Math 454   Boundary Value Problems for Partial Differential Equations

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Fall 2024

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Course Website: **TODO**
Class Hours: TuTh 11:30 - 13:00
Class Room: 268 Weiser

Course Description

Math 454 introduces various methods for solving linear partial differential equations. The topics include the use of Fourier series and other orthogonal expansions, method of characteristics and Green's function.

Materials

- There is no required textbook. For supplemental reading, the following options are recommended.

- Prof. Manabu Machida's course website. http://www.mmachida.com/math454/

- Mark A. Pinsky. *Partial Differential Equations and Boundary-Value Problems with Applications.* American Mathematical Society 3rd ed. 2011

- R. Haberman. *Applied Partial Differential Equations with Fourier Series and Boundary Value Problems, 4th edition.* Pearson Prentice Hall, 2004.

Prerequisites

- Calculus: Math 115, 116, and 215 (or equivalent)

- ODEs: Math 216 (or equivalent)

Course Organization

Classes

The class meets twice per week (TTh) in 90 minutes sessions with a 5 minutes break.

Homework

Here will be weekly HW sets due on Tuesdays at 11:59pm. (The due date may change later in the semester due to the midterm exams and Holidays). Students may discuss the problems with each other, but each student should write up their own solutions, neatly and legibly. The solutions should be scanned and uploaded to Gradescope in Canvas.

Exams

There are two midterms and one final exam of this course.

Grading Policy

- homework = 20%, due on Tuesdays at 11:59pm.

- midterm exam = 40%, Wednesday, October 23, 6-7:30pm

- final exam = 40%, Friday, December 13, 4:00-6:00pm