Goals

MHF 3202 serves as a transition from computationally-based mathematics courses such as calculus and differential equations to abstract, proof-based mathematics courses such as algebra and analysis. The primary goals of this course are

(i) to familiarize you with standard mathematical notation and fundamental mathematical concepts;
(ii) to train you to construct logical arguments using standard proof techniques;
(iii) to increase your ability to detect errors in reasoning in your own mathematical arguments and in those of others; and
(iv) to gain experience in constructing examples and counter-examples in mathematics.

The topics we will cover include deductive reasoning and proof strategies for logical connectives and quantifiers, applications of proof techniques to relations and functions, mathematical induction and its applications, and proofs of fundamental facts about countable and uncountable sets.

Course components

Textbook. The textbook for the course is *How to Prove It: A Structured Approach* 2e by Daniel Velleman. The course will closely follow Velleman’s text through all seven chapters (with some rearrangement of the material). Each week you will receive a reading schedule. Students are expected to read the assigned sections before class.

Homework. There will be weekly homework assignments due at the beginning of class. There will be a total of 10 assignments. Each assignment will be worth 10 points. I will drop the lowest homework grade when computing your total homework score, and will scale the remaining assignments so that the homework assignments will be worth a total of 100 points. Late homework will not be accepted.

Group Work. Occasionally, we will have group activities in class that I will collect. These will be worth a combined total of points.
Exams. There will be four in-class tests during the term, each worth 100 points:
- Test 1: Wednesday, February 3
- Test 2: Friday, February 26
- Test 3: Wednesday, March 30
- Test 4: Wednesday, April 20

Please note the dates and plan accordingly. You must take the tests at these times, except under exceptional circumstances.

Policies

Attendance. Students are expected to attend class regularly, be prepared to answer questions on the reading, and participate in class discussions and group work. If you miss class, you are responsible for finding out about homework and/or announcements made during the class. Requirements for make-up exams, assignments, and other work in this class are consistent with university policies and can be found at:

https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Grading policy. Here is the official grading scheme:
- Homework: 100 points
- Group activities/Participation: 25 points
- Tests: 4 × 100 points
- Total: 525 points

Course grades will be determined by the following scale: 92-100 A, 90-91 A-, 88-89 B+, 82-87 B, 80-81 B-, 78-79 C+, 72-77 C, 70-71 C-, 68-69 D+, 62-67 D, 60-61 D-, 59 or below F.

Course Evaluations. Students are expected to provide feedback on the quality of instruction in this course based on ten criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results

Academic Honesty. The course will be conducted in accordance with the University honor code and academic honesty policy, which can be found on the web site of the Dean of Students.

Classroom Accommodation. Students with disabilities requesting classroom accommodation should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc) by proving appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.