

Mathematics 1220-006

Spring 2015

- Instructor:** Kyle Gaffney
- Class Time and Place:** 2:00 p.m. – 2:50 p.m.
Mondays, Tuesdays, Wednesdays, and Fridays
in WEB L101
- Office Hours:** Monday, and Friday 3:00 p.m. to 4:00 p.m.
or by appointment.
- Office Location:** LCB 318
- E-mail address:** gaffney@math.utah.edu
- Class Web Page:** <http://www.math.utah.edu/~gaffney> (go to Teaching and our class)
- Text:** (1) *Calculus with Differential Equations*, 9th edition,
by Varberg, Purcell and Rigdon. ISBN: 0-13-230633-6
- Course Information:** Math1220, Calculus 2 is a 4-credit semester course.
- Prerequisite:** Prerequisites: "C" or better in (MATH 1210 OR MATH 1250 OR MATH 1270 OR MATH 1311 OR MATH 1310) OR AP Calculus AB score of at least 4 OR AP Calculus BC score of at least 3.
- Course Description:** Geometric applications of the integral, logarithmic, and exponential functions, techniques of integration, conic sections, improper integrals, numerical approximation techniques, infinite series and power series expansions, differential equations (continued).
- Expected Learning Outcomes:**

Upon successful completion of this course, a student should be able to:

- Compute derivatives and integrals for exponential, logarithmic, hyperbolic functions, and inverse trigonometric functions.
- Integrate integrable functions using integration by parts, u-substitution, trigonometric substitutions, rationalizing substitutions, partial fraction decomposition, and trigonometric identities. This includes knowing which techniques to apply to a given integral.
- Use L'Hopital's Rule to calculate indeterminate-type limits and also know what limits are the non-indeterminate forms and how to compute those limits.
- Compute improper integrals.

- Understand the difference between an infinite sequence and infinite series and determine if a sequence converges or diverges.
- Determine whether or not an infinite series of numbers converges or diverges using a variety of tests.
- Understand what it means for a Power Series to converge or diverge and be able to find the Taylor Series for a given function.
- Differentiate and integrate functions in polar coordinates.

Tutoring Lab: T. Benny Rushing Mathematics Student Center (adjacent to JWB and LCB), Room 155
 M - Th 8 a.m. - 8 p.m.
 F 8 a.m. - 6 p.m.
 (opens Wednesday) (closed Saturdays, Sundays and holidays)
 They are also offering group tutoring sessions. If you're interested, inquire at the Tutoring Lab. <http://www.math.utah.edu/ugrad/tutoring.html>

Private Tutoring: University Tutoring Services, 330 SSB
 (they offer inexpensive tutoring). There is also a list of tutors at the Math Department office in JWB233.

Computer Lab: also in the T. Benny Rushing Mathematics Student Center, Room 155C.
 M - Th 8 a.m. - 8 p.m.
 F 8 a.m.- 6 p.m.
 Link to computer lab is <http://www.math.utah.edu/ugrad/lab.html>

Grading: The grades will be calculated as follows:
 Homework 20%
 Midterm 20%
 Midterm 20%
 Midterm 10%
 Final Exam 30%
 (Note: There will be 3 midterms. Your lowest midterm score will count for 10% of your grade and your top two midterm scores will each count for 20% of your final grade.)

Homework: There will be weekly homework assignments collected at the beginning of class each Wednesday. The assignment will be graded by completion with a subset of problems graded for accuracy. Solutions will be posted on my website. Homework may be worked on in groups and it is encouraged to discuss the problems with your classmates however each student must submit their own assignment in their own work. Late homework will not be accepted, if for some reason you are unable to attend class when an assignment is due it is your responsibility to get me the assignment before it is due.

Midterms:

There will be three different one-hour and twenty minute midterm exams given in class throughout the semester. The midterm exams are not cumulative and will be on material covered since the last midterm. If for some reason you will be unable to attend class on one of the following dates you must give me 1 weeks' notice to arrange and prepare a makeup exam for you.

Midterm exam 1 date: Friday, February 20th

Midterm exam 2 date: Friday, March 27th

Midterm exam 3 date: Friday, April 24th

Final Exam:

The cumulative final exam will be on Thursday, April 30th from 1:00 – 3:00 pm in WEB L101.

Online Grades:

I will put your grades online on Canvas. You can get there easily from the main University of Utah website www.utah.edu. To log in, you use the same student id and password that you use for Campus Information System. I do my best to update the grades on a regular basis and keep everything accurate. However, I would advise you to check your grades often to make sure there were no data entry mistakes. I'm always happy to correct any mistakes I've made. You just need to let me know about them.

Calculators:

You may find it helpful to have a graphing calculator for your own personal use for the homework problems. Calculators will not be necessary or permitted on the exams.

Grading Scale:

The grade scale will be the usual:

A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), E (0-59).

There will be no extra credit offered for this course. No curve is guaranteed however if it becomes necessary to implement a curve your grade will not decrease from it.

ADA Statement:

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services (CDS), 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and me to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to CDS.

Student Responsibilities: All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.
<http://regulations.utah.edu/academics/6-400.php>