



SYLLABUS

MATH 500: Intermediate Analysis

Fall 2023

INSTRUCTOR

Name Professor Emily Witt

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Office Snow Hall 523

Office Hours Wednesdays from 12-1 PM in Snow 156, Thursdays from 11 AM - 12 PM on Zoom

TIME AND PLACE

Class Time MWF 11:00–11:50 AM

Class Location Snow Hall 156

DESCRIPTION

A careful formulation of convergence and limits of sequences and functions; continuity and properties of continuous functions; differentiation; the Riemann integral; mean-value theorems and the fundamental theorem of calculus. Not open to students with credit in MATH 765.

PREREQUISITES

MATH 127 or MATH 147, and MATH 290 or MATH 291.

MATERIALS

Textbook *Foundations of Analysis* by Joseph L. Taylor

RESOURCES

The syllabus, course schedule, and a brief update of what was covered in each class can be found on the [MATH 500 Course Website](#). Grades will be updated on Canvas.

TIME COMMITMENT

MATH 500 is a 3-credit course, and regular attendance is integral to successful completion. Consistent with [KU policy](#) and the federal description of a credit hour, students should expect to spend at least 9 hours on the course throughout the semester, i.e., dedicating at least 6.5 hours beyond the 2.5 weekly in-class hours studying and completing assignments.

REQUIREMENTS

Homework Homework problems will be assigned after every class session for students to practice the material. They will not be turned in.

Quizzes Frequent, unannounced quizzes (approximately weekly) will be administered for students to test their understanding. There will be no make-up quizzes, but each student's lowest two quiz percentages will be dropped.

Quiz Corrections Students can correct their mistakes on quizzes, adhering to guidelines laid out, to earn up to half the missed points, rounded down.

Group Projects	Students will complete four in-depth group projects. Teammate peer evaluations will compose 5% of their group project grade.		
Exams	Midterm 1	Wednesday, September 27	In class
	Midterm 2	Wednesday, November 1	In class
	Final Exam	Wednesday, December 13	10:30 AM–1 PM, Location TBA

EVALUATION CRITERIA AND GRADING SCALE

Students will be evaluated on their understanding of the material, and their ability to apply it. Mathematical proofs will be graded not only on correctness, but on clarity of arguments. Professor Witt welcomes suggestions on concerns throughout the semester, as she is open to modifications based on the students' best interest. Students will also be asked to complete an end-of-semester, online Student Survey of Teaching.

Homework	0%	Midterm 1	20%
Quizzes	15%	Midterm 2	20%
Group Projects	20%	Final Exam	25%

LEARNING OUTCOMES

We will cover the following sections of the textbook: 1.1–1.5, 2.1–2.5, 3.1–3.4, 4.1–4.3, 5.1–5.3. After successfully completing the course, students should understand the following concepts at a level where they are able to apply them, and write mathematical proofs about them: suprema and infima, limits of sequences, monotone sequences, Cauchy sequences, continuous functions, uniform continuity, differentiation, integration, and the Fundamental Theorems of Calculus.

FORMAT AND INSTRUCTIONAL METHODS

This is a lecture-only, in-person class. Along with in-class assessments, students are required to work actively in teams outside of class to complete investigative projects.

ATTENDANCE AND PARTICIPATION POLICY

Students are expected to attend classes regularly, and follow the [University Excused Absences](#) policy.

ACADEMIC INTEGRITY AND PROFESSIONAL CONDUCT

Students are encouraged to study collaboratively. That said, cheating on any assignment or assessment will result in a grade of 0. Please see KU's [Academic Misconduct policy](#).

COMMERCIAL NOTE-TAKING

Commercial note-taking is not permitted in this course, and course materials, including notes, may not be sold to any person or entity. Any student engaged in, or contributing to, the commercial exchange of notes or course materials will be subject to discipline, including academic misconduct charges, in accordance with [KU policy](#). Note: note-taking provided by a student volunteer for a student with a disability, as a reasonable accommodation under the ADA, is not the same as commercial note-taking and does not fall under this policy.

INTELLECTUAL PROPERTY

Course materials prepared by the instructor, including quizzes, exams, and group homework, are property of the instructor. They cannot be posted online, or otherwise further distributed. Video and audio recording of lectures and review sessions without instructor consent is prohibited.

SUBJECT TO CHANGE STATEMENT

The course policies are subject to change at the discretion of Professor Witt, based on the best interests of the students. Any changes will be announced clearly during class and updated online.

ADDITIONAL RESOURCE AND POLICY INFORMATION

Student Resources

- [University Academic Support Centers](#)
- [Counseling and Educational Support Services](#)
- [The KU Writing Center](#)
- [Religious Observances](#)

University Policies

- [Change of Grade](#)
- [Diversity and Inclusion](#)
- [Mandatory Reporting \(Title IX/Civil Rights\)](#)
- [Nondiscrimination, Equal Opportunity, and Affirmative Action](#)
- [Sexual Harassment](#)
- [Student Rights and Responsibilities](#)
- [Racial and Ethnic Harassment Policy](#)
- [Commitment to Integrity and Ethical Conduct](#)
- [KBOR Statement on Free Expression](#)
- [Weapons, Including Firearms](#)

In addition to the policies and resources noted above, the KU Student Affairs [Student Resources website](#) provides links to KU Policies and Resources pertaining to academic misconduct, grading policies, harassment and discrimination, diversity and inclusion, mandatory reporting, equal opportunity and affirmative action, and student rights and responsibilities. Please visit the site to familiarize yourself with these policies and resources. Contact Professor Witt, or Student Affairs directly, if you have questions or concerns about any of these policies, statements, or resources.