UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

Applied Mathematics 433 Mathematical Methods in Physics

Topics include Fourier analysis; Partial differential equations; Complex analysis; Residue integrals; Extensive physical applications.
Course Hours: H(3-1T)
Prerequisite(s): Applied Mathematics 307 or 311; one of Applied Mathematics 309 or Mathematics 353 or 381 or 331; one of Mathematics 211, 213 or 221.
Antirequisite(s): Credit will be not be allowed for more than one of Applied Mathematics 433, or 415, or 413.

Syllabus

Topics	**Number of Hours**
Complex Analysis, Laurent Series, Residues, Cauchy theorem, Evaluation of real integrals by methods of complex analysis	12
Fourier Series and Fourier Integrals, boundary value problems for physical fields	7
Partial Differential Equations	11
Green's Functions	2
Laplace Transforms and applications	4
TOTAL HOURS	**36**

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2010:08:05 Effective Fall 2010

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