Math 627, Introduction to Fourier Analysis, Fall 2021

Basic Information

Instructor:	Sergey Denisov
Office:	623 Van Vleck Hall
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E-Mail:	`denissov@wisc.edu`
Web Page:	http://www.math.wisc.edu/~denissov
Office Hours:	regular, by Zoom: each Monday, 6:00–7:00 pm in person, by appointment only: each Friday, 2:15–4:00 pm, B325 Van Vleck
Texts:	required: *Fourier analysis, an introduction* by E. Stein, R. Shakarchi suggested: *Early Fourier Analysis* by H. Montgomery, *Lectures on Fourier transform and its applications* by B. Osgood, *The evolution of applied Harmonic Analysis* by E. Prestini
Lecture:	MWF 1:20 –2:10 pm, B231 Van Vleck

Assignments:

There will be final take home exam. Homework problems will be regularly posted on Canvas every other Wednesday starting September 15. Typically, you will have two weeks to turn them in on Canvas. I expect all assignments to be written neatly, and handed in on time. You can collaborate on hw but should write solutions in your own words.

Honors: students taking this course with Honors will occasionally be given more challenging hw problems and extra reading assignments

Grading:

Your final grade will be calculated as follows. For each of you, I will compute the number

$$x = 0.6 \cdot \frac{\text{your total hw}}{\text{max hw score}} + 0.4 \cdot \frac{\text{your score for the final}}{\text{max final score}}$$

Now $x \in [0, 1]$. Your grade will be determined by the following table

$0.9 \le x \le 1$	A
$0.85 \le x < 0.9$	AB
$0.75 \le x < 0.85$	B
$0.65 \le x < 0.75$	BC
$0.5 \le x < 0.65$	C
$0.4 \le x < 0.5$	D
$x < 0.4$	F

After the final this table can change BUT ONLY IN YOUR FAVOR!

Material:	The topics will include: Fourier series and integrals (questions of convergence, polynomial estimates) in dimensions one and higher, applications in physics, finite Fourier analysis
COVID:	You are expected to observe UW covid related policies