Washington University - St. Louis
Fall 2016
Math 519 - Harmonic Analysis
Lecture: Room: Cupples I 06 - Time: MWF 1:00pm – 2:00pm

Instructor: Brett D. Wick Office: Cupples I 212
Office Phone: 314-935-6765 Office Hours: MWF 2:00pm – 3:00pm
Email: wick@math.wustl.edu or by appointment
Webpage: http://www.math.wustl.edu/∼wick/teaching/math519_F2017.html

Text: There will be no assigned text for the course. The material to be covered will be taken from research papers in the area. For the background material students can consult the texts:

> "Classical and Modern Harmonic Analysis" by Grafakos;
>
> "Harmonic Analysis: Real Variable Methods, Orthogonality, and Oscillatory Integrals" by Stein;
>
> "Fourier Analysis" by Duoandikoetxea.

Additional material will be taken from other sources such as books or papers in the literature.

Prerequisite and Description: Math 519 will be an advanced course in harmonic analysis. Topics covered include the basics of the theory of Calderon-Zygmund operators, Littlewood-Paley Theory, the applications of these topics to the study of function spaces and topics related to Riesz transforms associated to differential operators.

Prerequisites for the course are Math 5051 and 5052, or permission of instructor.

Attendance: Attendance is required for all lectures. The student who misses a class meeting is responsible for any assignments and/or announcements made. Office hours will not be utilized to re-teach material presented in class. However, questions to better understand the course are always welcome.

In the event of an absence that will impact your ability to complete your assignments due to travel representing Washington University - St. Louis, you must notify the professor at least two weeks in advance to arrange an early test or other alternative. Otherwise, such absences will be treated as personal.

Homework: This course will have no homework assignments.

Projects: There will be a required project to complete for the course. The project will be to work through a particular paper and present it to the class. The project will be determined by discussion between the student and the instructor and selected based on connections with the course and students interests. Exact details will be provided later.

Learning Disabilities: It is the right of any student with a certified learning disability to request necessary accommodation. Such requests must be made well in advance of the time

that the accommodation is required and a letter of documentation from the CornerStone office must be presented at the time of any request.

Academic Honesty: It is expected that all students are aware of their individual responsibilities under the WUSTL Academic Integrity Policy, which will be strictly adhered to in this class. **Any violations must be reported directly to the Dean of Students.**

Grades: The usual ten-point scale will be used (A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59), however, if necessary, adjustments will be made to arrive at a standard grade distribution. Grades will be based upon attendance, participation and a class project.

Attendance/Participation	50%
Project	50%

Important Dates for Fall 2017:

August 28	First day of classes
September 4	Labor Day - No Class
October 16 - 17	Fall Student Recess - No Class
November 22 - 26	Thanksgiving Break - No Class
December 8	Last day of classes