Course Information

- **Course:** Math 1550 Section 27
- **Text:** Calculus (early transcendentals), 8th ed.
- **Author:** James Stewart
- **Course Content:** Chapters 2 through 6, plus some topics from Chapter 8 of text-book.
- **Classroom:** 115 North Hall
- **Time:** 13:30 - 14:20 MTWThF

Instructor Information

- **Instructor:** Yilong Wang
- **Office:** 107 Lockett Hall
- **Office Hours:**
    Mondays 10:30 - 11:30 in 107 Lockett Hall
    Wednesdays 9:00 - 10:00 in 111 North Hall
    Fridays 10:00 - 11:00 in 107 Lockett Hall
    or by appointment
- **email:** `yilongwang@lsu.edu`

Course Description

This course is a five hour introductory calculus course designed for math, science and engineering majors and certain other technical majors. It satisfies five hours of the General Education Analytical Reasoning requirement. This course is a General Education course in the analytical reasoning area because it includes the following area learning objective: "LSU graduates will employ scientific and mathematical models in the resolution of laboratory and real-world problems."

As a 5-credit course, students are expected to have ten hours of coursework outside of class per week, for a minimum time commitment of 15 hours per week.

ALEKS Course Prerequisite

To enroll in this course you need to have a minimum score of 70% on the ALEKS Calculus Placement Test. More information on the LSU calculus ALEKS requirement is available here: https://www.math.lsu.edu/ugrad/ALEKS

This test covers the fundamental precalculus skills that you will need to succeed in this course. If you achieved your ALEKS score in a way that does not reflect your own skills and knowledge, then it is very likely that you will fail this course. In such a case, you are strongly urged to work through the ALEKS learning modules over the next two weeks so that you can

attain a passing score that reflects what you know. The following modules are particularly strongly correlated with success in Calculus I: Exponentials and Logarithms, Trigonometry, Rational Expressions and Functions, and Radical Expressions.

Graded Work

Final Exam	Comprehensive	25%
Exams	Four hourly exams	60% (15% each)
Quizzes		5%
WebAssign		10%

The Final Exam: The Final exam will take place on December 8, 15:00-17:00. There will be no early final exam exceptions. Any authorized make-ups will be on Monday December 10th.

WebAssign: We will be using WebAssign to do online homework and quizzes. If you have already purchased a Webassign access code for calculus in a prior semester, you can re-use that code with no additional purchase if it is a multi-term "Lifetime of the Edition" code for the 8th edition of Stewart's Calculus textbook. If you do not have an access code and need to purchase one, LSU has negotiated a special discount for Webassign access in calculus that is available at this site: **http://www.cengagebrain.com/course/2798589**. It is $92.50 for a multi-term access code alone, or $103.10 for a multi-term access code plus loose-leaf pages of the textbook. Since the access code provides access to the online e-book, the physical pages of the textbook are not necessary unless you prefer reading from paper instead of from a screen. There is also an option to buy access to buy a 1-semester access for all lsu courses which are using webassign for $119.99. Look at description in file named "webassignpurchasing" at the top of the course moodle page.
Create a WebAssign account by going to www.webassign.net and clicking on the link labelled "I have a class key." The key for our class is **lsu 7587 7386**. In the field that asks for your student ID, enter your LSU ID number (89....) without any hyphens or spaces. The student ID number is needed to transfer your scores into the Moodle gradebook.

Tests: There will **no make-up tests**, except in extreme cases. If you must miss a tests, you should notify me as soon as possible by email to `yilongwang@lsu.edu`. It is then your responsibility to request a makeup for legitimate absences. When a test is graded and returned, you should review it carefully. If you have any questions about the grading, please discuss them with me in a timely fashion.

Quizzes: There will be 10 in-class quizzes on Tuesdays starting from **Aug 28th**. The quiz will take place **at the beginning of the class**. You have 10 minute to finish the quiz. All quiz problems are taken from your Webassign homework (with numbers changed). I will drop your 2 lowest quizzes. There will be **no make-ups** for missed quizzes.

Calculators and Collaboration: You can use any technology available to help with homework, and you may collaborate with others while doing them. However, on in-class quizzes and exams you may only use a scientific calculator that does not do graphs or symbolic manipulation, such as solving equations and symbolically calculating derivatives and integrals. Also, work on in-class exams must be your own work with no assistance from anyone. During an exam or quiz, attempts to look at other students' work, the use of crib sheets or formula sheets, and any attempts to access the internet will be considered to be a violation of the LSU

Code of Student Conduct and will be reported to the Student Advocacy and Accountability Office.

Important dates The last day to drop a course without a W is Tuesday September 28th. The last day to drop a course with a W is November 2nd.

Grading Scale

A+	97+
A	93-97
A-	90-93
B+	87-90
B	83-87
B-	80-83
C+	77-80
C	73-77
C-	70-73
D+	67-70
D	63-67
D-	60-63
F	0-59

Test and Exam Schedule (subject to changes except for the final exam)

Exam 1:	Monday September 10
Exam 2:	Monday October 8
Exam 3:	Monday November 5
Exam 4:	Monday November 26
Final Exam:	Saturday December 8
	15:00 - 17:00

Quiz schedule

Aug 28, Sep 4, Sep 18, Sep 25, Oct 2, Oct 16, Oct 23, Oct 30, Nov 13, Nov 20.

Other comments & suggestions

- Do your WebAssign, and other exercises from the text. Do not fall behind.
- Plan on spending 2 hours each day reading the sections covered, reviewing your class notes and working homework exercises. Understanding latter material depends heavily on knowing the earlier material.
- You are to attend each regularly scheduled class and to keep up with the assigned work. As a matter of courtesy, please let me know in advance if you will come late to a class or need to leave a class early.
- Ask questions in class. This will also help your fellow students.
- If you drop by my office outside of office hours, I will happy to give you some help, unless I have some urgent task or am meeting with someone else. Please stop by and introduce yourself.

Topics Covered

A partial list of basic skills you should acquire during the course.

(1) Limits and Continuity
- Evaluate limits from a graph
- Evaluate limits at points of continuity
- Evaluate limits of indeterminate forms using algebraic simplifications and l'Hospital's rule
- Know what continuity implies about a graph and behavior of a function
- Determine points of discontinuity for functions defined as formulas or graphs

(2) Differentiation
- Know the various interpretations of the derivative (velocity, rate of change, slope of tangent line)

- Evaluate the derivatives of simple functions using a difference quotient
- Evaluate the derivatives of combinations of the basic elementary functions
- Take the derivative using implicit and logarithmic differentiation
- Find tangent lines and be able to use them as linear approximations
- Find critical values, local extrema and the intervals of concavity for differentiable functions
- Find absolute extrema of constrained functions
- Solve problems involving related rates
- Solve basic optimization problems
- Understand the Mean Value Theorem for Derivatives

(3) Integration
- Understand anti-derivatives and know the basic anti-derivative formulas
- Have an understanding of the Riemann Integral as a limit of Riemann sums
- Be able to use both parts of the Fundamental Theorem
- Evaluate definite integrals using substitution
- Find the area between two curves and the volumes of solids of revolution
- Find arc lengths and areas of surfaces of revolution
- Understand the Mean Value Theorem for Integrals