Math 1220-05,08 Calculus II, Spring 2021

Instructor: Ray Barton

Email: barton@math.utah.edu

Zoom Link to Class Lectures and Office Hours: https://utah.zoom.us/j/91677928751?pwd=aHFGTU04b0lZT0FZZDhMa2gyUTRMZz09

Accessibility & Support: You can contact me thru the Canvas Inbox or by email. For more detailed questions you can attend Zoom office hours Tues 06:00PM-07:00PM.

Credit Hours: 4

Prerequisite Information: "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

COURSE DETAILS

- Course Type: Interactive Video Conferencing (IVC - synchronous online)
- Class Location & Meeting Times: CANVAS (Zoom) Mon/Wed 06:00PM-07:50PM
- Attendance & Punctuality: Although we are meeting online in Zoom sessions, attendance is as important as if we were meeting face-to-face. There will be opportunities to interact with the instructor and with other students to discuss questions about homework and new material. Tests will also be given regularly during our Zoom classes so you must be in regular attendance. If you encounter serious illness, email me so we can work out a plan to help you keep up.

- CANVAS: Canvas will be used for posting course announcements, homework assignments, grades, files and any relevant supplementary material. You will also upload homework and tests on Canvas. You are welcome to make use of the Canvas discussion board to discuss course problems or topics. You can access the Canvas page through CIS or by logging in at utah.instructure.com. Students should check the Canvas page regularly for course information and resources. Email notifications and correspondence will be sent to the student’s UMail address ([u-number]@utah.edu); this email account must be checked regularly. For technical assistance, review the Canvas Getting Started Guide for Students

Course Materials:
• **Textbook:** 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/](http://www.math.utah.edu/schedule/bookInfo/)

**Technical requirements:**

• You will need a **computer with webcam** to participate in the Zoom classes. The computer will need a strong internet connection with adequate bandwidth. A **mobile phone with camera** may be helpful when uploading homework and tests to Canvas, but a mobile phone will not give you the screen-size you need in order to see an entire page of a detailed Calculus problem.

• **Homework and Tests must be uploaded to Canvas as a single pdf file rather than several jpg files.** If your upload contains several files, only the first one will be scored. If you use a mobile phone to upload homework and tests, please download and use a **scanning app** like Adobe Scan or Genius Scan. These apps allow you scan a document from your phone and combine several pages in to one document. The quality of the images you submit using a scanning app are much better than just taking a picture with your phone and so the grader is more likely to be able to see all your work and award the credit you deserve.

• You may find the **Canvas mobile phone app** helpful to upload assignments and tests.

• Students are expected to be computer literate and **Canvas and Zoom navigation skills** are expected.

• Tests will be taken during our Zoom classes and will be proctored using **Zoom with video** so you will need the ability to enable your video when you attend Zoom classes so that I can see you.

• A **graphing calculator** will be required for some parts of the homework and exams. You are free to use any calculator. I will be using a **Texas Instruments Nspire CX CAS** in class.
COURSE EXPECTED LEARNING OUTCOMES

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

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 nonindeterminate 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.
8. Differentiate and integrate functions in polar coordinates.

CLASS SCHEDULE & IMPORTANT DATES

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Grading: The following are the grade components and the percentage each contributes to a student’s final grade:

- **Homework Assignments (25%)**: There are usually two homework assignments given each week. These two assignments must each be scanned and uploaded to Canvas separately and must be submitted by Monday night (11:59PM) of the following week after they are assigned. We will discuss questions on the homework at the beginning of each class. Each assignment will be worth 10 points. One problem from each assignment will be selected for grading by the grader, and graded out of 5 points. There will also be 5 points for each assignment given for completion of all the problems assigned. I am looking for evidence of effort and detail, not just a correct answer. The lowest homework score will be dropped. No late homework will be accepted, unless accompanied by a doctor’s note or other verification of extenuating circumstances. I recommend using online homework solution resources sparingly as they can keep you from gaining conceptual understanding.

- **Midterm Exams (60%)**: Five tests will be given and the lowest score will be dropped at the end of the semester. The four remaining tests will each be worth 15% of your grade. Dates of the tests are listed in the Class Schedule. Students qualifying for academic accommodations should contact me and make necessary arrangements BEFORE the first exam. Makeup exams will not be given.
• **Final Exam (15%)** - A two-hour comprehensive exam will be given. The date of the final exam is listed in the Class Schedule.

Final course letter grades will be determined as follows: If $X$ is your course percentage weighted according to the above, then

- $X \geq 90\% \Rightarrow A$
- $X \geq 88\% \Rightarrow A-$
- $X \geq 85\% \Rightarrow B+$
- $X \geq 82\% \Rightarrow B$
- $X \geq 78\% \Rightarrow B-$
- $X \geq 75\% \Rightarrow C+$
- $X \geq 72\% \Rightarrow C$
- $X \geq 68\% \Rightarrow C-$
- $X \geq 65\% \Rightarrow D+$
- $X \geq 62\% \Rightarrow D$
- $X \geq 58\% \Rightarrow D-$
- $X < 58\% \Rightarrow E$

It is your responsibility to ensure the accuracy of all recorded homework and test scores. Also, you should keep as record all your graded assignments and tests. If you see any error in your grades on Canvas, reach out to me as soon as possible, or at the latest within two weeks from when the assignment was graded.

