

Instructor name: Harry S. (Steve) Mills
Office: Ed Beaty Hall, 134K
Phone: (970) 339-6238 or 1-800-301-5388x6238

Required Course Materials and Resources:

Text: Thomas' Calculus, 12th Edition, ISBN: 9780321587992

E-Mail: Use E-Mail tool on Course Website, by clicking on "Classlist" link and then clicking on my name (Harry Mills) in the listing. In order for me to serve *all* students as efficiently as possible, *this* is the e-mail tool for you to use.

Course Website:

Login at <http://www.aims.edu/student/index.php>

Click on **My Courses** tab.

Select this course from the list, and explore the links! It's pretty self-explanatory.

Please see the Course Website and visit it regularly for announcements, this syllabus, course schedule, assignments, lecture notes, practice tests, homework and test solutions, and anything else we want to put there.

Unlined Paper for homework: I highly recommend just buying one ream of cheap, not-thick-as-cardboard paper, and use as much of it as you need. *Homework on ruled paper will not be accepted.* I'd say more, here, but I'll be bloviating on this in class too much as it is.

Stapler: Calculus homework that is more than one page that is not stapled in the top left corner will not be accepted. If *everyone* has a stapler, then the one day you don't bring one, somebody next to you will have one. Work this out. :o)

Graphing Calculator and Computer Algebra Access: A calculus student should either purchase a graphing calculator (TI-83 or TI-84 are baby bear's porridge) and Computer Algebra System (like *Maple*, *Mathematica*, *MatLab*, etc.) directly, or find and *use* (free) web-based resources that serve your needs as they go along. Anyone planning to be an engineer will eventually encounter CAS's.

Recommended Course Materials:

Student Solutions Manual: ISBN: 9780321600707. This can be really handy for saving time and helping you earn full credit on homework.

[PearsonMyLabandMastering](#): Comes with *e*-book (a cheap, nontraditional way of accessing the textbook), homework help, worked examples etc. The CourseID is MILLS65909 . While not required, students may find it very useful to have on-demand help on homework-type problems, and a video lecture that gives another teacher's take.

Course dates and times: 8/20 – 12/7 , 12:10-1:00 PM MTWRF

Course location: Ed Beaty 133 or 131?

Office Hours: See last page of this document or Course Website.

Catalog course description and prerequisites: Introduces single variable calculus and analytic geometry. Includes limits, continuity, derivatives, and applications of derivatives as well as indefinite and definite integrals. Trigonometric functions are included.

Prerequisite: "C" or better in MAT 121 and MAT 122, 80 or above on Accuplacer College Math Test, or 28 on the math portion of the ACT test, or 740 on the math portion of the SAT test. Five credits.

Grades without MyMathLab:

| | |
|---------------|-----|
| Grading: | |
| 4 Hour Tests: | 60% |
| Final Test: | 20% |
| Homework: | 20% |

| |
|----------------|
| Grading scale: |
| 90%-100% A |
| 80%-89% B |
| 70%-79% C |
| 60%-69% D |
| Below 60% F |

Chapter Tests: At the end of each of Chapters 2 – 5, there will be an in-class Chapter Test. Your Test Grade is the average of your Test Scores (as a percent). I will replace your lowest Test Score with the Final Test score, assuming your lowest test is worse than your Final.

Final Test: At the end of the course, there will be a 2-hour Final Test, at a specific time to be announced. Your Final Test Grade will be figured as a percent.

Homework: Your final homework grade will be based on 85% of the available points (approximately 600 points available, 10 per assignment). So if you're getting 85% each assignment, on average, you will earn 100% credit for the homework segment.

Virtually every day, you will submit (well-)written homework.
Each assignment is worth 10 points. No late assignments will be accepted.

MyMathLab Exercises:

If you wish to work all the online exercises, I will give you the option of applying the online work to your grade. This is experimental, at least for me. I want to reward students who want to use it regularly, but I don't want to force anyone to do it.

The issue, for me, is that I think the Calculus Sequence is where students learn a lot about thinking and writing in science, math, and engineering. It's a little more time-intensive for the instructor, but looking at daily written work is probably more important at this stage than at any other in your careers, to date. I think there's a LITTLE culture shock, but you will find that my expectations don't really add that much to the time, and the finished product is nice to have around for a portfolio and future reference.

