

## MATH 1823: Calculus and Analytic Geometry I

Fall 2012, The University of Oklahoma  
Section 020, M W F 1:30-2:20 PM, PHSC 359

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**Prerequisites:** MATH 1523 at OU, or satisfactory score on the placement test, or satisfactory score on the ACT/SAT.

**Text:** *Calculus (7th ed)*, by James Stewart, Brooks/Cole, 2012, ISBN-13: 978-0-538-49781-7.

**Grading:** Homework and quizzes: 10%; each of the three midterms: 20%; final exam: 30%. Grading scale:

A: 90-100%; B: 78-89%; C: 66-77%; D: 56-65%; F: 0-55%.

**Attendance and make-up exams:** Attendance is required. 1-hour advance notice with legitimate and documented reasons is needed for missed midterms. 24-hour advance notice with legitimate and documented reasons is needed for missed final exam.

**Policies on Calculators and Computer Programs/Websites:** Not allowed during exams or quizzes. You may only use them for checking your answers on assigned exercises after you are done.

**Policies on Homework and Quizzes:** After each lecture, you are expected to 1) go over the material covered in the class in the textbook, read through all the examples and solutions, and do the assigned odd-numbered exercises and check the answer keys in Appendix I; and 2) do the assigned even-numbered problems and write it neatly with blue or black-inked pens or pencils on lined letter-sized sheets. Even-numbered assignments are due in 7-10 days. The deadlines will be given on the day the homework is assigned. No late homework is accepted. No calculator/computer is allowed unless specified otherwise on the problem. You may discuss with others when you do your homework but verbatim copying homework will be strongly discouraged by discrediting problem sets of both the person who copies and the person who loans his/her homework.

**Mathematical Writing:** Write all your "=", parentheses, and brackets wherever they should appear. For example  $\sin(2x) \neq (\sin 2)x$  and  $\sin 2x$  can mean either expression. For angles, we will be using radians instead of degrees.

$\pi = 180^\circ$ . Points might be deducted if handwriting is not legible or causes misunderstanding.

**Exam Preparation Suggestions:** In the first week of class, you should go through the “Diagnostic Tests” section of the book on your own. Pick and do a handful of problems and check the answers. Before each exam, you should also go over several exercises in the “Review” section at the end of the chapter which will be covered in the exam.

**Some important dates:**

- Monday, August 20, 2012 – First day of classes.
- Monday, September 3, 2012 – Labor Day (no class).
- Friday, September 21, 2012 – First midterm exam.
- Last day to withdraw with an automatic *W*: Friday, October 26, 2012 for undergraduate students and Friday, September 28, 2012 for graduate students.
- Last day to withdraw without petition to the Dean: Friday, October 26, 2012 (for graduate students a *W/F* grade is assigned for withdrawals processed during the period October 1–26).
- Friday, October 12, 2012 – OU-Texas football game holiday.
- Friday, October 19, 2012 – Second midterm exam.
- Monday, November 19, 2012 – Third midterm exam.
- November 21–23, 2012 – Thanksgiving break (no classes).
- Friday, December 7, 2012 – Last day of classes.
- Thursday, December 13, 2012, 8:00-10:00 AM – Final exam.

**Policy on W/I grades:**

Through the end of the sixth week of the semester, students can withdraw from the course with an automatic *W*. Between the seventh and tenth weeks of the semester, undergraduate students can continue to withdraw with an automatic *W*, but graduate students must obtain the instructor’s signature on the University’s “drop form” to withdraw from the course, and along with the signature the instructor must indicate whether the student is passing or failing at the time of the withdrawal. After the tenth week of the semester, all students can only withdraw via petition to the Dean of their college. The petition process also requires the instructor’s signature with a passing-failing indication at the time the petition is filed. Note that a “failing” indication on the petition means that

even if the petition is approved, your grade in the course will be weighted in your GPA as an *F*).

The grade of *I* (Incomplete) is not intended to serve as a benign substitute for the grade of *F*, and will only be given if a student has completed the majority of the work in the course (for example everything except the final exam), the course work cannot be completed because of compelling and verifiable problem beyond the student's control, and the student expresses a clear intention of making up the missed work as soon as possible. It is also required that students sign a written "Incomplete Contract" before a grade of Incomplete can be given. Such a contract makes clear what work is to be made up and when the make-up work must be completed.

**Academic misconduct:** All cases of suspected academic misconduct will be referred to the Dean of the College of Arts and Sciences for prosecution under the University's Academic Misconduct Code. The penalties can be quite severe.

**Don't do it!** For more details on the University's policies concerning academic misconduct see

[http://integrity.ou.edu/files/Academic\\_Misconduct\\_Code.pdf](http://integrity.ou.edu/files/Academic_Misconduct_Code.pdf)

This link also has information about students' rights to appeal charges of academic misconduct. For information about admonitions (either accepting or contesting them) see

<http://integrity.ou.edu/files/Admonition.pdf>

Students are also bound by the provisions of the *OU Student Code*, which can be found at

<http://judicial.ou.edu/content/view/27/32/>

**Students with disabilities:** The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the instructor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166: phone (405) 325-3852 or TDD (only) (405) 325-4173.

Math 1823: Calculus and Analytic Geometry I  
Section 002, Fall 2012 Syllabus

Week	Dates	Topic	Sections
1	Aug 20-24	Introduction Functions Review of trigonometry	1.1-1.3 Appendix D
2	Aug 27-31	Inverse functions Exponential functions Logarithmic functions	6.1 6.2 6.3
3	Sep 5-7	Tangent and velocity Limit	1.4 1.5
4	Sep 10-14	Limit laws, properties Continuity Derivatives and rates of change	1.6 1.8 2.1
5	Sep 17 Sep 19 Sep 21	Derivatives and rates of change (cont.) Review and catch-up First midterm exam	
6	Sep 24-28	Derivatives as functions Differentiation formulas	2.2 2.3
7	Oct 1-5	Derivatives of trigonometric functions Derivatives of exponential functions Chain rule	2.4 6.2 2.5
8	Oct 8-10	Implicit differentiation Derivatives of logarithmic functions Related rates	2.6 6.4 2.8
9	Oct 15 Oct 17 Oct 19	Related rates (cont.) Review and catch-up Second midterm exam	
10	Oct 22 -26	Linear approximations and differentials Maxima and minima	2.9 3.1
11	Oct 29-Nov 2	Mean value theorem Derivatives and shapes of graphs	3.2 3.3
12	Nov 5-9	Limits at infinity, horizontal asymptotes Indeterminate forms and l'Hospital's rule	3.4 6.8
13	Nov 12-14  Nov 16	Curve Sketching Optimization problems Review	3.5 3.7
14	Nov 19	Third midterm exam	
15	Nov 26-30	Newton's method Antiderivatives	3.8 3.9
16	Dec 3-7	Quizzes and reviews	
	Dec 13	Final exam	