# MATH 225: Linear Algebra and Linear Differential Equations Fall 2019 Syllabus

| Туре       | Section | Time             | Location      | Instructor  |
|------------|---------|------------------|---------------|-------------|
| Lecture    | 39538R  | MWF 9:00-9:50am  | VKC 100       | Qingtang Su |
| Discussion | 39539R  | TuTh 2:00-2:50pm | <b>GFS220</b> | TBD         |
| Discussion | 39540R  | TuTh 3:00-3:50pm | <b>GFS220</b> | TBD         |

**Disclaimer:** This syllabus does not constitute a contract. The Instructor reserves the right to make changes at his discretion throughout the semester.

### **Contact Information:**

- Instructor: Dr. Qingtang Su Office: KAP 444C Email: qingtang@usc.edu Office hours: Wednesday 1:00 - 3:00 pm or by appointment
- TA: TBD Office: TBD Email: TBD@usc.edu Office hours: TBD

Course Textbook: Goode & Annin, Differential Equations & Linear Algebra. Fourth Edition<sup>1</sup>. ISBN: 9780321964670.

**Course Description:** (4 units) Matrices, systems of linear equations, vector spaces, linear transformations, eigenvalues, systems of linear differential equations. This corresponds to Chapters 1-9 of the Fourth Edition.

Prerequisites: MATH 126 or MATH 127.

Blackboard learning management system: Homework assignments as well as announcements concerning the course will be posted to Blackboard http://blackboard.usc.edu. It is your responsibility to check Blackboard frequently. Your scores will also be recorded on Blackboard. It is your responsibility to check that your scores are recorded correctly.

Math Center: The Math Center (KAP 263) will be an extremely valuable resource for you. Its website is here. Your TA holds office hours there, as do all other TAs for core math classes and they are all there to help you. It is **highly recommended** that you make a habit of going to the Math Center regularly, to work with other students and to get your questions answered as they arise.

### **Important Dates:**

| Friday, September 13, 2019 | Last day to add or drop <sup>2</sup> classes.                    |  |
|----------------------------|--|--|
| Friday, October 11, 2019   | Midterm # 1; Time: 9:00-9:50 am; Room: VKC 100.                  |  |
| Friday, October 11, 2019   | Last day to drop a course without a mark of W on the transcript. |  |
| Friday, November 8, 2019   | Midterm # 2; Time: 9:00-9:50 am; Room: VKC 100.                  |  |
| Friday, November 15, 2019  | Last day to drop a class with a mark of W.                       |  |
| Monday, December 16, 2019  | <b>Final exam</b> ; Time: 11:00-13:00; Room: TBD                 |  |

#### Grade weights:

<sup>&</sup>lt;sup>1</sup>Note: Chapters, sections, and exercises have been rearranged from the 3rd Edition

<sup>&</sup>lt;sup>2</sup>drop without a mark "W" and receive a refund

| Midterms:   | $2 \times 20\%$ |
|-------------|-----------------|
| Final Exam: | 35%             |
| Quizzes:    | 10%             |
| HWs:        | 15%             |

**Homework:** Homework will be assigned and posted in Blackboard on Thursdays, and will be due at the beginning of discussion the following Thursday. Late homework will not be accepted. An assortment of the problems from each homework will be graded. In your solutions, you should give at least a brief explanation where applicable (e.g. for problems whose answer is just yes or no). No homework will be due in the same week as an exam. In order to account for unexpected circumstances, your lowest two homework scores will be dropped.

**Quizzes:** There will be quizzes at the end of Tuesday discussion sessions, which cover the material on the homework that is due Thursday in the same week. There will be no quiz the first week, and no quiz in the same week as an exam. In order to account for unexpected circumstances, your lowest two quiz scores will be dropped.

## **Exam Policy:**

- No calculator, cell/smart phone or other electronic device will be allowed during an examination.
- There will be exactly 3 exams. The first two will be held in our regular room and time. The Final will be a cumulative exam, written by the Math Department. It is university policy that no student may take this exam early or be allowed to skip it, so plan your holiday travel appropriately.
- If there is a scheduling conflict for an exam, you must **let ME know (NOT the TA) at least 2 weeks before the examination**. A scheduling conflict must involve an activity sponsored and approved by USC (marching band, athlete event, etc.). In particular, the university club or organization in question must send an official request, with the Deans approval, to all faculty. Personal activities do not qualify. **FAILURE TO ATTEND AN EXAMINATION WILL NOT BE EXCUSED UNDER NO CIRCUMSTANCES**.

Academic Integrity: You must abide by the university policies on academic integrity. Please review them here. In essence, these policies require you to be honest. So, please: be honest.

**Students with disabilities:** Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be the letter is delivered to the instructor as early in the semester as possible. DSP is located in STU 301 and is open 8:30a.m.-5:00p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Course Calendar** We will cover the following sections of your textbook, on roughly the weeks listed. This calendar is very tentative.

- Week 01 : Introductions, Sections 2.1 2.4
- Week 02: Monday holiday. Sections 2.4-2.5
- Week 03: Sections 2.6 2.9.
- Week 04: Sections 3.1 3.5
- Week 05: Section 4.1 4.6.
- Week 06: Sections 4.7 and review.
- Week 07: Sections 4.8 4.11.
- Week 08: (Fall Recess: Oct, 17-18) Sections 5.1 5.3, 5.5. (We will skip 5.4.)
- Week 09: Section 6.1 6.4

- Week 11: Sections 6.5 6.6 7.1.
- Week 12: Sections 7.2 7.3 and review.
- Week 13: Sections 7.4 7.7.
- Week 14: (Thanks giving: Wed-Sunday) Some sections from Chapter 1.
- Week 15: Some sections from Chapter 8.
- Week \* : Some sections from Chapter 9 (if time permits).
- Finals Week