SYLLABUS
INTRODUCTION TO PARTIAL DIFFERENTIAL EQUATIONS
MATHEMATICS 3363
Spring 2020

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Prerequisite: Math 2433 and either Math 3321or Math 3331.

Text: *Applied Partial Differential Equations*, 5th ed. By Richard Haberman

Objectives: Upon completion of this course, it is expected that students will be able to
               solve elementary boundary and initial value problems for partial
               differential equations. It is also expected that they will have an
               understanding of trigonometric Fourier series and other orthogonal
               expansions.

Topics: Course content will include
               1. Derivations of some of the partial differential equation problems of
                  physics.
               2. Sturm-Liouville and other two-point boundary value problems.
               3. Trigonometric Fourier series. Expansions in terms of other orthogonal
                  sequences of functions.
               4. Partial differential equation problems on domains of finite spatial
                  extent using the method of separation of variables.
               5. Partial differential equation problems on domains of infinite spatial
                  extent.
               6. Nonhomogeneous partial differential equation problems.
               7. Partial differential equation problems in coordinate systems other than
                  rectangular.

Grading: Graded homework and quizzes   30%
               Exam I   20%
               Exam II   20%
               Final Exam   30%

Tentative dates for Exams I and II are February 13 and April 2. The final exam will be at
2:00 p.m. on April 30.