MAT 375 M003— Introduction to Abstract Mathematics
Spring 2016

Instructor:	Professor Moira McDermott
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Office:	313E Carnegie (443-1481)
Time & Place:	TTh 2:00–3:20 pm, 115 Carnegie
Office hours:	MW 2:30-3:30, T 3:30-4:30 pm, Th 4:00-5:00, and by appointment

Prerequisites: MAT 295 or permission of the instructor.

Textbook: *Passage to Abstract Mathematics*, by Mark E. Watkins and Jeffrey L. Meyer, Pearson, 2012.

Official Course Description: Principles of symbolic logic, set theory, basic function theory, relations, and cardinality. Emphasis on developing proof-writing skills, including mathematical induction.

Course Overview: The main goal of this course is for students to learn how to read and write proofs. In addition, the course will introduce the fundamental principles underlying abstract mathematics including logic, methods of proof, set theory, mathematical induction, functions, and infinity. This roughly consists of chapters 1-7 in the text. The emphasis of the course is mastery of the material and methods rather than covering a specific list of topics. In addition, you will be learning to read and write proofs instead of learning a collection of computational techniques.

Grading: Course grades will be based on homework (10%), quizzes (25%), two in class exams (20% each), and a cumulative final exam (25%). The two in class exams are tentatively scheduled for February 25 and April 21. There will be no makeups for the in class exams or the final exam. If you have a documented excused absence for one of the in class exams, your grade on the relevant portion of the final will be used.

The final exam is scheduled for **Tuesday, May 10, 10:15 am - 12:15 pm**.

Homework: Problem sets will be assigned and collected weekly. These homework assignments are crucial to your experience in the course. Homework assignments will be a mixture of problem-solving and formal proofs. Working independently on the assignments will probably help you to learn the material more effectively and to do better on exams. However, you may, and sometimes should, work with others to fully understand the material. You must write your own solutions to homework problems, and you must acknowledge any collaborators. Homework will be graded on mathematical correctness and also on clarity and completeness of your writeup. **Late homework will not be accepted.**

Attendance: You are expected to attend and participate in class. Missing class is among the most common reasons for poor performance in the course (not doing the homework is another one). If you miss a class, you are responsible for obtaining notes for that class from a student who attended. I will not provide notes for missed classes. It is your responsibility to find out about any announcements concerning homework, quizzes, or exams made during class.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see http://academic_integrity.syr.edu.

Complete academic honesty is expected of all students. Any incidence of academic dishonesty, as defined by the SU Academic Integrity Policy, will result in both course sanctions and formal notification of the College of Arts & Sciences. (A first violation will result in a 0 on the assignment, quiz, or exam. A second violation will result in failing the course.) I encourage you to work together on homework and discuss problems and their solutions, but you must write up your solutions individually. What you write must reflect *your own understanding* of the problems. Consulting outside sources (online solutions, Chegg, etc.) will hamper your ability to learn the material. Copying a homework solution, in part or in full, is considered a violation of academic integrity. If you have any questions about the differences between working together and copying or how to document sources, please see me.

Students with Disabilities: Students who may need academic accommodations due to a disability are encouraged to discuss their needs with me at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498, and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information about services and policy, see http://disabilityservices.syr.edu.

Faith Tradition Observance: SU's religious observances policy can be found at http://supolicies.syr.edu/emp_ben/religious_observance.htm. Under the policy, students are provided an opportunity to make up any examination, study, or work requirement that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. There is an online notification process available on MySlice.

Tips for success in this course:

- Stay caught up. Mathematical concepts build on each other cumulatively.

- Know how to solve each assigned homework problem. Be able to explain your solutions and write coherent proofs. Practice communicating your solution effectively.

- Ask questions at the earliest sign of confusion.

- Work independently and with others on assignments.

- Expect to work hard. Don't get discouraged if you find some of the material difficult. Be persistent and patient.