Math 1001: Excursions in Mathematics

Fall 2017 Course Syllabus

Instructor: Gregg Musiker,   **E-mail:** `musiker@math.umn.edu`

   Office Number: Vincent Hall 251,   **Telelphone:**   624-7073

   Office hours: Monday 2:00-3:00, Wednesday 1:10-2:00 pm, and Friday 10:10-11:00.

Meeting time: This class will meet on MWF 11:15 - 12:05 am in Molecular Cellular Biology 2-120.

Course Webpage: `http://www.math.umn.edu/∼musiker/1001/`

TA: Madeline Handschy   **E-mail:** `hands014@umn.edu`

   Office Number: Vincent Hall 520,   **Telelphone:**   624-2329

   Office hours: Monday, Tuesday, and Wednesday 12:20-1:10.

Recitations:

   Section 011: Thursday 10:10 - 11:00 Amundson Hall 162

   Section 012: Thursday 11:15 - 12:05 Bruininks Hall 131A

   Section 013: Thursday 12:20 - 1:10 Kolthoff Hall 135

Required Text: *Excursions in Modern Mathematics, 9th edition* (2017) by Peter Tannenbaum.

If you have the 8th edition (2014), your text will more or less contain the same topics (although with occasional exceptions), but the references to section numbers, examples and exercises might not always match the ones I announce in class and on the website. If you are in this situation, please find a classmate with the 9th edition, check with the library copy, or come talk to me early on.

Course Content: This course satisfies the Mathematical Thinking Core portion of the Liberal Education requirements at the University of Minnesota, and will provide a quantitative and analytical viewpoint for solving a number of every-day problems. Topics will deal with voting, fair division of assets, circuits and networks, money and finance, symmetry and patterns, probability and odds, and statistics and polling.

We will cover most of chapters 1-7, 10, 11, and 14-17 of Tannenbaum's text.

Homework: Homework will be assigned in class every day and the assignment will be posted on the course webpage. Homework will not be collected and graded. Yet doing homework is absolutely indispensable for success in the course as **mathematics is not a spectator sport.** Problems on quizzes and exams will be very similar to the homework problems.

Quizzes: A quiz will be given most Thursdays (starting the second week and excluding weeks when there are midterms). Quizzes will be based on the homework assigned during the preceding week. You cannot make up a quiz. Tentatively, there will be 9 quizzes in all, and the lowest quiz score will be dropped. The quizzes are handled exclusively by your TA's.

Exams: There will be **three 50-minute in-class midterm exams** and a **3-hour final exam**. The midterm exams are scheduled for

- Friday September 29th (Chapters 5, 6, 7, 10)
- Friday November 10th (Chapters 1, 2, 3, 4, 14, 15)
- Friday December 1st (Chapters 16, 17)

The final exam will be a comprehensive exam over all the material covered in the course (includes the above plus Chapter 11). All sections of Math 1001 take the same final exam on

- Friday December 15th.

Make up exams: Will be allowed only under exceptional circumstances. You must notify the lecturer, not the TA, in advance. Exam absences due to recognized University related activities, religious holidays, verifiable illness, or personal/family emergencies will be dealt with on an individual basis. Except in extreme situations, any student missing the final exam will fail the course.

Calculators/Cell phones: All quizzes and exams are closed book and closed notes, but a basic scientific calculator (that does basic arithmetic and exponentials) will be allowed. Graphing calculators or calculators that can do symbolic manipulations will not be allowed during exams and quizzes. As a courtesy to me and your fellow students, please turn your cell phone off before class starts. The use of your cellphone as a calculator on quizzes and exams is also prohibited.

Final Grade: Quizzes count for 20%, each of the 3 midterm exams for 15%, and the final exam for 35%.

Moodle: For your record-keeping, Quiz and Exam grades will be posted through **Moodle** which you can log on through `https://ay17.moodle.umn.edu/my/`. Final grades will only be determined at the end.

