

Catalog Description: (from <http://www.umt.edu/catalog/mathsci.htm>)

U 162 Applied Calculus 4 cr. Prereq. Appropriate placement score or one of Math 121, 122, 151. Introductory course surveying the principal ideas of differential and integral calculus with emphasis on applications and computer software. Mathematical modeling in discrete and continuous settings. Intended primarily for students who do not plan to take higher calculus.

Goals:

The purpose of this class is to show how certain mathematical concepts (and, in particular, notions of a function, derivative, integral, differential equation, etc.) can be naturally used to describe and analyze real life phenomena that involve change. After introducing and studying these concepts we will use them as tools for making and solving simple mathematical models. Some models will be formulated in terms of differential equations. We will use analytical methods and computer programs for exploring these models. Most examples will be drawn from the economics, the life sciences and other disciplines. The students will learn the skills of differentiation, integration, and simple models building and analysis.

Text: D. Hughes-Hallett et al., Applied Calculus, 4th custom edition., John Wiley & Sons, Inc., 2011.

Grading: Your course grade will be based on 3 exams, 100 points each. The lowest of the three scores will be dropped; however all three tests must be taken ie I will NOT drop a zero. There will be ten quizzes of 10 points each with the lowest two dropped. There are **no** make-up quizzes. All the tests and quizzes are closed book; however a sheet of paper with notes will be permitted. In addition, calculators are also allowed on all tests and quizzes. When a test 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. There will be a 120 point final exam. If taken (see below) it *may not be* dropped. Total maximal number of points (for 2 exams + 8 quizzes + final) is 400. There is no graded homework, however recommended problems are given for each section and are strongly encouraged. Letter grades correspond to the following percentages:

A: [360-400] **B:** [320,360) **C:** [260, 320) **D:**[220, 260) **F:** [0, 220)

Exceptions to the above rules regarding taking tests, etc. may be made by the course coordinator on an individual basis. Also, extraordinary performance on the final may, at the instructor's discretion, be the basis for raising a grade.

Hard-working students will have an option to avoid taking the final. To qualify for this option and get an **A** grade, one must meet **all** of the following criteria:

1. You must take all three tests during the semester.
2. The sum of all the points for the tests and quizzes (*prior* to any quizzes being dropped) must average to an A grade (90% or higher).

This option does not automatically take effect; you must confirm your eligibility at the end of the semester with your TA or the coordinator.

Make-ups: **THERE ARE NO MAKE-UPS** for the turn-in assignments and quizzes, regardless of the reason (e.g. sickness, sports, family emergency, etc.); this is why the lowest is dropped. Exam make-ups will **ONLY** be given under special and extenuating circumstances, such as a death in the family or illness, provided that a note from the Health Service or doctor is furnished by the student **AND** permission is given by me **prior** to the exam. At most one make-up exam will be given.
It is your responsibility to notify me as soon as you know you will miss any exam and it must be either prior to or within 24 hours of the exam.

Add/Drop Policy: The last day to add/drop or change grading option to Audit by Cyberbear is **2/10**. The last day to change sections and to change grading options is **3/26**. This is also the last day to drop. Changes after this deadline and until **5/4** must be done by Petition to Drop/Add after deadline and approved by me, your advisor and the appropriate Dean. Approval requires genuine extenuating circumstances as listed in the university catalog.

Extenuating circumstances are:

1. Missing a substantial number of classes due to illness, accident or family emergency.
2. A change in work schedule that makes it impossible to attend class or devote adequate time to the course.
3. Registration in the course by error and never attending class.

Reasons that are not satisfactory include:

1. Forgetting to turn in a drop slip.
2. Protecting your grade point average.

Incomplete (I) Grades: To be eligible for an "I", the following conditions must be met:

1. The student must have been in attendance and **passing** the course up to 3 weeks before the semester ends; and
2. The student is unable to complete the course due to extenuating circumstances, which usually means serious illness or death in the family.

Incompletes are not given under any other circumstances and are always given at the discretion of the instructor. See the 2010-2011 catalog for further information.

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 online at <http://www.umt.edu/SA/VPSA/index.cfm/page/1321>

Special Accommodations: Students with disabilities are welcome to discuss accommodations with me.

Important University-Wide Info and Dates:

- Friday, 10 February, 5:00 pm: Last Day to Add/Drop by CyberBear. Also last day to select AUDIT option. After this date, a drop results in W on transcript and no refund is given.
- Monday, 20 February: President's Day
- 2 -6 April: SPRING BREAK
- Monday, 26 March, 4:30 pm: Last Day to Drop by Paper Form. Transcript will show WP or WF. \$10 fee.
- Friday, 27 April 5:00 pm: Last Day to Withdraw from all courses
- Friday, 4 May, 4:30 pm: Last Day to petition for a drop or change of grading option