

Spring 2-1-2018

## M 182.80: Honors Calculus II

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## Syllabus for M 182 – Honors Calculus II – Spring 2018

Professor: Jennifer Brooks

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Class meetings: 9:00 -9:50 (MTWF), Math 305

Office hours: Monday, Wednesday 2:00 – 3:00, Tuesday 3:00 – 4:00, or by appointment.

Text: *Calculus*, 6th Edition, Hughes-Hallett, et al, Wiley.

### Learning Outcomes

In this second course on the calculus of functions of a single real variable, we will focus on techniques of integration, applications of integration, sequences and series of real numbers, and power series. More specifically, by the end of this course you will:

1. Understand the relationship between differential and integral calculus (Fundamental Theorem of Calculus).
2. Understand some of the applications of integration, including area, volume, arc length, etc. This includes the ability to set up definite integrals as solutions to common application problems.
3. Be able to calculate antiderivatives using techniques such as integration by parts and trigonometric substitutions.
4. Have some familiarity with first-order differential equations.
5. Have a basic understanding of curves defined by parametric or polar equations.
6. Be able to test infinite series for convergence, and to find the interval of convergence of a power series.
7. Be able to find the Taylor series of a function.

### Assessment

There will be four components:

Homework: 15%

Quizzes: 15%

Three exams: 45%

Cumulative final exam: 25%

### *Homework*

Each Wednesday at the beginning of class, all homework problems assigned the previous week are due. **Late homework will not be accepted.**

### *Quizzes*

Each Wednesday there will be a 15 minute quiz. There will be no quiz during the week of an exam. Your lowest quiz score will be dropped, and hence make-up quizzes will not be given.

### *Exams*

In-class exams will be given on **Wednesday, February 21** , **Wednesday, March 21**, and **Wednesday, April 25**.

### **Students with Disabilities**

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction for students with disabilities in collaboration with instructors and Disability Services for Students, which is located in Lom-masson Center 154. The University does not permit fundamental alterations of academic standards or retroactive modifications.

### **Academic Misconduct**

All students need to be familiar with the Student Conduct Code. You can find it in the “A to Z Index” on UM’s home page.

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.

### **Important Dates**

- Feb. 19 (Monday): No class – Presidents’ Day
- Feb. 21 (Wednesday): Exam 1
- Mar. 21 (Wednesday): Exam 2
- Mar. 26 – Mar. 30 (Monday – Friday): Spring Break
- Apr. 25 (Wednesday): Exam 3
- May 8 (Tuesday): Final Exam 10:10 – 12:10