

# Math 1220-003 Syllabus

Summer 2018

## **MATH 1220-003: Calculus II**

Summer 2018

Meeting time and location: MTWH 8:00–9:30. Location JTB 120

Instructor: Daniel Smolkin

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Office: JWB 307

Office hours: MW 10-11 in JWB 307, Tuesday 10-11 at Two Creek Coffee in CSC, or by appointment

## **Course Description**

Calculus II is the sequel to Calculus I. The main goal of this class will be to improve your quantitative reasoning skills and prepare you for future math classes, such as Calculus III and Differential Equations. The following is the official list of “expected learning outcomes” for this course:

1. Compute derivatives and integrals for exponential, logarithmic, hyperbolic functions, and inverse trigonometric functions.
2. 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.
3. 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.
4. Compute improper integrals.
5. Understand the difference between an infinite sequence and infinite series and determine if a sequence converges or diverges.
6. Determine whether or not an infinite series of numbers converges or diverges using a variety of tests.
7. Understand what it means for a Power Series to converge or diverge and be able to find the Taylor Series for a given function. Determine how closely a Taylor polynomial approximates a function using Taylor’s Remainder Theorem.
8. Differentiate and integrate functions in polar coordinates.

## **Prerequisites**

One of the following:

- A grade of “C” or better in one of: Math 1210, Math 1250, Math 1270, Math 1311, or Math 1310
- An AP Calculus AB score of at least 4, or
- An AP Calculus BC score of at least 3.

Please see me if you do not meet any of these requirements.

## Course text

Our textbook is *Calculus with Differential Equations*, by Varberg, Purcell, and Rigdon (9th edition). For information on purchasing the textbook, go to <http://www.math.utah.edu/schedule/bookInfo/>

## Important Dates

- Drop deadline: June 18th.
- Exam 1: July 3rd.
- Withdraw deadline: July 7th.
- Exam 2: July 19th.
- **Final exam: Thursday, August 2nd, 8-10am.** Location: JTB 120

## Grading

Grading will be based on homework, quizzes, and exams. Each student's grade for the course will be broken down in the following way:

Homework	Quizzes	Exam 1	Exam 2	Final
20 %	25 %	15 %	15 %	25 %

Here's the grading scale I'll be using:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
≥ 93	90–92.9	88–89.9	83–87.9	80–82.9	78–79.9	73–77.9	70–72.9	68–69.9	63–67.9	60–62.9	< 60

## Course Policies

**Calculators:** A calculator may be useful for the homework and quizzes. However, calculators will not be allowed during exams.

**Homework:** Due to the condensed nature of this course, I will be assigning (almost) **daily homework**. This will consist of one or two problems to be turned in for credit and many other problems for you to work on just for your own learning. The solutions that you turn in for credit should be carefully written in complete sentences. Stay tuned for more information on the expectations for your homework. I will post each day's homework assignment on the course webpage after class.

**Quizzes:** We will have one or two quizzes each week throughout the semester, for a total of 12 quizzes. Quizzes will be open-note, and you're encouraged to work with your classmates on the quizzes. Quizzes must be turned in the day after they are assigned. Your three lowest quiz scores will be dropped. **Late quizzes will not be accepted.**

**Exams:** We will have two midterms and a final exam. Even though our class meets for 90 minutes, the midterms will each be just 1 hour long. On midterm days we will have half an hour of review before the exam. **Calculators will not be allowed for exams. Cell phones must be turned off during exams.** Exam 1 will cover chapters 6 and 7. Exam 2 will cover sections 8.1 through 9.5.

**Attendance:** Attendance in the class not mandatory. However, it is your responsibility to find out what you missed if you don't attend class. Please check the course webpage or ask your classmates before e-mailing me.

**Cheating** will not be tolerated. Any homework, quiz, or exam on which we determine a student has cheated will receive a 0.

## Tips for success

**Office hours:** I encourage everyone to stop by office hours if you have any questions about the course, or if you want to talk for whatever reason. Office hours are a great opportunity to get one-on-one help, which

is usually more effective than large lectures. If you can't make the scheduled office hours, feel free to e-mail me and set up an appointment. My schedule should be fairly open in the afternoons.

**The math tutoring center** is a great place for (free!) student help. The tutoring center is located in room 155 of the T. Benny Rushing Mathematics Center, adjacent to the first floors of LCB and JWB (it's sort of in the basement). Their website is <http://www.math.utah.edu/ugrad/tutoring.html>. Their Summer hours are 8am–8pm MTWH and 8am–4pm on Fridays.

The department has **video lectures** corresponding to this course available at <http://www.math.utah.edu/Lectures>

Another great resource is the list of **past exams** on the department website, found here: <http://www.math.utah.edu/online/1220/pastexam.html>. These past exams are a great source of practice problems.

## Course schedule (tentative)

Week	Topics
June 11–June 14	Sections 6.1–6.5
June 18–June 21	Sections 6.6–6.9, 7.1
June 25–June 28	Sections 7.2–7.6
July 2–July 5	Sections 8.1–8.2. <b>Exam 1 on July 3.</b> No class on July 4.
July 9–July 12	Sections 8.3–8.4, 9.1–9.3
July 16–July 19	Sections 9.4–9.6. <b>Exam 2 on July 19.</b>
July 23–July 26	Sections 9.7–9.9, 10.5. No class on July 24.
July 30–August 2	Sections 10.6–10.7, Final exam review. <b>Final exam on August 2nd.</b>

## 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. Students 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, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, and I will do so, beginning with verbal warnings and progressing to dismissal from and class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee, see <http://regulations.utah.edu/academics/6-400.php>.

## 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 & Access, 162 Olpin Union Building, 801-581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability & Access.

## Addressing Sexual Misconduct

Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

## Student Names and Personal Pronouns

Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your UIDcard, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email [bpeacock@sa.utah.edu](mailto:bpeacock@sa.utah.edu) to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

## Wellness Statement

Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at [www.wellness.utah.edu](http://www.wellness.utah.edu) or 801-581-7776.