

Course 2 MAP4341/5345 Elementary Partial Differential Equations/Introduction to Partial Differential Equations/Section 2780/2844

Time and Location

M W F 4, Little 205

Office Hour: M W F 12:30-1:30pm.

Description and Goals

Credits: 3; Prereq: MAP 2302 and MAP 4305 with minimum grades of C.

Introduction to second-order linear partial differential equations (heat, wave and Laplace equations), separation of variables in PDEs, Sturm-Liouville eigenvalue problems, method of eigenfunction expansions (Fourier analysis), PDEs in higher dimensions, PDEs in Other coordinate systems, Green's functions.

Other materials will be selected from chapters 1-5 and 7-12 of Applied Partial Differential Equations, 4th Edition, by R. Haberman. The weekly course schedule of topics is roughly as follows: (Each topic will be covered in one or two weeks) Introduction to PDEs, Fourier's method: Separation of variables, PDEs in higher dimensions, PDEs in other coordinate systems, PDEs on Unbounded domains, General Orthogonal Series Expansions, Finite difference methods for PDEs, Green's functions for time independent Problems.

Textbook: Introduction to Applied Partial Differential Equations, by John M. Davis, ISBN-13: 978-1-4292-7592-7.

Homework

Homework will be assigned after each lecture. The problems are not required to be turned in. However all the exams are closely related to the assigned problems.

Final Grades

There will be four exams (including the final exam). A half of the exam problems will be taken directly from the homework. The other problems are similar to the homework problems and examples discussed in lectures. Each exam covers topics discussed in class during the month prior to the exam. **ABSOLUTELY NO MAKEUPS WITHOUT MEDICAL DOCUMENTATION. NO REQUESTS FOR EXTRA CREDITS OR EXTRA ANYTHING. NO BARGAINING FOR, OR CHANGING OF, GRADES OR POINTS.** Tentative dates for the three mid-term exams: January 31, February 28 and March 31. The date of the final exam is to be announced. The first three mid-term exams weight 20% each, the final comprehensive exam is worth 40%.

Grading Scale

A: 85+ or above; B+: 75-84; B: 70-74; C+: 65-69; C: 60-64; D: 50-59; E: 0-49.

Attendance and Late Policy

ABSOLUTELY NO MAKEUPS WITHOUT MEDICAL DOCUMENTATION. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at :

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Students that need accommodation

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Information on current UF grading policies for assigning grade points:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Information on course evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.