

Spring 2014, MATH 131:503 Mathematical Concepts: Calculus

INSTRUCTOR: M. S. Mallikarjunaiah
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OFFICE: Blocker 506B
OFFICE HOURS: Monday 3-5PM, Thursday 10-12PM

Class Time: MWF 10:20-11:10, Location: HELD 111

Course Description: (Credit 3) Limits and continuity; rates of change, slope; differentiation: the derivative, maxima and minima; integration: the definite and indefinite integral techniques; curve fitting.

Prerequisites: High school algebra I and II and geometry. Credit will not be given for more than one of MATH 131, 142, 147, 151 and 171.

Text: *Single Variable Calculus: Concepts & Contexts*, 4th Edition, 2010

Author: James Stewart; **ISBN:** 0-495-55972-5 (hard cover) or 1-133-44425-3 (loose-leaf)

Note: When you registered for this class you paid for an electronic version of the textbook and access to your computer homework. Thus, you are **NOT** required to purchase a hard copy of the textbook. For more information go to <http://www.math.tamu.edu/courses/eHomework> and click on "student information page".

Calculator Policy: This course **REQUIRES** you to use a TI-83 or TI-84 (plus or silver edition) calculator or the TI-Nspire (non-CAS version). These will be the only calculators I will use in class for demonstrations. You will be allowed to use the calculator in the quizzes and exams.

NOTE: *It is considered CHEATING to have notes, formulas, or programs in your calculator other than the ones I give you to use. Consequences for cheating will be severe.*

Email Policy: Check your official TAMU email account EVERY day. You are responsible for any information I send via email. Also, because of privacy rights, I cannot discuss grades via email. Also, please include your full name, course number (Math131), and section number(503) in your email.

Cell Phone Policy: All cell phones must be turned OFF and out of sight during class, **NO TEXTING**.

Grading Policy & Letter Grade Distribution:

Homework Assignments	10%
Quizzes(Take home)	15%
In-Class Assignments	5%
Midterm Exam I	15%
Midterm Exam II	15%
Midterm Exam III	15%
Final Exam	25%
Total	100%

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Note: At the end of the semester, you will receive the grade you *earned* in the course according to the distribution above (***NO EXCEPTIONS***).

Tentative Exam Schedule:

Exam I : Friday, February 7th, 2014

Exam II: Friday, March 7th, 2014

Exam III: Wednesday, April 23rd, 2014

Comprehensive Final Exam: 8am-10am, Tuesday, May 6th, 2014

Note: Any questions regarding the grading of the Exams must be presented to me within one week of the return of the exams. Otherwise the grade will not be changed.

Make-up Policy: No make-up assignments, quizzes, or exams will be given without an official, written, University Excuse. An absence for a non-acute medical service or regular check-up does not constitute an excused absence. In case of illness, you **MUST** contact me within TWO working days of the missed assignmentquizexam; otherwise, you forfeit the right to a make-up. For more information please see *University Student Rules*.

Class Policy: To succeed in this class, attendance is a necessity. Be on time to class!! Once in the classroom, you will be expected to be respectful to everyone. This includes turning off and putting away cell phones, ipods, and newspapers. Also, it is very disrespectful to talk during lecture. If I feel you are being disrespectful, I will may ask you to leave the classroom.

Quizzes, Homework Assignments: Take home quizzes will be assigned every Friday and due next Friday in class. No late quizzes will be accepted except for the university-approved excuses. If you can't make it to the class, it is your responsibility to send me the work before the due date. Either written or web assign homework will be assigned every week.

Help Session: The times and locations for Math 131 Help Sessions will be announced by the second week of classes and can be found on my course web page. The help sessions have drop-in hours where you can get help with your suggested homework, online homework, class notes, or other problems. These help sessions are an excellent source of help, especially if you are unable to attend my office hours.

Week in Review: The Math 131 Week in Review is held by a lecturer in the math department and will cover the material taught in class the previous week. The direct link to the Week in Review can be found on our course web page. There, you will find the times, locations, and practice problems

for each review. You should print the practice problems and bring them with you to the Week in Review.

Scholastic Dishonesty: Copying work done by others, either in-class or out-of-class, is an act of scholastic dishonesty and will be prosecuted to the full extent allowed by University policy. Collaboration on assignments, either in-class or out-of-class, is forbidden unless I grant permission. If you cheat on an assignment, you will receive a zero. Also, you will be reported to the University. Another form of cheating is typing formulas in the calculator or using programs that give you an advantage over classmates. If I catch anyone cheating this way, you will get a zero on the assignment and be reported to the University for cheating.

Remember the Aggie Code of Honor: **“An Aggie does not lie, cheat, or steal or tolerate those who do.”**

For more information about the Honor Council Rules and Procedures visit the web site: <http://aggiehonor.tamu.edu/RulesAndProcedures/>

Americans With Disabilities Act (ADA) Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room B118 of the Cain Hall or call 845-1637.

Learning Outcomes:

At the completion of this course, students will be able to:

1. Identify basic functions and use them to model real-life situations.
2. Compute limits numerically, graphically, and algebraically, and apply them to the concept of continuity.
3. Understand the limit definition of the derivative and calculate derivatives of various functions using the limit definition and differentiation formulas.
4. Compare the graph of a function with the graphs of the functions first and second derivatives.
5. Find the local and absolute extrema of functions, including optimization applications.
6. Compute antiderivatives and understand the concept of integration as it relates to area.
7. Use the Fundamental Theorem of Calculus to evaluate integrals, including the method of substitution.
8. Apply integration as it relates to area between curves, the average value of a function, and further applications.