

Math 309 – Linear Analysis Spring 2017 – Sections A

Instructor: Dr. Fanny Dos Reis

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Web Page: <http://such-that.com/>

Class Forum: <http://piazza.com/washington/spring2017/math309/home>

Class Schedule: MWF 9:30-10:20 am

Meeting Room: LOW 205

Office Hours: MF noon – 1:00 pm

Note: Check my website and Piazza regularly for class announcements, important information, class notes and daily schedule.

Textbooks: Boyce *Linear Analysis*, tenth edition.

Course Description: Math 309 serves as the culmination of the Math 307-8-9 program in linear analysis. It combines analysis tools and ideas (such as series expansions, complex numbers and exponentials, and differential equations) from Math 307 with comparable content (eigenvalues, and difference equations, orthogonal bases, projections and best approximations) from Math 308. These tools are applied to the solution and qualitative study of linear systems of ordinary differential equations, and to the analysis of classical partial differential equations (heat, wave, Laplace equations). In the case of partial differential equations, the method of separation of variables is used to obtain solutions to boundary value problems which are then solved and are used to generate the Fourier series solutions of the original partial differential equation.

Prerequisites: Math 126; Math 307, Math 308

Quizzes: Regularly throughout the quarter, the student will be given in-class assignments during lecture which must be completed before leaving class. Most of the time, the assignments will be similar to suggested homework problems and will be given during the lecture and will last for 10-15 minutes.

Homework Assignments: Homework exercises will be assigned on my webpage as the quarter progresses. Students will turn in their work for grading. No late homework will be accepted.

Exams: There will be two in-class exams and a cumulative final exam. The first 2 exams will be administered in class during the lectures. The students will need to turn off any electronic device and leave it in their bag. One handwritten 2-sided notebook-sized sheet is allowed during the exams and the final examination

The **tentative** exam dates are

- Exam I: Monday April 24th, 9:30 am – 10:20 am, LOW 205
- Exam II: Monday May 22nd, 9:30 am – 10:20 am, LOW 205
- **Final exam:** Wednesday June 7th, 8:30am-10:20am LOW 205

Grading Policy:

2 exams:	25% each
Homework:	10%
Quizzes:	10%
Final exam:	30%

Academic honesty: I further refer the student Conduct code
<http://www.washington.edu/students/handbook/conduct.html>

Make-Up Policy: If you miss an assignment due to unavoidable, compelling well-documented reason, please, contact me immediately.

Copyright Policies: All printed materials disseminated in class or on the web are protected by Copyright laws. One Xerox copy (or download from the web) is allowed for personal use. Multiple copies, sale, or upload on a different website of any of these materials is strictly prohibited.

Sources of Help and Preparing for Exams:

1. **Office Hours:** I am here to help. I hope you will visit during my office hours. It gives us the chance to go over the questions you may have about the material, the lectures, the assignments, or to discuss study strategy or any class related subject.
2. **Class Notes:** An outline of notes will be posted before each class day. It will be beneficial to print these out and bring them with you to class. You should review your notes after class, and make sure you get any questions you have about the material answered before the next class day.
3. **Practice:** In order to succeed in this class, it is essential that you work the homework problems in your textbook, re-work the problems done in lecture and in homework. They are the material for the quizzes and exams.
4. **Clue:** The Center for Learning and Undergraduate enrichment
<http://depts.washington.edu/aspw/clue/home/>