
Fall 2011: Physics 301: Mathematical Physics
Course Outline

General Information

Lecturer: Professor Junru Wu
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Office Hours T 10-11, W 1-3 and by appointment

Lectures

Lecture	TR	1:00 – 2:15	Cook 402
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Course Prerequisites: Physics 211, Physics 214

Course Description: Introduction to basic mathematical methods of theoretical physics; vector and matrices; line, surface and volume integrals; Fourier analysis; Integral transforms; Higher-order differential equations; Eigenfunction methods for differential equations; Partial differential equations; Orthogonal functions etc..

Course Text: Essential Mathematical Methods for the Physical, K.F. Riley, and M.P. Hobson, (2011; Cambridge University Press) ISBN: 978-0-521-76114-7. This text is available at the [UVM Bookstore](#) and [online](#).

References: Mathematical Methods for Physics, H.W. Wyld; Mathematical Methods for Physicists, G. Arfken

Homework: There will be problem sets periodically.

Exams: There will be three exams. The final grade of the course will be based on the homework (40%), the three exams (20% each).