Math 547 Summer-1, 2020
Syllabus

Richard Rimanyi

May 11, 2020

1   Basics

Instructor: Richard Rimanyi, Department of Mathematics, CP-429

Prerequisite: math233

Textbook: J. Holt: Linear Algebra with Applications (2nd Ed)

2   About the material

In this course, we will learn the main concepts of Linear Algebra, such as *systems of linear equations, Euclidean spaces, subspaces, linear independence, span, dimension, matrices, determinant, eigen-space analysis, orthogonality, projections, Gram-Schmidt process, Spectral Theorem, Singular Value Decomposition.* Although we will mostly focus on the computational and algorithmic parts of linear algebra, we will also touch upon some simple arguments and theory behind the notions.

I will lecture on the key points and difficult concepts, but you will need to read the book for more details and review your notes regularly. It is also very important that you work many problems from the book every week beyond the homework assignments.

3   Means of teaching

There are 30 pre-recorded videos you need to watch (for schedule, see below). The instructor will be available for live Zoom sessions (995-3076-1944) at noon every class meeting day to answer questions on the material discussed in the videos.

There will be office hours (Zoom 911-1644-6485) May 15 2pm and May 18 2pm. Starting May 18, the frequency and times of the office hours will be determined based on discussion with the class.

4 Dates

Week 1 (May 13-15) Lectures 1–4
Week 2 (May 18–22) Lectures 5–11
Midterm-1: May 26
Week 3 (May 26–29) Lectures 12–15
Week 4 (June 1–5) Lectures 16–23
Midterm-2: June 8
Week 5-6 (June 8–15) Lectures 24–30

Final: June 17, 11:30-2:30:

5 Websites

- Class website: *Sakai*

- Discussions, communication with instructor: *Piazza*

  – piazza.com/unc/summer2020/math547001/home

- Handing in written homework assignments, handing in exams: *Gradescope*

- Computational homework assignments: *WebAssign.*

  – Class key: unc 2473 5338

- Lectures, discussions, office hours: *Zoom*

You are automatically enrolled in Zoom and Sakai through UNC. I will add every registered student to Gradescope by the first day of classes. Use the class key above to join WebAssign. Use the link above to join Piazza.

6 Exams

There will be two Midterms (75 min) and a Final (3 hours), on the dates shown above. These are not take-home exams. You will have 75 minutes (180 for the final) to complete them. Whether the time of these exams will be fixed, or you can choose the time within a window will be determined later.

Whether the exams are online proctored or not, will be determined later.

7   Grading

WebAssign Homework: 100 pt
Written Homework: 100 pt
Midterm-1: 100 pt
Midterm-2: 100 pt
Final: 200 pt

Total: 600 pt

8   Honor code

It is expected that each student will conduct him or herself within the guidelines of the Honor System. All academic work should be done with the complete honesty and integrity that this University demands.

All **exams** (midterms, final) that you hand in must be your work only. In particular, you must not use other people's work or help to solve exams problems. This includes internet sources. Using internet sources (e.g. posting exam questions, copying/rewriting solutions from the internet) is a violation of the honor code, and hence will be reported.

You may discuss **homework assignments** with your class mates. If you do so, you still need to write up the solution yourself, copying someone else's work is not acceptable. Also, in this case your written homework must start with the statement that you discussed this problem with ⟨names⟩. Posting homework assignments on the internet or copying solutions from the internet is a violation of the honor code, and hence will be reported.