

Math 1131 Syllabus

Course and Section:	50451, Summer 2005
Location:	Room 102, Howard Hall
Days and Times:	Mon-Thurs 10:55 a.m. – 12:55 p.m.
Instructor:	Dr. Tim Howard
Office:	Room 225, Faculty Office Building
Phone:	706-568-2172
Email:	thoward@colstate.edu
Website:	http://math.colstate.edu/thoward/Math1131/
Office Hours:	Available by appointment

Required Text: *Calculus: Early Transcendentals*, Fifth Edition, by James Stewart.

Catalog Course Description. *Prerequisite:* MATH 1113 (pre-calculus) with a grade of “C” or better or an appropriate placement score. Topics include exponential and logarithmic functions, introduction to limits and derivatives, computation and application of derivatives, and the definite integral.

Course Objectives

Students who complete this course will

- Understand the concept of a limit from graphical and computational perspectives
- Grasp the definition of the derivative of a function, both algebraically and geometrically
- Recognize the derivative as a rate of change
- Know how to apply the derivative in a variety of problems involving optimization, curve sketching, approximations, business, and economics
- Be able to state and interpret the key theorems of calculus -- the Mean Value Theorem and the Fundamental Theorem of Calculus
- Possess the capability to read a theorem in a calculus text, check the hypotheses in a particular situation, and draw appropriate conclusions
- Demonstrate the capability to solve mathematical problems that require multiple steps
- Articulate mathematical ideas orally and in writing

Required Calculators

All students are expected to use a graphing calculator with the following capabilities:

1. Plot the graph of a function on a variety of specified viewing windows,
2. Numerically find the zeros of functions and solve equations,

3. Construct a table with a user-defined function,
4. Find the regression line/polynomial/exponential function for a set of data points, and
5. Numerically evaluate derivatives and integrals.

Calculator sharing will not be allowed during tests. Calculators with symbolic differentiation or integration capabilities (such as the TI-89 and TI-92) are not permitted.

How Your Grade Will Be Determined

Course scores will be based on a variety of assessments including tests, written assignments, class participation, and a final exam. Components will be weighted as follows:

Three tests @ 18%	54%
Collected Homework	10%
Class Participation	11%
Comprehensive Final Exam	25%

Letter grades will be based on the percent ranges:

A: $90 \leq \text{grade} \leq 100$	B: $80 \leq \text{grade} < 90$
C: $70 \leq \text{grade} < 80$	D: $60 \leq \text{grade} < 70$

I do not give extra credit assignments, so it is important to study hard and make every grade count. If it helps a student, and if the student has taken all three tests, I will drop her/his lowest test score and replace it with the score from the final exam.

Tests

Three in-class tests will be given during the term. *Absolutely no makeup tests will be given.* If I excuse a student's absence from a test, her/his score from the final exam will also be counted as the missing test score. I require advance notice of an absence in all but the most urgent situations.

Students arriving late for a test and after a completed test has already been submitted will be prohibited from beginning the test and will receive a zero for the test score. For the first such offense, the test score is eligible for replacement by the final exam score. However, the student will not be allowed to drop any other test score.

During testing, nothing will be permitted on students' desks except the printed tests, approved calculators, pencils, pens, and erasers. Food, drinks, cell phones, and other papers normally will not be allowed.

Homework Exercises

With each text section that we cover, I will assign a set of exercises. Most of these will not be collected. Their purpose is to aid the student in assessing her/his ability to apply the basic ideas from each lesson.

Collected Homework

Other exercises (besides those referenced in the previous paragraph) will be designated “For Discussion and Collection.” Normally, students will present these solutions in class. At the beginning of each week, every student will be expected to hand in a carefully written solution to one of the Discussion and Collection problems presented during the previous week. These problems will be graded on a very high standard.

Students are permitted to discuss their ideas about these problems with each other, but each student must write her/his own solution for submission. Submitting someone else’s work as your own is plagiarism. If you wish to discuss a problem with someone, I recommend that you do not take detailed notes. Instead, make certain that you fully understand the ideas. Then write up a solution later – in your own words. If you use someone else’s *idea* to solve a problem, that person should be clearly acknowledged in your write-up. (This is acceptable).

Under normal circumstances, late assignments will not be accepted.

Class Participation

This grade reflects your preparation for each class meeting, contributions to in-class discussions, presentation to the class of solutions of Discussion and Collection exercises, **and** engagement in designated in-class activities ~~and email submission of section web quizzes found on the web at http://www.stewartcalculus.com/media/4_home.php~~. This is not a grade that you will receive merely by showing up. Portions of the participation grade will necessarily be based on my subjective rating of your performance; you’re welcome to check on your progress at any time during the term.

Final Exam

The final exam will be comprehensive. All students are required to take the exam at the official exam time designated by the university (Friday, July 29, 11:50-1:50).

