

Calculus I
MAT 202 – G11
CRN 21082

Syllabus
Spring, 2009

Instructor name: Steve Mills

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Text: : **THOMAS' CALCULUS.** Thomas, George, Jr and Weir, Maurice and Hass, Joel. Addison-Wesley. 12th Edition. 2010

E-Mail: Use E-Mail tool on Course Website. Emergency e-mail: *steve.mills@aims.edu*

Course location: Ed Beaty 143

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:

Grading:	
4 Practice Tests:	20%
Midterm Test	30%
Final Test:	30%
Homework:	20%

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

Practice Tests – Given at the end of each chapter, with a generous curve. This category is only 20% of your grade, so you can use the Practice Tests to sharpen your claws for the Midterm and Final tests.

Curve on Practice Tests:

- A – 85 – 100%
- B – 70 – 84%
- C – 55 – 69%
- D – 40 – 55%

Midterm Test – Comprehensive over Chapters 7 and 8

Final Test - Comprehensive test

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

A typical point system (rubric) I use:

Context of the question – 1 point per exercise (*Someone reading your work shouldn't need to open the book to know what's being asked and how it was answered.*)

Solid supporting work (clear, complete) – 1 point per exercise

Correct Answer – 1 point per exercise

On-Time Delivery – 1 point for the whole assignment

I will *not* grade work that...

- ... is written on the *back* of the homework. (I'm a grade-one-side-only guy.) This does NOT mean you will squeeze an entire assignment onto one page. When you use multiple pages, you will only use one side of each page.
- ... is sloppy or illegible.
- ... has a staple through it. (*Leave an inch at the top! Staple the **corner!***)
- ... has problems out of order. (I won't go chasing around looking for exercises. If you get stuck on a problem, start a fresh piece of paper.)

Grades Miscellany:

MAKE-UP TESTS: You really shouldn't miss *any* class time or *any* tests. But provision is made for make-ups by way of dropping the lowest test score. If you miss a test, that will be the test that is dropped. Generally speaking, make-ups are available only if you are in the hospital, in jail, or there is a death in the family. In any case, I must receive prior notification that you will not take the test as scheduled (See contact information, above), and supporting documentation such as a doctor's note, court papers, or a funeral/obituary notice. In the last case, it is impossible to be sensitive enough about this after the fact, so I am notifying you *now* about this requirement.

CELL PHONES: Turn off all cell phones and put them away during class, unless you're a parent or an emergency worker on call. At the very least, put your phone on VIBRATE mode.

Tutoring Information: 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.

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

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 our Student Conduct Policy, which is discussed here:

<http://www.aims.edu/student/conduct/code-of-conduct?expanddiv=item1#expectations>

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 January 30th.

Withdraw "W": The Grading System definition of a W is: "WITHDRAWAL: Indicates withdrawal from the course. Last day to withdraw is April 12th. 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:

- Always read the next section before class. The Course Outline pretty much tells you what's next (In general, we're starting in 1.1 and cruising straight through to 6.5.)
- Jot down the theorems and definitions that will be covered. This will leave you free to learn more about what they mean and how to *use* them, which is what *I* want to talk about.
- Attempt a few exercises, to see what you're up against. *If it's easy for you, I have no problem with your turning in your homework at the beginning of class and leaving to do something else. But I'd rather have you in the room, to help explain things to others, perhaps?*
- 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. If we get "too big," I will shift one or more office hours to a classroom.

After Class:

- Start the homework as soon as possible.
- Any exercise you can't do, start a whole new piece of paper and continue with the exercises. *Don't spend too much time on a problem that's a challenge. Instead, write down a few ideas about it, and move on!!!*
- Complete any self-assessments I've assigned. These might very well be the most valuable learning experiences you have during the semester.

Make-up test: I don't like doing make-up tests. Instead, I will drop your lowest test score.

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

Standard Competencies:

- I. Write and state clearly the definitions and properties, differentiate, and integrate logarithmic and exponential functions.
- II. Set up and solve applied problems involving logarithmic and exponential functions as selected by the instructor.
- III. Differentiate and integrate the inverse trigonometric functions.
- IV. Define, differentiate, and integrate hyperbolic functions as selected by the instructor.
- V. Use the appropriate algorithm(s) ζ including integration by parts, trigonometric substitutions, partial fractions, numerical methods, etc. ζ to integrate algebraic, logarithmic, exponential, trigonometric, and composite functions.
- VI. Use various limit theorems to evaluate improper integrals.
- VII. Determine the convergence or divergence of various sequences and series.
- VIII. Use Taylor and Maclaurin series to express selected functions.
- IX. Use Taylor's formula with remainder to approximate selected functions.
- X. Identify and graph equations involving a variety of conic sections.
- XI. Convert between Cartesian and polar coordinates.
- XII. Graph and determine the area of regions defined by polar equations.
- XIII. Read, analyze and apply written material to new situations.
- XIV. Demonstrate the ability to select and apply contemporary forms of technology to solve problems or compile information.