**Additional Resources**
Departmental Videos: The math department has a full set of lecture videos which you are welcome to use to supplement our course material. These can be found at http://www.math.utah.edu/lectures/

NETIQUETTE - EXPECTATIONS FOR ONLINE LEARNING ENVIRONMENT

- Classroom equivalency: Respectful participation in all aspects of the course will make our time together productive and engaging. Zoom lectures, discussion threads, emails and canvas are all considered equivalent to classrooms and student behavior within those environments shall conform to the student code. Specifically:
  - Posting photos or comments that would be off-topic in a classroom are still off-topic in an online posting.
  - Disrespectful language and photos are never appropriate.
  - Using angry or abusive language is not acceptable, and will be dealt with according to the Student Code. The instructor may remove online postings that are inappropriate.
  - Course e-mails, e-journals, and other online course communications are part of the classroom and as such, are University property and subject to the Student Code. Privacy regarding these communications between correspondents must not be assumed and should be mutually agreed upon in advance, in writing.
- Other expectations for online communication (on Discussion Board, Emails, Zoom chat etc):
- Emails: When emailing your Instructor and Teaching Team keep a professional tone (e.g. Use a descriptive subject line, avoid “Hey” and always use your professors’ proper title: Dr. or Prof., Sign your message with your name and return e-mail address. Please consult this page for tips on how to write appropriate professional emails: [https://academicpositions.com/career-advice/how-to-email-a-professor](https://academicpositions.com/career-advice/how-to-email-a-professor)
- Treat your instructor, teaching team and classmates with respect in email or any other communication.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as “wassup?” and texting abbreviations such as “u” instead of “you.”
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or be offensive to others.
- Be careful with personal information (both yours and others).

- Electronic or equipment failure: It is your responsibility to maintain your computer and related equipment in order to participate in the online portion of the course. Equipment failures will not be an acceptable excuse for late or absent assignments.
- Online submissions: You are responsible for submitting the assignment with the required naming convention, correct file extension, and using the software type and version required for the assignment.

**ACADEMIC CODE OF CONDUCT**

- Homework is a tool for learning. I encourage students to use any resource available to complete homework including peers, internet sites or tutors. However, any work presented should represent your own effort. Strictly copying work from a peer, tutor or internet site is not appropriate and will be considered cheating. All work on exams must be your own. You are not allowed help on exams from any person, website, or resource other than a reference page that will be provided. Cheating will invalidate scores.

- You are encouraged to review the Student Code for the University of Utah: [https://regulations.utah.edu/academics/6-400.php](https://regulations.utah.edu/academics/6-400.php). In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students
must adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating. A student who engages in academic misconduct as defined in Part I.B. may be subject to academic sanctions including but not limited to a grade reduction, failing grade, probation, suspension or dismissal from the program or the University, or revocation of the student's degree or certificate. Sanctions may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing.

ADDITIONAL POLICIES AND RESOURCES

Inclusivity Statement: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Discrimination and Harassment: 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 Office of the Dean of Students, 270 Union Building, 801-581-7066. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS). Please see Student Bill of Rights, section E http://regulations.utah.edu/academics/6-400.php. I will listen and believe you if someone is threatening you.

Names/Pronouns. Canvas allows students to change the name that is displayed AND allows them to add their pronouns to their Canvas name. 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, which managed can be managed at any time). 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 or on assignments. Please advise me of any name or pronoun changes so I can help create a learning environment in which you, your name, and your
pronoun are respected. If you need any assistance or support, please reach out to the LGBT Resource Center. https://lgbt.utah.edu/campus/faculty_resources.php

**English Language Learners.** If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center (http://writingcenter.utah.edu/); the Writing Program (http://writing-program.utah.edu/); the English Language Institute (http://continue.utah.edu/eli/). Please let me know if there is any additional support you would like to discuss for this class.

**Undocumented Student Support.** Immigration is a complex phenomenon with broad impact—those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at 801.213.3697 or visit dream.utah.edu.

**Veterans Center.** If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: http://veteranscenter.utah.edu/. Please also let me know if you need any additional support in this class for any reason.

**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 or 801-581-7776.

**Student Success Advocates:** The mission of Student Success Advocates is to support students in making the most of their University of Utah experience (ssa.utah.edu). They can assist with mentoring, resources, etc. Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact a Student Success Advocate for support (https://asuu.utah.edu/displaced-students).

**The Americans with Disabilities Act:**

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 on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University’s Title IX Coordinator; Director, Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or to 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 police, contact the Department of Public Safety, 801-585-2677(COPS).

**Campus Safety:** The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safe.utah.edu](http://safe.utah.edu)

**University Counseling Center** The University Counseling Center (UCC) provides developmental, preventive, and therapeutic services and programs that promote the intellectual, emotional, cultural, and social development of University of Utah students. They advocate a philosophy of acceptance, compassion, and support for those they serve, as well as for each other. They aspire to respect cultural, individual and role differences as they continually work toward creating a safe and affirming climate for individuals of all ages, cultures, ethnicities, genders, gender identities, languages, mental and physical abilities, national origins, races, religions, sexual orientations, sizes and socioeconomic statuses.

**Office of the Dean of Students** The Office of the Dean of Students is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. Please consider reaching out to the Office of Dean of Students for any questions, issues and concerns. 200 South Central Campus Dr., Suite 270. Monday-Friday 8 am-5 pm.

**Syllabus subject to change:** This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas.