

MATH 3210: Foundations of Analysis 1

Instructor: Daniel Bragg - bragg@math.utah.edu

Website: http://math.utah.edu/~bragg/3210_F23/

Lecture: MTWF 9:40a.m.-10:30a.m. (LCB 215)

Office Hours: Wednesdays and Fridays, 12:00p.m.-1:00p.m., JWB 319

Course Information: MATH 3210 is a 4 credit course.

Course Description: MATH 3210 gives a rigorous presentations of the real numbers, as well as infinite series and differentiation and integration of functions of one variable. An emphasis is placed on reading and writing mathematical proofs.

Prerequisite Information: A grade of “C” or better in one of MATH 2210, 1260, 1280, 1321, or 3140, and a grade of “C” or better in one of MATH 2200, 2270, or 2250.

Text: “Foundations of Analysis” by Joseph L. Taylor, American Mathematical Society, Providence 2012. ISBN-13: 978-0-8218-8984-8, ISBN-10: 0821889842. (For information on purchasing the textbook, see <https://www.math.utah.edu/resources/bookinfo.php>)

Course Organization:

Topics: We will cover most or all of the material from the following chapters of the textbook:

- Chapter 1: The Real Numbers
- Chapter 2: Sequences
- Chapter 3: Continuous Functions
- Chapter 4: The Derivative
- Chapter 5: The Integral
- Chapter 6: Infinite Series

Canvas: Homework, grades, announcements, and supplementary files will be posted to the course Canvas page. You can access the Canvas page through CIS.

Homework: Homework will be assigned approximately weekly (posted on Canvas). All homework should be turned in electronically on Canvas. You can either typeset your assignments using LaTeX, or handwrite and then scan them. No paper copies will be accepted.

Each week, three problems will be selected and graded out of 5 points each. There will also be 5 points for completion. At the end of the semester, your lowest homework score will be dropped.

The homework is where most of your learning will take place. It is the most important part of the class. You are encouraged to work with other students on the homework, and to talk to tutors or instructors. Each student is responsible for their own write-up.

If you would like an extension on a homework assignment for any reason, just send me an email before the due date. There will be no negative impact on the grade for late homework where an arrangement was made prior to the due-date.

Exams: There will be three midterm exams and one final exam.

- **Midterm Exam 1** - Friday, September 5 (9/15/23), 9:40a.m.-10:30a.m., LCB 215

- **Midterm Exam 2** - Friday, October 6 (10/6/23), 9:40a.m.-10:30a.m., LCB 215
- **Midterm Exam 3** - Friday, November 10 (11/10/23), 9:40a.m.-10:30a.m., LCB 215
- **Final Exam** - Wednesday, December 13 (12/13/23), 8:00a.m.-10:00a.m., LCB 215

Each midterm will replace one lecture, and have a time limit of 50 minutes. The final exam will be cumulative. No calculators are allowed on exams. Don't worry - the exams will be designed so that you won't need them.

If you have a university excused absence (band, debate, student government, intercollegiate athletics) which conflicts with an exam, you should let me know as soon as possible so we can make alternate arrangements.

Grading: This class has two possible grading schemes. I will compute your score both ways, and give you the higher one.

- **Method 1:** Homework (20%), MT 1 (20%), MT 2 (20%), MT 3 (20%), Final Exam (20%).
- **Method 2:** Your lowest midterm score is dropped, and your score is computed by: Homework (20%), two remaining midterms (20% x 2), Final Exam (40%).

This score will be converted to a letter grade by the following formula:

93-100	A
90-93	A-
87-90	B+
83-87	B
80-83	B-
77-80	C+
73-77	C
70-73	C-
67-70	D+
63-67	D
60-63	D-
0-60	E

Depending on class averages, the final grading scheme may be more generous than this one.

Additional Resources:

- **Tutoring** - The Mathematics Student Center (155 JWB/LCB) offers free tutoring. See the following link:

<https://www.math.utah.edu/undergraduate/mathcenter.php>.

You can find private tutors at the ASUU Tutoring Center (330 SSB).

Policies:

COVID Statement: The COVID-19 guidelines for the University of Utah are adapted often due to the ever-changing status of the pandemic. For the most up-to-date information regarding the campus guidelines, visit <https://coronavirus.utah.edu>.

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 2 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. <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, veterans 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 Pronouns: As an instructor, I am provided with a class roster which lists your legal name, as well as preferred first name if you have indicated one in the Student Profile section of your CIS account. If you would like me to refer to you by a different name, please let me know. I will honor the preferred names and pronouns of students in all aspects of the course, including in class, during office hours, and on assignments.

If you need assistance with getting your preferred name printed on your UIDcard, you can visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email bpeacock@sa.utah.edu to schedule an appointment. 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 or 801-581-7776.

Safety Statement: 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 safeu.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.

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>.