Goals

- Convey the basic concepts so that students can apply their knowledge in research
- Have a constructive class atmosphere in which discussion is possible
- Give students opportunities to show understanding

Lectures: TuTh 11:00 am-12:20 pm in EBU II 305.

Contact: My e-mail address is <u>sgls@ucsd.edu</u>, but if you have a question, talk to me before or after class, or come to see me. Office hours: I will aim to be available twice a week (time TBD) you can make an appointment to meet me. It is your responsibility to come and find me if you have questions, concerns, etc. Problem class time/format TBD. A combination of in person and Zoom is usually most effective.

Textbook and reserves: I will place the book by Rile, Hobson and Bence on reserve at the library, along with a few others.

Syllabus (may be teaked)

- 1. Sturm-Liouville theory
- 2. First-order PDEs
- 3. The diffusion equation
- 4. Laplace's equation
- 5. The wave equation

Lecture schedule (provisional):

- Jan 9: Chapter I Sturm-Liouville problems
- Jan 11: (Cont.)
- Jan 16: (Cont.)
- Jan 18: (Cont.) HW I due (TBD)
- Jan 23: Chapter II First-order PDEs
- Jan 25: (Cont.)
- Jan 30: (Cont.)
- Feb 1: (Cont.) HW II due (TBD)
- Feb 6: Chapter III The diffusion equation
- Feb 8: (Cont.)
- Feb 13: (Cont.)
- Feb 15: (Cont.) HW III due (TBD)
- Feb 20: Chapter III Laplace's equation
- Feb 22: (Cont.)
- Feb 27: (Cont.)
- Feb 29: (Cont.) HW IV due (TBD)
- Mar 5: Chapter IV The wave equation

- Mar 7: (Cont.)
- Mar 12: (Cont.)
- Mar 14: (Cont.) HW V due (TBD)

Homework policy: you may discuss problems among yourselves, but everything you write and hand in should be your own work. Regrades: you should write a short explanation and turn it in to me within one week of the homework being due. There will be 5 homeworks. Upload via Gradescope.

Midterm: One or two; to be discussed. Date(s) TBD 80 minutes, open note. Preferably in class then scanned, but if there are two, it might be best not to have at least one in class.

Final: March 21, 11:30 am-2:30 pm. 3 hours, open note. In class then scanned.

Grading policy: I remind you of UCSD's <u>policyLinks to an external site.</u> on academic integrity.

Updated January 3.