Grades with MyMathLab:

| | |
|---------------|-----|
| Grading: | |
| 4 Hour Tests: | 50% |
| Final Test: | 20% |
| Homework: | 20% |
| MyMathLab | 10% |

| | |
|----------------|---|
| Grading scale: | |
| 90%-100% | A |
| 80%-89% | B |
| 70%-79% | C |
| 60%-69% | D |
| Below 60% | F |

The system I've used for the last 3 years (Calc I, II, and III):

10 points per assignment

- 2 or 3 points per problem, 3 or 4 problems get graded. A $\frac{2}{3}$ in the margin means you earned 2 out of a possible 3 points for a particular problem.
- 2 points per assignment for "supporting context." Someone reading your work shouldn't need to open the book to know what was asked and how it was answered.

Basically, you need to copy (or paraphrase) the instructions from the book, and then you need a decent narrative on how you solved it, and this amounts to just showing the steps. I will give examples throughout the semester.

There are always at least 10 available points, and often there will be 12 or more points available, but a 10 will still be considered 100%, so most students pick up a lot of bonus points along the way.

Make sure that your homework...

- ... is on unlined paper (copier paper, or the back of already-printed-on pages).
- ... is written on *only one side* (the FRONT) of each page (I won't even look at the back of any page.)
- ... is complete (including question instructions)
- ... is clear (show the steps!)
- ... is stapled in the top left-hand corner (if the front is facing up)
- ... is submitted with problems in the proper order. I won't go hunting for missing problems. If they're not where I expect them, I won't find them.
- ... has your name, this course (MAT 201) and the assignment (e.g. 2.1) at the top of the back of the last page in your assignment. Harder to describe in words than to show...

Late Homework is not Graded. You can turn it in, late and all I'm going to do is write a 5/10 for "five out of ten" at the top. I'm too busy trying to take care of the people who get their stuff in on-time.

Homework Solutions are always posted on the website after the homework due date.

Grades Miscellany:

Incomplete "I": You must successfully complete 75% of the course *and* have a compelling reason for an Incomplete.

Add/Drop: Last day to Add/Drop this course is September 5th.

Withdraw "W": The Grading System definition of a W is: "WITHDRAWAL: Indicates withdrawal from the course. Last day to withdraw is October 20th?. No Ws given after that date!

Audit Grade: See the catalog. The student must obtain instructor approval by the Drop/Add deadline for the course.

Before Class: The student who “gets more looks” at the knowledge has a huge edge on one who tries to do everything in one sitting. Learning to budget 30-minute chunks of time, where you’re not in a panic to *finish* in 30 minutes makes you a superior learner.

- **Make your first pass at the material** to be covered in the next meeting. The nice thing about taking an early look at the material is there’s no pressure to get it perfect in one sitting, and everything you read or write is going to help you.
 - Jot down the theorems and definitions that will be covered. Read and maybe take some notes on the examples. Do it at *your* pace, and not the pace of a *coffee-amped instructor, who assumes you’ve at least taken a first pass at the knowledge*. You’ll learn, through experience, how to leave room and use these quick notes as a template for note-taking in class.
 - Attempt a few exercises, to see what you’re up against. If you can work them, then *great*. If not, you’re more ready to hear me explain it than you were before *you make your first pass*. And if you do this part *smart*, then you’ll have all the grunt work (“context” that the teacher wants) done on your homework, before you start.
- **Budget some time to ask questions 1-on-1** (or in groups) in my office. While I am happy to answer a few homework questions, I *still* collect the homework at the beginning of class. *Right* before class (11-ish) is a popular time. *Last* year, I got us our own “study room” in Beaty, where my guys could hang out, from 11 to 12.

After Class:

- Start the homework as soon as possible.
- Any exercise you can't do, jot down your thoughts, then start a whole new piece of paper for the next problem and continue with the exercises. *Don't spend too much time on a problem that's a challenge*. Better to move on and come back to it, maybe armed with some help from the instructor, or just from letting it percolate in your brain, while you get the stuff done that you *can* get done.

Make-up test: I only do make-up tests for college-excused absences. If you're sick, you better have some documentary evidence. The deal, here, is the teacher typically isn't interested at *all* in making a whole ‘nother test, just for one person, around the time he’s busy grading the 30 tests that came in on-time. **THAT’s** the motivation, from *my* end. You’re doubling my workload, just for one person, when you ask for a makeup.