Academic Honesty

Cheating and plagiarism are serious offenses and will not be tolerated. Plagiarism is the act of presenting someone else's work as your own (this someone may be another student, a tutor, a member of the faculty, or an author). Any student found cheating or committing plagiarism will be subject to disciplinary action. In this course, possible disciplinary actions include the receipt of a zero on an assignment and the receipt of an "F" for the course grade. All identified cases will be reported to the Office of Judicial Affairs.

Retention of Graded Papers

Students' papers and final exams will be archived until the midpoint of the next semester. At that time, any unclaimed papers will be discarded.

Attendance and Absences from Tests

Attendance at each scheduled class meeting is mandatory. The second and subsequent unexcused absences will each result in a reduction of the student's final course grade by one letter. After four absences, a student normally will be dismissed from the course with the grade of "WF". Late arrivals to class and early departures are rude and might be counted as absences from an entire class period at the instructor's discretion.

Academic Withdrawal

Any course dropped after June 14 becomes a part of your academic record. From that date until mid term (July 6) a grade of "W" will be assigned for completed withdrawal requests (available through the ISIS online registration system) received by the Registrar. A grade of "WF" will be assigned for withdrawal requests received after mid term. The student is responsible for completing the withdrawal request and verifying that it has been received by the Registrar's Office. I advise your keeping a printed record of any withdrawal requests submitted.

Noteworthy Dates

Test days and assignment dates may be subject to change. Any changes will be announced in class.

June 22 – Test 1
July 4 -- holiday
July 6 -- midpoint of term; Test 2
July 19 – Test 3
July 29 (Friday) – Final exam, 11:50 – 1:50

Respectful Conduct

I expect all students to observe the following courtesies:

Arrive for class on time. Late class arrivals are disruptive and inconsiderate (and might be regarded as absences). Students who frequently arrive late will be withdrawn from the course with a grade of "WF".

Stay for the entire class.

Return from breaks by the scheduled time. I will allow one 10-minute break during the class period. This is your chance to visit the restroom, make a telephone call, or pick up a snack. Please budget your time accordingly and return at the time appointed.

Silence pagers and cell phones. Use of cell phones in the classroom will not be permitted; you should not bring one into the classroom unless the ringer is turned OFF. If you carry a pager, it must be set on silent mode or left outside of the classroom. Students frequently in violation of this policy may be asked not to return to class.

Students who fail to behave courteously may be asked not to return to class.

Students with Disabilities

If you have a documented disability as described by the *Rehabilitation Act of 1973* (P.L. 933-112 Section 504) and *Americans with Disabilities Act (ADA)* and would like to request academic and/or physical accommodations, please contact Joy Norman at the Office of Disability Services in the Center for Academic Support and Student Retention, Tucker Hall (phone 706-568-2330) as soon as possible. Course requirements will not be waived but reasonable accommodations may be provided as appropriate.

Tentative Course Schedule

Note: Unless I state otherwise, you are always expected to read the entire section, including all examples, after we cover that section in class.

Day	Section(s)	Assignment
Monday June 13	Orientation and Overview 1.1 Four Ways to Represent a Function	1.1 # 2, 5, 9, 12, 16, 17, 19, 27, 46, 52, 60* , 64, 66
Tuesday June 14	1.2 Mathematical Models 1.3 New Functions from Old Functions	1.2 # 4, 6* , 15, 16, 18, 20 1.3 # 1-3, 5, 11-13, 15, 37, 54, 64*
Wednesday June 15	1.5 Exponential Functions	1.5 # 5, 11-13, 16, 17, 22* , 26
Thursday June 16	1.6 Inverse Functions & Logarithms 2.1 The Tangent & Velocity Problems	1.6 # 7, 15, 24, 35, 41, 51, 54, 55, 63, 65, 68, 71 2.1 # 3, 6, 8
Mon, June 20	2.2 The Limit of a Function	2.2 # 2-4, 6, 8, 10, 14, 15, 19, 24, 28, 38*
Tues, June 21	2.3 The Limit Laws, Test review	2.3 #1,2,4, 12, 13, 15, 21, 24, 37, 41, 60*
Wed, June 22	Test 1, Section 2.4 The Precise Def. Of a Limit	TBA
Thur, June 23	TBA	TBA
June 27 – 30	Sections 2.5-3.1	TBA
July 5-7	Sections 3.2-3.4 (Test 2 July 6)	TBA
July 11-14	Sections 3.5-3.11	TBA
July 18-21	Sections 4.1-4.4, 4.6	TBA
July 25-28	Sections 4.7-5.3, Review	TBA
Friday July 29	Final Exam 11:50 a.m. – 1:50 p.m.	

* Denotes problems that are designated for Discussion and Collection. Each student is expected to submit a carefully written solution to one D&C problem each week.