Math 2373, CSE Linear Algebra and Differential Equations, Spring 2020
01/21/2020 - 05/04/2020
University of Minnesota, Twin Cities Campus (Draft of 1/13/2020)

<table>
<thead>
<tr>
<th>MATH 2373 - 010 (58226)</th>
<th>MATH 2373 - 020 (58230)</th>
<th>MATH 2373 - 030 (65628)</th>
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</thead>
<tbody>
<tr>
<td>MoWe 9:05AM-9:55AM</td>
<td>MoWe 11:15AM-12:05PM</td>
<td>MoWe 2:30PM-3:20PM</td>
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<td>Tate Hall B20</td>
<td>Tate Hall 101</td>
<td>Fraser Hall 102</td>
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<td>Terrence Stanley</td>
<td>Greg Anderson</td>
<td>Greg Anderson</td>
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COURSE SUPERVISOR:
Prof. Greg W. Anderson: VinH 460, gwanders@umn.edu, (612) 625-9524
Office Hours: MW: 1:25-2:15, 3:35–4:25

WEB PAGE: www.math.umn.edu/~gwanders/Math2373, accessible through the Canvas site.

ANNOUNCEMENTS: All announcements related to the class and classwork are made in lecture and are not guaranteed to be posted online. All announcements about office hours, office locations, e-mail addresses of teaching staff, exam locations, etc. are made in recitation and are not guaranteed to be posted online.

REQUIRED TEXT: Differential Equations & Linear Algebra, Second Edition by Farlow, Hall, McDill, and West. A used copy is okay provided it is the second edition. Also the Custom Edition used in 2017-18 is okay.

EXAM PROCTORING SCHEDULE: (This is a bit complicated. Read carefully.)

Students in discussions 11–15, 21–25, 31,32 take exams in Willey Hall 175 on the dates indicated and may choose either one of the two times indicated:

**Midterm I:** Tues., Feb. 18, 2020 (5:00-5:55pm or 6:05-7:00pm)
**Midterm II:** Tues., Mar. 24, 2020 (5:00-5:55pm or 6:05-7:00pm)
**Midterm III:** Tues., Apr. 21, 2020 (5:00-5:55pm or 6:05-7:00pm)

Students in discussions 33 and 34 take the exams on the same dates indicated above but do so in LindH40 at their regularly scheduled lab time.

**Note:** Students attending between 5 and 6 must sit in their seats quietly until time is called. But those attending between 6 and 7 may leave when they are finished.

**Further note:** All recitations for the whole course DO meet every week including during exam weeks. But there are NO regular lab meetings during exam weeks.

**Final Exam:** Thursday, May 7, noon-3pm.
The exam site(s) will be announced toward the end of the semester in recitation.

STATUTE OF LIMITATIONS: Requests for regrading of written work (midterm exams, homework, and lab reports) will be honored only for a period of one week after the items in question have been returned to the class. Failure to pick up an item when it is returned to the class does not stop the clock on the statute of limitations unless there is a written excuse for the absence.

CALCULATORS: On exams, any calculator is permitted, but we draw the line at laptops and touchscreen devices—these are forbidden. All other devices, especially those with wireless capabilities, must be turned off and stowed out of easy reach during exams. You may not have notes stored on your calculator or use it to communicate surreptitiously with others. **You are required to have a graphing calculator capable of evaluating determinants and finding the reduced row echelon form of a matrix.**

SPECIAL NEEDS: Please present a copy of your accommodation letter from the Disability Resource Center (DRC) to your lecturer in the first two weeks and with your instructor’s help as needed set up your accommodations for the whole semester ASAP. For further information please visit:
S/N GRADE: If you are registered S/N we will submit a grade of S if your letter grade is C- or above, and otherwise a grade of N.

MAKE-UPS (for one-time extraordinary events): Exam absences due to recognized University-related activities, religious holidays, verifiable illness, and family/medical emergencies will be dealt with on an individual basis. For university activities or religious holidays you should make arrangements with your TA well in advance. If you are suddenly unable to take an exam, you should e-mail your TA with cc to Prof. Anderson ASAP. **If you are too sick to take an exam, do not take the exam because there are NO RETAKES.** In all cases of absence from exams a written excuse is required for a make-up to be granted. Ignorance of the time and place of an exam will not be accepted as an excuse for absence from an exam. If you do not take an exam you will be assigned a score of zero for that exam.

INCOMPLETES: We will consider giving you an incomplete only if some severe, unexpected event prevents you from completing the course AND you have taken at least 2 midterms AND to date you have been doing work at the C level or better. In order for the registrar to permit the incomplete grade to be assigned you have to sign a contract stating exactly what you agree to do to complete the course along with deadlines for completion. We do not grant incompletes just because you’ve gotten behind in your work. You may drop without permission from any class up through the 8th week of the semester.

