

Math 555a - Partial Differential Equations

Fall 2018

Contact information

- **Instructor:** Yu Deng
 - **Office hours:** TBA
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- **Class meeting:** MWF 9:00-9:50am in KAP 141

Course description

This is a first course in the theory of partial differential equations (PDE). We will start by introducing some concepts and methods that are common through all types of PDEs, such as the notion of well-posedness, strong/weak solutions, method of characteristics, fundamental solutions etc. Then we will take a glance at each of the important types of PDEs: elliptic, parabolic, hyperbolic/dispersive. The contents we cover will depend on the progress.

Textbook

L. C. Evans, *Partial Differential Equations*, 2nd edition, Graduate Studies in Mathematics Volume 19, American Mathematical Society, 2010.

Blackboard

We will be using the *blackboard* site, <https://blackboard.usc.edu>. All the materials related to this course, including homework assignments, will be put there. You should **check blackboard regularly**.

Homework assignments

Homework assignments are due every two weeks. Please see the schedule, available in blackboard, for the precise dates when assignments are posted (on blackboard) or due. Discussion and collaboration are allowed, in fact encouraged, but you should write the solution in your own words.

Assignments are submitted at the beginning of lectures; alternatively you can submit them via email **before the beginning of lectures**. Please do **not** put them in my mailbox. Late submissions are not accepted. In calculation of final grade, the **lowest** homework score will be dropped.

Exams

There will be one in-class **midterm** on **Friday, Oct 12** and one **final exam** on **Monday, Dec 10, 11am-1pm**. If you cannot attend an exam for a valid reason, you can take a makeup exam, but you should contact me as early as possible.

Grading breakdown

Grade = 30% · (Homework grade) + 30% · (Midterm grade) + 40% · (Final grade).

Getting help

If you have any feedback, problems, questions or want to chat, please do not hesitate to drop by at my office.

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Section 11, Behavior Violating University Standards, <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions>. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity <http://equity.usc.edu> or to the Department of Public Safety <http://adminsnet.usc.edu/department/department-public-safety>. This is important for the safety of the whole USC community. Another member of the university community such as a friend, classmate, advisor, or faculty member can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men <http://www.usc.edu/student-affairs/cwm/>

provides 24/7 confidential support, and the sexual assault resource center webpage <http://sarc.usc.edu> describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the American Language Institute <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.