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M 564.01: Topics in Analysis

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Syllabus for M 564, Spring 2019
Topics in Analysis: Fourier Analysis

Meeting Time: MWF 2:00 - 2:50
Location: Math 305.

Professor: Jennifer Brooks
Office: Math 107
Office Phone: 243-2083
e-mail: jennifer.brooks@mso.umt.edu
Office Hours: MWF 1:00 – 1:50.

Text: *Hermitian Analysis : From Fourier Series to Cauchy-Riemann Geometry,*
John P. D'Angelo, Birkhäuser, 2013.

Course Description

In this course we study the fundamentals of Fourier analysis. Topics include Fourier series, Hilbert spaces, and the Fourier transform. The course is designed to be accessible to those with a solid foundation in undergraduate mathematics and aims to connect Fourier analysis with other areas of mathematics.

Assessment

Homework: 50%
Project: 50%

You are expected to present a problem at least once every two weeks. You may choose the problem you present. When you have selected a problem, let me know in class or by email and I will tell you on which day you may present.

You are also expected to complete a final project for the course on a topic of interest to you that is related to the content of the course. Of course the topic is to be approved by me in advance. I will set various deadlines throughout the semester for selecting a topic and demonstrating partial progress. You will give a presentation of your final project during one of the last classes or during the final exam time. Your presentation should be at least 25 minutes.

Academic Misconduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at http://www.umt.edu/SA/VPSA/index.cfm/page/1321.

Students with Disabilities

Students with disabilities may request reasonable modifications by consulting with me. The University of Montana assures equal access to instruction through collaboration between students, instructors, and Disability Services for Students (DSS). For more information, consult http://www.umt.edu/disability.

Important Dates

Jan. 21 (Monday): MLK Day – no class.
Feb. 18 (Monday): Presidents' Day – no class.
Mar. 25 – Mar 29: SPRING BREAK.

Apr. 26 (Friday): Last day of class.