MAKE-UPS (for recurring conflicts with classes or work): If you have a class to attend, or a job to hold down every Tuesday evening during the semester, or a similar recurring conflict, you must inform your TA in person during the third week of the semester. (We’ll remind you about this in recitation in the third week.) You must supply written documentation, e.g. a print-out of your class schedule or a signed note from your supervisor at work. You will then take the exam on the next day, Wednesday, during the day. The times and places available for this make-up exam will be announced in recitation.

PROCEDURE FOR CALCULATING GRADES IN MATH 2373

Students collect points during the semester as follows:

- There are **12 homework assignments** each with face-value of 10 points maximum.
- There are **9 lab reports** each with face-value of 10 points maximum.
- There are **3 midterm exams** each with face-value of 100 points maximum.
- There is a **final exam** with face-value of 200 points maximum.

Your **Total Exam Score** is calculated by the formula

\[
\text{Total Exam Score} = \left( \frac{\text{MT1} + \text{MT2} + \text{MT3}}{300} \right) \times 450 + \left( \frac{\text{FINAL}}{200} \right) \times 350
\]

which is 800 points maximum. Your **Total Score** is calculated by the formula

\[
\text{Total Score} = \left( \frac{\text{HmwkTotal}}{120} \right) + \left( \frac{\text{LabTotal}}{90} \right) + \left( \frac{\text{MT1} + \text{MT2} + \text{MT3}}{300} \right) \times 450 + \left( \frac{\text{FINAL}}{200} \right) \times 350
\]

which is 1000 points maximum. The distribution of course grades in each recitation will be determined by the performance of the students on the common midterm and final exams as measured by the **Total Exam Score**. An individual student’s course grade within that distribution will then be determined by the **Total Score**. We use this procedure so that your lab and homework performance is compared only with that of other students in your recitation.
MIDTERMS: There are three midterm exams, each 55 minutes long and given on a Tuesday evening. The ground rules are closed book, closed notes, open calculator and no “cheat sheets” other than those we may provide attached to the exam. There are no multiple choice questions. Questions are similar to homework, worksheet, or review sheet problems but are never verbatim quotes. Scientific and graphing calculators are allowed on exams, but laptops, cell-phones, audio devices, etc are not allowed. You may not have notes stored in your calculator or use it to communicate surreptitiously with others. In the absence of specific instructions to the contrary, you are expected to show all the work needed to justify your answers by hand (rather than machine) calculation. Answers appearing without supporting calculations and explanation, even correct ones, will receive no credit. Please use the results of the first midterm to help you decide if you’re in danger of failing and should either drop the course or get extra help.

HOMEWORK: Homework is assigned once a week and is due on Tuesdays in recitation at the *beginning* of the class period. No credit for late homework. We encourage you to discuss homework problems with your classmates, including strategies for solving different kinds of problems. Indeed this is one of the best ways to improve your understanding of the course. However, when you write up your solutions you must do this on your own. Handing in homework that is almost identical to a classmate’s is a form of cheating and will not be tolerated. Your homework must be neatly, clearly and logically written. **Hard copies are required.** Staple or clip your homework together and write your name on the front page. You are required to show methods of solution, not just final answers, and to explain yourself with reasonable clarity. You will lose homework points if you fail to meet any of these standards.

LABS: Each week you spend 50 minutes in the lab interacting with MATLAB and you are expected to produce a report on your laboratory activities, due at the *beginning* of lab the next week. No credit for late labs. We discourage verbatim transcription of all your interactions with the computer – that’s too much to read. We want just enough computer printout and additional commentary to answer all the questions on the lab handout and to convince us that you understood your assignment. Answers to questions must be composed in complete sentences. All MATLAB commands you use should be included in the report but the intermediate output should be edited out. What you hand in should be a complete and neatly presented lab report. **Hard copies are required.** Pages should be stapled or clipped. Write your name legibly on the front page. Handing in a lab report that is almost identical to a classmate’s is a form of cheating and will not be tolerated. You will lose lab points if you fail to meet any of these standards.

FINAL EXAM: The final exam is three hours long. The ground rules are the same as for the midterms: closed book, closed notes, open calculator, and no “cheat sheets” other than those we provide. Questions will be in the same format as on the midterms. In particular, there are (with possibly a couple of exceptions) no multiple choice questions and unless otherwise instructed you have to show all the work needed to solve problems by hand. Please note the date and time of the final exam very carefully and plan accordingly. You commit to that date and time, as well as to the designated location to be announced later, when you sign up for this course.

See [http://www.policy.umn.edu/Policies/Education/](http://www.policy.umn.edu/Policies/Education/) for University GRADING STANDARDS and standards of SCHOLASTIC CONDUCT.

Finally: STUDENTS ARE HELD RESPONSIBLE FOR ALL ANNOUNCEMENTS AND ALL COURSE CONTENT DELIVERED IN LECTURE, IN RECITATION, AND IN LAB.