

# Math 3220 - 01: Foundations of Analysis II

MWF 8:30 - 9:50

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**Office Hours:** Office hours will be held on Zoom. We will pick a time together during the first week of class. I am happy to meet with you outside of these times schedule permitting. If you are struggling with any of the material, I cannot emphasize the importance of office hours enough.

**Textbook:** Foundations of Analysis, By Joe Taylor, 2012 edition, ISBN: 13-9780821889848

**Course Prerequisites:** Prerequisites: "C" or better in MATH 3210 and (MATH 2270 or MATH 2250).

**Course Information and Description:** Math 3220 Foundations of Analysis II is a 4-credit semester course. Continuity, compactness, differentiation and affine approximation, chain rule, Taylor series, extremization, error estimation, inverse and implicit function theorems, Riemann integration, Fubini's Theorem, change of variables formula. The emphasis is on further developing the student's ability to understand more abstract concepts and to write an effective and rigorous mathematical argument.

**Class:** I will lecture during the normal class time via Zoom. While videos of the lectures will be posted, I strongly encourage you to attend the actual class so that you can ask questions and work with other students on in-class problems. As of now, there is no attendance policy but if I feel like the performance of students is suffering because students are not staying on top of the material, I may implement some form of attendance policy.

**Homework:** Homework will be assigned weekly and due on Wednesday at 11:59 pm. I will accept one homework up to a week late. No other late homework will be accepted. Homework will be graded based on both completion and correctness. Your homework must be neat.

**Quizzes:** Group quizzes will be given weekly on Friday during class. *No make-up quizzes will be given*, but your two lowest scores will be dropped at the end of the semester.

**Midterms:** There will be three midterm exams given in class. Except under extremely unusual circumstances, you must inform me in advance of the missed test. You are expected to promptly make arrangements with me to make up the exam.

**Grading:** Your grade will be based on

|            |     |                   |
|------------|-----|-------------------|
| Homework:  | 30% | Every Wednesday   |
| Quizzes:   | 10% | Every Friday      |
| Midterm 1: | 20% | Friday, June 12th |
| Midterm 2: | 20% | Friday, July 10th |
| Final Exam | 20% | Friday, July 31st |

Your final letter grade will be determined by your overall percentage as follows:

|    |             |            |             |             |             |
|----|-------------|------------|-------------|-------------|-------------|
|    | A           | 93% – 100% | A-          | 90% – 92.9% |             |
| B+ | 87% – 89.9% | B          | 83% – 86.9% | B-          | 80% – 82.9% |
| C+ | 77% – 79.9% | C          | 73% – 76.9% | C-          | 70% – 72.9% |
| D+ | 67% – 69.9% | D          | 63% – 66.9% | D-          | 60% – 62.9% |
|    | E           | below 60%  |             |             |             |

**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.

**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>

**Class Policies:**

- I reserve the right to modify the class structure and syllabus at any time but I will notify you if and when any changes are made.
- I understand and empathize with the fact that COVID-19 is creating unique challenges for students (and instructors). Many of you likely did not intend to take (or teach) this course online and will have to adapt to learning (or teaching) through this new medium. To that end, if you are willing to communicate with me I am happy to do everything I can to support you. Please contact me at any point throughout the semester if you are struggling.
- If an emergency arises that prevents your from making it to an exam or turning in a homework it is your responsibility to communicate that information to me as soon as possible. I will do my best to accommodate any situation that comes up.
- If you are struggling with a concept *please* come talk to me or visit the tutoring center as soon as possible.
- I encourage you to work with others on the homework but anything that you turn in must be your own work.
- Regrade requests can only be made the class after the homework/quiz/exam was returned and in writing with an explanation why more credit is due.