

Mathematics 3425: Foundations of Mathematics, Section 001 Fall 2023

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Class Schedule: Class meets MWF at 11:15-12:10 in RBS 2024.

Office Hours: 12:30-1:30 MWF and by appointment arranged by email.

Required Text: *Book of Proof*, 3rd edition by Richard Hammack. A free PDF of the book can be downloaded by

<https://www.people.vcu.edu/~rhammack/BookOfProof/>.

Course Description: This course is a study of elementary logic, intermediate set theory, relations, functions, and countable number systems. In general, this is a course about writing proofs and constructing logical arguments.

Course Prerequisites: A grade of C or better in Calculus II (Math 2414 or equivalent).

Student Learning Objectives: Upon completion of this course, students should be able to do the following:

1. Write complete, correct, and coherent proofs.
2. Understand and employ fundamental mathematical concepts such as logic, proof techniques, set theory, and mathematical induction.

Grading: To assign your grade, I will average your homework, the 2 midterms, and the final as follows.

Homework: 25%

Midterms: 25% each

Final Exam: 25%

Getting an A requires at least a 90% average, B 80%, C 70%, and D 60%. Anything lower is an F.

Homework: Each Friday, I will give out a new homework assignment at the end of class. You will have one week to complete each assignment. If you finish an assignment late, you will receive a 10% penalty for each day after the due date. If you have a scheduling conflict and cannot turn it in on time, please inform me beforehand.

Exams: On September 29 and October 27, we will have two midterms.

Final Exam: The final exam is currently scheduled for December 4 from 10:15 to 12:15 in RBS 2024.

Cell Phones: Cell phones are not permitted in class. Please silence them beforehand.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook, assigned and unassigned problems, notes from class, the Math Learning Center, your instructor, and the other students (though your work must ultimately be your own). E-mail is the best way to contact me outside of class and office hours.

While the internet is a valuable resource, using it to unethically acquire answers is considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past and present, violates the idea that your work must be your own.

Cheating is a very serious issue and can result in disciplinary action. While you may collaborate with your peers, you cannot copy their work.

University Policies: [Date] is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Absence for University-Sponsored Events and Activities,

Social Security, and FERPA Statement, please see
<http://www.utt Tyler.edu/academicaffairs/files/syllabuspolicy.pdf>.

ADA Compliance: If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact the Office of Student Accessibility and Resources so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability support services/accommodation(s) must provide documentation of his/her disability to the Disability Support Services counselor. For more information, call or visit the Office of Student Accessibility and Resources located in the University Center, Room 3150. The telephone number is 903-566-7079. Additional information may also be obtained at the following site:
<https://utt Tyler.edu/disability-services/?r=/disabilityservices>.