M171 Calculus I - Fall 2012 Syllabus

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• Time: MTWF 1:10pm-2:00pm
• Office Hours: TBA


Calculators: Calculators are technically required for this course but it is possible to do well in the course without one. Calculators can be a useful tool for mathematics, making computations less tedious and aiding in exploration of sound mathematical intuition. However we must be careful, many students rely too heavily on calculators which can hinder the development of reasoning, estimation, and mental mathematics skills. For these reasons, calculators will NOT be allowed or needed on quizzes and exams.

Catalog Description: Differential calculus, including limits, continuous functions, Intermediate Value Theorem, tangents, linear approximation, inverse functions, implicit differentiation, extreme values and the Mean Value Theorem. Integral Calculus including antiderivatives, definite integrals, and the Fundamental Theorem of Calculus. Prerequisite: M 121 and M 122 or M 151.

Learning Goals: The purpose of this course is to learn the basic concepts in differential and integral calculus. In particular, by the end of the course students should be able to

(1) Understand the concepts of limit and continuity.
(2) Understand the concept of derivative (limit definition, geometric interpretation via tangent lines, interpretation as a rate of change).
(3) Be able to compute derivatives (including derivatives of functions defined implicitly).
(4) Understand the relationship between the derivative and the graph of a function.
(5) Understand the definition and the basic properties of the definite integral.

Homework: Homework is due at the beginning of class of its due date. Hand-in homework will be due on Wednesday; there will also be on-line work (found by going to the website http://lennes.math.umt.edu/webwork2/). Late homework will not be accepted as your lowest homework score will be dropped. Homework is to be one-sided, stapled, and with your name on the first page.

As on the exams and quizzes, answers by themselves are not adequate without clearly indicating your reasoning. You are expected to write a neat and coherent solution, and grading will be based on correctness, clarity, and justification. You are allowed - and even encouraged - to work with others on the homework as long as the solutions you present are your own. However, if you simply rely on me or others to direct you on every problem, then you will not improve your problem-solving skills, and you will likely find the exams quite difficult.

Quizzes: Quizzes will given at the end of each Friday class except for exam days. There are no make-ups given on quizzes for any reason. Your lowest two quiz scores will be dropped.

Midterm Exams: There will be three midterm exams given in class. TENTATIVELY, these will be given Monday Sept 24, Friday Oct 19, and Tuesday Nov 20. Makeups are given at instructor’s discretion and only in cases of emergency or other important circumstances. If you cannot make it to an exam, you must let me know BEFORE the exam is given.

Cell Phones: Your cell phone should be on silent and put away during class.

Differentiation Skills Test: This test will be given for the first time in class on Friday Oct 12. A score of 80% of greater is required to pass the test. You can take the test as many times as necessary, but you must pass this test by Thanksgiving (Nov 20) to pass the course. If you pass your first attempt, you will receive a bonus 2% on the Final Exam.
Final Exam (Required & Not Flexible): The final exam is a mandatory common final with all Calculus I sections held Wednesday, December 12, 6:00 p.m. – 8:00 p.m. Location: TBD

Grading: The grades cutoffs will be assigned as follows: A 93%, A- 90%, B+ 87%, B 83%, B- 80%, C+ 75%, C 70%, C- 65%, D+ 62%, D 58%, D- 55%.

The distribution of the portions of the grade is as follows.

- Homework: 20%
- Quizzes: 10%
- Exams: 45% (3@ 15%)
- Final: 25%

As mentioned above, each student must also pass the Differentiation Skills Test.

When an exam, quiz, or homework is returned, there is one week from the date of return for contesting the grading. After that time period the grade will be accepted as final.

Holidays and Important Dates:

- M Sept 3
- W Sept 5
- M Sept 24
- F Oct 12
- F Oct 19
- M Oct 29
- T Nov 6
- M Nov 12
- W-F Nov 21-23
- T Nov 20
- F Dec 7
- W Dec 12
- Labor Day, no classes
- Last Day to drop/add via CyberBear
- Exam 1
- Differentiation Skills Test
- Exam 2
- Last day to add/drop via paper form
- Election Day, no classes
- Veterans Day, no classes
- Thanksgiving Break
- Exam 3
- Last day to add/drop via petition
- Final Exam (6:00-8:00 p.m.)

Disabilities: Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Student (DSS). “Reasonable” means the University permits no fundamental alterations of academic standards or retroactive modifications. For more information, please consult http://www.umt.edu/disability.

Incompletes are given at the discretion of the instructor and only considered in cases where

- the student has been in attendance and doing passing work up to three weeks before the end of the semester, AND
- for reasons beyond the student’s control and which are acceptable to the instructor, the student has been unable to complete the requirements of the course on time.

Negligence and indifference are NOT acceptable reasons.

Misconduct: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code, available for review on-line at http://life.umt.edu/vpsa/documents/StudentConductCode1.pdf.