Calculators: A scientific calculator is required for this class. A graphing calculator is recommended but not required. (Homework problems requiring a graphing calculator may be done using an online grapher instead.) Unless otherwise specified in class, calculators are to be used only to calculate: add, subtract, multiply, divide, and calculate logs, roots, powers, trig functions and factorials. You will be required to show all other work on homework and tests. I will not give credit for answers given without work shown.

Graphing calculators are not allowed on tests. Cell phones or any other electronic device are prohibited on tests, even if they have a built-in calculator.

Academic Honesty: You may get help with your homework, but work on a test is to be yours alone. You will not be given credit for any work that appears to be dishonest. (This includes copying, crib sheets, use of graphing calculators or cell phones, corrections made after the test is graded, as well as any other unauthorized source of information.) If there is a pattern of such work on a test, you will receive a grade of 0 on that test. If I have misjudged you in such an instance, please come and talk to me.

Student Conduct and Civility Statement: *Let common sense and common courtesy prevail!*

If they do *not* prevail, the student will be held to the letter and spirit of Section 5, Subsections 600 (Discipline) and 601 (Rights and Responsibilities) of the Aims Policy and Procedures Manual, and Aims and I will take all appropriate actions to secure a safe and courteous learning environment for everybody. Nothing less will be tolerated. Details may be found at

<http://www.aims.edu/inside/policies/manual/policyProcedure.pdf>

(Scroll down and select #5-600 and #5-601 for full descriptions.)

Cell Phone Policy: If you have a cell phone with you in the classroom, make sure the ringer or beeper is off unless you are expecting a call due to an emergency situation. In that case you must inform the instructor in order not to disrupt the class unexpectedly.

Children on Campus: (Aims Policy Manual #3-600) (see the college website for additional information about this policy): All children on campus under the age of sixteen (16) must be under the direct supervision of a parent or legal guardian unless they are involved in a specific College approved and supervised activity.

Tutoring: Drop-in, individual, and guided study group tutoring is available to currently enrolled Aims students. For available subjects, hours, and additional questions, please call 339-6541 for Greeley, 667-4611 Ext. 3304 for Loveland, and 303-718-5905 for Fort Lupton services. Also, please visit our website at <http://www.aims.edu/student/learning-commons/tsi/index.php> for current information. The Computer Learning Lab staff provides assistance in various disciplines, including CIS, Business Technology, Graphics Technology and various programming languages. There are a large number of computers

loaded with current software available for student use. Please visit the website for additional information: <http://www.aims.edu/student/learning-commons/complab/>

Disabilities: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Disability Access Services Office privately to discuss her/his specific needs. Please be aware that before most accommodations can be allowed in class they must be approved through the Disability Access Services office. Students should contact the Disability Access Services office at 970-339-6388 or disabilities@aims.edu to set up an appointment to discuss the process of requesting reasonable accommodations. We are located in the College Center in the One-Stop Shop area on the 1st floor.

General Education Competencies: This course satisfies the following State GE categories: Critical Thinking, Technology, and Mathematics.

Learning Outcomes:

Solve selected algebraic and trigonometric problems.

Identify limits of Algebraic, Trigonometric, and Composite Functions

Solve for the derivatives of Algebraic, Trigonometry, and Composite Functions

Solve for the derivatives of selected functions.

Use the appropriate algorithm(s) (including product, quotient, and chain rules) to find derivatives of algebraic, trigonometric, and composite function.

Find derivatives of implicitly defined functions.

Use the first and second derivatives of functions to find extrema, points of inflection, sketch the graph of functions.

Set-up and solve applied problems selected by the instructor.

Find indefinite and definite integrals - Algebraic

Read, analyze, and apply to problems, written material related to the study of calculus

Write and speak clearly and logically and essays about topics related to calculus.

Demonstrate the ability to select and apply contemporary forms of technology to solve problems or compile information in the study of calculus.

My Weekly Schedule:

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------------|---------------|----------------|------------------|-----------------|---------------|
| 7:10 – 8:00 | | | | | |
| 8:10 – 9:00 | | Office | Prep | Prep | |
| 9:10 – 10:00 | | Office | Office | | Office |
| 10:10 - 11:00 | 121 | 121 | 121 | | 121 |
| 11:10 - 12:00 | Office | Office | Office | Office | Office |
| 12:10 - 1:00 | 201 | 201 | 201 | 201 | 201 |
| 1:10 – 2:00 | Office | Prep | Prep | Office | |
| 2:10 – 3:00 | | | | Prep | |
| 3:10 – 4:00 | | | | | |