Fall 2019 Math 220/CME 303: Partial
differential equations of applied mathematics

This is a course on partial differential equations with a focus on applications.

Course webpage

Instructor
Jonathan Luk, jluk@stanford.edu

Teaching assistant
Qiuye Jia, jqy@stanford.edu

Prerequisites
Knowledge on multivariable calculus, ordinary differential equations, and experience with writing proofs.

Lectures
TuTh 1:30am-2:50pm, McCullough 115

Office Hours
W 10:30-11:30 am with JL at 380-382Z; MW 7-9pm with QJ, location TBD.

Textbook
Partial Differential Equations: An accessible route through theory and applications by Andras Vasy. You will be able to find some posted lecture notes on the course webpage, which is an earlier version of the book.

Topics of the course
Method of characteristics; poisson, heat and wave equations; distribution theory; Fourier transforms; eigenvalue problems; Fourier series.

Homework assignments
• There will be eight homework assignments. Assignments can be found on the course website (at least) one week before it is due.
• Homeworks are due weekly on Tuesdays (starting Week 2) during lectures, except for Week 7 which is right after the midterm exam.

• **No late homework will be accepted** without prior approval from the instructor.

• You may (and are in fact encouraged to) discuss the homework problems with others in the class, but you **must** write up your own solution.

• The final score for the homework assignments will be calculated as the average of all of the assignments, each with an equal weight.

**Examinations**

• There will be one **midterm examination**, to be held during the usual class hour on the Thursday of Week 6.

• There will be a final examination.

• Makeup midterm examinations are only available to students with a clash with other classes or in exceptional situation with prior approval by the instructor. If this applies to you, you should contact me immediately, and no later than the end of Week 1.

• The final exam is scheduled by the registrar’s office and no makeup exams will be available.

**Grading policy**

The grade will be based on the homework assignments (30%), the midterm exams (30%) and the final exam (40%).

**OAE Accommodation**

If you have an accommodation letter from OAE, please contact me immediately, and no later than the end of Week 1.

**Course related expenses**

All students should retain receipts for books and other course-related expenses, as these may be qualified educational expenses for tax purposes. If you are an undergraduate receiving financial aid, you may be eligible for additional financial aid for required books and course materials if these expenses exceed the aid amount in your award letter. For more information, review your award letter or visit the Student Budget website https://financialaid.stanford.edu/undergrad/budget/index.html