Physics 600
Mathematical Methods of Theoretical Physics

Instructor: Jason Kumar
WAT 436
jkumar@hawaii.edu
(808)956-2972

Class meets:
T Th 12:00-1:15pm
WAT 417

Recommended Textbook:
Mathematical Methods of Physics
Mathews and Walker

Topics to be covered:

Generalized Curvature

Group Theory (Representation Theory)

Perturbation Theory

Complex Analysis

Fourier Analysis

Grading:

The course grade will be based on homework and exams

60% -- homework
20% -- midterm
20% -- final

Student Learning Outcomes:
At the successful completion of this course, students will be expected to:

1) Have an understanding of the general nature of curvature and of its specific application to geometry and gauge-symmetry
2) Understand how to use the basic tools and results of representation theory

3) Understand methods of perturbation theory, along with basic computations of non-perturbative physics
4) Understand the basic tool and techniques of complex and Fourier analysis