

CLASS TIMES: MTuWF 11:00-11:50am in Room 311, Mathematics Building

INSTRUCTOR: Ian Kit Nicolas ([iankit.nicolas@umontana.edu](mailto:iankit.nicolas@umontana.edu))

OFFICE HOURS: MW @ 1-1:50pm; TuTh @ 12-1:50pm located at the Math Learning Center (MLC, Basement Floor of Math Building) or *by appointment*.

DESCRIPTION: Offered autumn and spring. Prereq. M171 or M181. Techniques of Integration. Area computations. Improper integrals. Infinite series and various convergence tests. Power series. Taylor's Formula. Polar coordinates. Parametric curves.

MOODLE PAGE: The Moodle page will frequently be updated with new homework, website links, notes, grades, and any other pertinent files regarding the class. *You should visit the site regularly.* The website is found at:  
<https://moodle.umt.edu/course/view.php?id=28513>

TEXT: *Calculus, Single Variable*, 6<sup>th</sup> edition, by Deborah Hughes-Hallett et al., John Wiley & Sons, 2014 (ISBN 9780470888643).

GRAPHING CALCULATOR: *Strongly recommended.* I will be teaching using a TI-83/TI-84. I will also use Desmos (<https://www.desmos.com>) occasionally in class. Please note that calculators or computers capable of symbolic algebraic computations, like the TI-89 or nSpire, are *not allowed on tests, quizzes, or the final exam*.

LEARNING OUTCOMES:

1. Use the integral to find the area between two curves and calculate volumes of revolution, work, the average value of a function, and arc length.
2. Use standard integration techniques including trigonometric substitution, integration by parts, and partial fractions.
3. Identify and calculate improper integrals.
4. Use parametrized curves in rectangular and polar coordinates and calculate their derivatives, arc lengths, and enclosed areas.
5. Compute limits of infinite sequences and test for monotonicity and boundedness.
6. Compute sums of geometric series and telescoping series.
7. Determine the convergence, absolute convergence, and divergence of infinite series using standard convergence tests.
8. Compute the radius and interval of convergence of power series.
9. Compute Taylor series and Taylor polynomial approximation of functions.

MIDTERMS: There are three 50-minute in-class Midterm Tests on **Sept. 27th**, **Oct. 21st**, and **Nov. 13th**. Please see the Tentative Schedule for the sections covered in each test. Solutions to the tests are posted on the Moodle page after they are taken in class.

FINAL EXAM: There will be a Final Exam on all material covered in the course. This exam is tentatively scheduled for **Friday, December 13th @ 11am-1pm** located at **Mathematics Building, Room 311**.

**QUIZZES:** There will be regular 25-minute quizzes. There will be no make-ups for missed quizzes. *The two lowest quiz scores will be dropped.* Solutions for the quizzes are posted on the Moodle page after they are taken in class. See the Tentative Schedule for the sections covered in each quiz.

**HOMEWORK:** It is okay to work together with classmates on homework assignments, but you must write up your own solutions in your own words. *Late homework is not accepted. Answers alone will not suffice.* It is important to *show your work* and provide *explanations* for your answers. Your work should be *legible*. If I cannot read it, you will get no credit. Solutions for the written homework will be posted on the Moodle page after class on the dates they are due. *The two lowest homework scores will be dropped.* See the Tentative Schedule for due dates of the homework.

**ASSESSMENT:** 20% Homework  
10% Quizzes  
45% Tests: 3 Midterms (15% each)  
25% Final Exam

**GRADING SCALE:**

≥ 93%	90%	87%	83%	80%	75%	70%	65%	62%	58%	55%	< 55%
A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

**SOME IMPORTANT DATES:**

<b>Aug. 26</b>	First day of class
<b>Sept. 2</b>	Labor Day (no class)
<b>Sept. 4</b>	Last day to drop courses
<b>Nov. 11</b>	Veteran's Day (no class)
<b>Nov. 27</b>	Student Travel Day (no class)
<b>Nov. 28-29</b>	Thanksgiving Break (no class)
<b>Dec. 6</b>	Last day of regular class
<b>Dec. 13</b>	Final Exam (11am-1pm)

Please see the Registrar's website (<http://www.umt.edu/registrar/calendar.php>) for a complete list of Fall 2019 dates and deadlines. Also, please see the Tentative Schedule for dates and deadlines in the class.

**MAKE-UP POLICY:** Make-ups for tests or quizzes will *only* be given under special and extenuating circumstances such as a family emergency or illness provided official documentation is furnished by the student. It is your responsibility to notify the instructor as soon as you are aware that you will miss a test in order for a make-up to be possible. Early final exams will *not* be given.

**ACADEMIC 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. The Code is available for review online at <http://www.umt.edu/student-affairs/dean-of-students/default.php>.

**ACCOMMODATION:** The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors and Disability Services for Students (DSS). If you think that you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommassen 154. I will work with you and DSS to provide an appropriate accommodation.