S/N Grade: If you are registered S/N, I will submit a grade of S if your letter grade is C or above, and otherwise a grade of N.

Incomplete grade: A grade of "I" will only be considered when failure to complete all course requirements is for reasons beyond the student's control. The minimum requirement for an incomplete grade is a substantial amount of course work completed at the level of C- or better. An "I" grade also requires a written agreement between the student and the instructor on how the missing work will be completed. After one year, and "I" turns into an "F" if the course work is not completed. Any arrangement for an incomplete grade can only be considered BEFORE the final exam.

Study Resources/Tutoring: Additional study resources and info about tutoring through the SMART Learning Commons is available at `https://www.lib.umn.edu/smart`.

Disability Accommodations: Disability Services promotes access and equity for everyone at the U of M. If you are registered with DS and require accommodations or services, please contact the instructor as soon as possible. If you require accommodations, but are not registered with DS, please contact their office at `https://diversity.umn.edu/disability/`.

To add or drop the course: For the various rules and deadlines for adding or dropping the course, visit One-Stop: `https://onestop.umn.edu/dates-and-deadlines`.

Scholastic Misconduct: You must do your own work on all quizzes and exams. Academic dishonesty in any work for this course will be grounds for awarding a grade of "F" for the entire course. University policies regarding academic dishonesty, credit, workload expectations, and grading standards are at

`http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html` and

`http://policy.umn.edu/Policies/Education/Education/STUDENTWORK.html`.

Complaints: I will be happy to discuss any complaints you might have about your recitation instructor. You can address complaints about your professor to Prof. Bryan Mosher, Director of Undergraduate Studies, Vincent Hall 115.

			Tentative Lecture and	**Initial Homework Schedule:**

Date	Section		Assignment
W Sept 6	5.1-5.2		Chap 5: 1, 3, 4, 5, 6, 8, 9, 11, 13, 16, 17, 19, 21
F Sept 8	5.2-5.4		Chap 5: 23, 25, 29, 33, 35, 38, 41, 45, 53, 60, 62, 67, 73
M Sept 11	6.1-6.2		Chap 6: 1, 4, 5, 7, 10, 13, 14, 17, 23
W Sept 13	6.3-6.4		Chap 6: 27, 29, 31, 33, 47, 55, 61
F Sept 15	6.5, 7.1	
M Sept 18	7.2-7.3	
W Sept 20	10.1-10.2	
F Sept 22	10.3-10.4	
M Sept 25	10.5	
W Sept 27	Prepare for MT 1	
F Sept 29	MT 1	
M Oct 2	1.1-1.2	
W Oct 4	1.3-1.4	
F Oct 6	1.5-1.6	
M Oct 9	2.1-2.2	
W Oct 11	2.3-2.4	
F Oct 13	3.1-3.2	
M Oct 16	3.3-3.4	
W Oct 18	3.5-3.6	
F Oct 20	4.1-4.2	
M Oct 23	4.3-4.4	
W Oct 25	4.5-4.6	
F Oct 27	Interlude: Geometry of Voting	
M Oct 30	Interlude: Geometry of Voting	
W Nov 1	14.1-14.2	
F Nov 3	14.3, 15.1	
M Nov 6	15.2-15.3	
W Nov 8	Prepare for MT 2	
F Nov 10	MT 2	
M Nov 13	16.1-16.2	
W Nov 15	16.3	
F Nov 17	16.4	
M Nov 20	16.5	
W Nov 22	17.1-7.2	
F Nov 24	Thanksgiving	
M Nov 27	17.3-17.4	
W Nov 29	Prepare for MT 3	
F Dec 1	MT 3	
M Dec 4	11.1-11.3	
W Dec 6	11.4-11.5	
F Dec 8	11.6-11.7	
M Dec 11	Prepare for the Final	
W Dec 13	Prepare for the Final	
F Dec 15	Final Exam	