1-2014

M 172.03: Calculus II

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Math 172 Calculus II, Section 3: Spring ‘14

Catalog Description for Math 172

Learning Goals:

1. Use the integral to find the area between two curves, volumes of revolution, work and the average value of a function;

2. Apply integration by direct and trigonometric substitution, parts, and partial fractions. Trigonometric integrals;

3. Use the integral to find arc length;

4. Explain and apply infinite sequences of real numbers, their monotonicity and boundedness, and the Monotonic Sequence Theorem;

5. Explain and apply convergent series of real numbers, geometric series, telescoping series, and the basic test for divergence;

6. Explain and apply the integral, comparison, limit comparison, and alternating series tests for series convergence;

7. Explain and apply absolute convergence and the ratio and root tests;

8. Explain and apply power series, radius of convergence, and the integration and differentiation of power series;

9. Explain and apply Taylor series and Taylor polynomial approximation of functions;

10. Explain and apply parametrized curves in rectangular and polar coordinates, their derivatives, arc lengths and enclosed areas.

Teacher: Greg St. George

Office: Math 313 (Third floor, in the elevator wing). Office phone: 243-4146 e-mail: gregory.stgeorge@umontana.edu

Office hours: Monday & Friday 2:10-3:00, Tues. & Wedn. 12:10-1:00. These may need to be changed as the semester proceeds to accommodate various committee meetings and other assorted administrative duties. Any changes will be announced in class.


Website: I think I will set up my own page this semester. I will let you know when it is available.
**Evaluation:** There will be three tests and a final in common with the other 171 sections. There will be (announced) quizzes and perhaps some hand in problem sets.

**Accomodation.** 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 you 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.

**Software and Calculators:** There will be no calculators used the final; they can be used on tests as long as they do not have a resident CAS.

**Tests, Final Exam:** Like last semester, we will have three tests and a final. The final is common, and will be Wednesday evening of finals week from 6-8 in the evening. The three tests will be in class. There may be some quizzes to get you ready for the tests; these will count toward your final grade if they end up helping you.

**Grading Scale:** The cutoffs for A is 0.9, for B: 0.8, for C 0.65, for D: 0.55. Plusses and minuses will be used, the increment is usually about 3 points. (e.g. to get a B+ the cutoff will be around 0.87.)

The following two sections are required by the provost:

**Academic Honesty:** 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.

**Student Conduct Code:** All students need to be familiar with the Student Conduct Code. The Code is available for review online; at this writing (Aug. 25, 2013) there is a link to the .pdf at

http://life.umt.edu/vpsa/student_conduct.php

(You can also find it is to search for “Student Conduct Code” via the “A to Z Index” link on the UM home page, at present at the upper right corner.)