Syllabus[1] **11 January 2016**

MAT 300 – Mathematical Structures – Spring 2016

Instructor: Alice Mark

Office Hours: Monday 1-3, Wednesday 12-1, and by appointment

Office: WXLR 331

Email: alice.mark@asu.edu

Any email you send to me must be sent from your official ASU email. All course correspondence will go to your `@asu.edu` account.

Phone: (480) 727 4857 (I strongly prefer that you contact me by email.)

Class Time and Location: MW, 3-4:15 in ED 338

Schedule Line Number: 29598

Course Description: This course covers a range of mathematical topics with the goal of developing students' skills in proof writing. Topics include logic, mathematical reasoning, problem solving, relations, functions, and sets. These topics provide the context in which students will learn and practice various proof techniques and strategies.

Text: How to Prove it (2nd Ed.) by Daniel J. Velleman.

Supplementary Materials: Other instructors have put their notes for this course online.

- Don Jones: `https://math.la.asu.edu/~dajones/class/300/300.html` (doesn't work for me in Firefox but does work in Chrome.)
- Andrzej Czygrinow: `https://math.la.asu.edu/~andrzej/mat300.html`

Additional materials may be provided from other sources.

Blackboard: There is a blackboard site for this course on which will be posted:

- This syllabus
- Announcements
- Homework assignments
- Grades

Working with others: You are encouraged to collaborate with your classmates on homework and in-class. You may not collaborate on exams. If you collaborate on homework, you must write up your proofs yourself in your own words before you turn them in, and you must write the names of your collaborators on your assignment.

Here is a space to write down the names and email addresses or phone numbers of some of your classmates so that you can form study groups.

name: _____ contact: _____

name: _____ contact: _____

name: _____ contact: _____

name: _____ contact: _____

[1]This syllabus is subject to change as necessary. Verbal or written announcements made in class, on blackboard, or over email are considered valid, official changes.

Assessment: Your grade will be determined using your performance on written work, exams, and your attendance and participation class.

- **Written homework** (20% of your final grade): Written homework will be collected in class on Wednesdays. **No late homework will be accepted.** The two lowest homework grades will be dropped. The problems will mostly be from the textbook, though there may be additional problems from other sources. (Redo problems, must be perfect.)

- **Journal** (15% of your final grade) This will be a compendium of several proofs we have done throughout the semester. You will have to revisit them, and rewrite them in "texbook style." This means that what you turn in should be good enough that it could appear in a textbook, and should include any necessary definitions or illustrations for context. More details will be provided later in the semester.

- **Exams** (60% of your final grade): There will be 2 in-class midterms and a final, each worth 20%. Your grade on the final may replace one midterm grade if it improves your overall grade in the class.

- **Attendance and participation** (5% of your final grade): Learning mathematics is not a passive activity. During the semester there will be opportunities for you to present in class to your fellow students. I may also collect written work done in class from time to time.

Proofs: The primary objective of this course is that you learn to write good proofs. Points will be given for clarity and for writing in full English sentences.

Grading Scale: All numbers below are percentages.

E	D	C	C+	B-	B	B+	A-	A	A+
$[0, 60)$	$[60, 70)$	$[70, 76)$	$[76, 80)$	$[80, 83)$	$[83, 87)$	$[87, 90)$	$[90, 93)$	$[93, 97)$	$[97, 100]$

Course Withdrawal: January 17 is the last day to add/drop without college approval. April 3 is the course withdrawal deadline. April 29 is the complete session withdrawal deadline.

A student may withdraw from a course with a grade of W during the withdrawal period. The instructors signature is not required. It is a students responsibility to verify that that they have in fact withdrawn from a class.

Instructor-Initiated Drop: At the instructor's discretion, any student who has not attended class during the first week of classes may be administratively dropped from the course. Non-attendance will not automatically result in a student being dropped from the course. The student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student's responsibility to be aware of their registration status.

Incompletes: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents the student who is doing acceptable work from completing a small percentage of the course requirements. The student must provide written documentation and be passing the class at the time to receive an Incomplete. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed. The Dean of the students college must approve any exceptions to these rules.

Course Policies: Students are responsible for assigned material whether or not it is covered in class. Students are responsible for material covered in class whether or not it is

in the text. Working regularly on assigned problems and attending class are essential. You are expected to read the text, preferably before the material is covered in class.

Make Up Exam Policies: Make up exams are at the discretion of the instructor and will only be given in the case of verified medical or other emergency. The instructor must be notified before the exam is given. Email your instructor or call the Mathematics Department Office (480-965-3951) and leave a message.

The final exam schedule listed in the Schedule of Classes (`http://students.asu.edu/final-exam-schedule`) will be strictly followed. Except to resolve those situations described below, no changes may be made in this schedule without prior approval of the Dean of the college in which the course is offered. Under this schedule, if a conflict occurs, or a student has more than three exams on one day, the instructors may be consulted about an individual schedule adjustment. If necessary, the matter may be pursued further with the appropriate dean(s). This procedure applies to conflicts among any combination of Downtown Phoenix campus, Tempe campus, Polytechnic campus, West campus, and/or off campus class.

Make-up exams will NOT be given for other non-emergency reasons. Students should consult the final exam schedule before making end-of-semester travel plans.

Student Resources: There are many resources available to assist you in learning the material. In addition to **my office hours** and **your fellow students** in the class, there is WXLR 303 and some online tutoring (`tutoring.asu.edu/online-tutoring`). All of these resources are free of charge.

Academic Dishonesty: Academic dishonesty, including inappropriate collaboration, will not be tolerated. Collaboration is inappropriate if it involves two students turning in identical or copied work, or work that was clearly done together without proper acknowledgment of collaborators. There are severe sanctions for cheating, plagiarizing and any other form of dishonesty. More information can be found at `http://www.asu.edu/studentaffairs/studentlife/judicial/academic_integrity.htm`

Disability Accommodations: If you have a disability that will require accommodations in this class, please schedule an appointment to see your instructor or come by during office hours. *Please do this at least a week before the first exam.* Note: To qualify for disability accommodations at ASU, students must qualify for services through the Disability Resource Center (DRC), which is located on the first floor of the Matthews Center Building at 480-965-1234 (voice) or 480-965-9000 (TTY). Please complete this process as soon as possible.