

Sam Houston State University
Math 5776 Fourier Analysis
Fall, 2017

1. **Course Info**

- Instructor: Daniel Wang
- Time and Location: Lee Drain 205, Monday, Wednesday 3-4:20 PM
- Office: 436 Lee Drain
- Email: daniel.wang@shsu.edu
- Office Hours: MWF 10-11, or by apointment

2. **Text**

- Required text: *Real Analysis: Measure Theory, Integration, and Hilbert Spaces*, by Elias M. Stein & Rami Shakarchi (Princeton).
- Possible text: *Functional Analysis, an Introduction to Further Topics in Analysis*, by Elias M. Stein & Rami Shakarchi (Princeton).
- Other resources: *Real Analysis: Modern Techniques and Their Applications* by Gerald Folland and *Real and Complex Analysis* by Walter Rudin. I used these books when I learned these topics.

3. **Grading** There will be a series of assignments, and possibly presentations, for the course. This will determine your grade.

4. **Course requirements** Math 6333 and 6334 (or a two-semester sequence in measure theory)

5. **Course Goals** We continue on with the basic topics in harmonic analysis. Possible topics are Hilbert Spaces, abstract measure theory, L^p spaces, singular integral operators, weighted theory. These are all ubiquitous concepts in analysis.

6. **Resources and Tips, in order of importance:**

- Come to class. You are responsible for everything that goes on in class as well as all the emails I send out. If you do miss class, find out what you missed **from your classmates**.
- Read the book. Read it before class; read it after class. Read it before bed; read it during meals. Our book is especially well-written, so it is worth many readings. However, the material is still difficult.
- My office hours are for answering your questions and concerns with the material and the course. If you can't come to my office hours, email me to schedule another time. Be sure to do this in advance since I rarely check my email in the evenings.

7. Final notes:

- No late work will be accepted. No make-up tests will be given, unless you have athletic or medical reasons. Only pdf-printouts of your homework will be accepted, and due during class.
- No calculators, notes, or formula sheets will be allowed during any tests, unless otherwise noted.
- Since we are using Blackboard, I will be sending emails to notify you of various announcements. Make sure you check your SHSU emails regularly.
- Attendance will be taken during the first few weeks of the course. That record will be used for registration and financial aid purposes. The full policy on attendance can be found at:
<http://www.shsu.edu/dotAsset/1e59e034-4fe5-4563-be7b-362234dca1ae.pdf>
- Don't cheat. The policy on academic integrity is at:
<http://www.shsu.edu/dotAsset/728eec25-f780-4dcf-932c-03d68cade002.pdf>
When in doubt, feel free to come talk to me.
- It is the policy of SHSU that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (936-294-3512, disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.
SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. No accommodation can be made until you register with the Services for Students with Disabilities. For more information, see:
<http://www.shsu.edu/dotAsset/7ff819c3-39f3-491d-b688-db5a330ced92.pdf>
- This syllabus does not deal with all situations that may arise in the course of a semester. I reserve the right to modify anything in this syllabus, as well as set new rules and guidelines for issues concerning classroom decorum, learning atmosphere, and academic integrity.