

**SYLLABUS
FOR
MATH 3326
PARTIAL DIFFERENTIAL EQUATIONS**

COURSE: MTH 3326 Section 1 T,TH 11:00-12:15 pm SR 207

INSTRUCTOR: Dr. Lance L. Littlejohn, Office SR 316B

OFFICE HOURS: M: 11:00 am – noon
T: 2:00 – 3:00pm
W: 10:00 am -11:00 am

DEPARTMENTAL PHONE: 710-3561

OFFICE PHONE: 710-3165

EMAIL ADDRESS: Lance_Littlejohn@baylor.edu

TEXT: *Beginning Partial Differential Equations* (second edition), Peter O'Neill, Wiley Interscience Publishers, 2008

PREREQUISITES: A grade of C or better in MTH 2321 and MTH 3325.

ATTENDANCE: Attendance for each class is expected. You should be aware of the attendance policy as stated in the Baylor catalog. Should you miss a class for whatever reason, you are still responsible for the material discussed and any assignments made. Also, please get to class on time.

Grading Policy: Your final grade is based on three components: Quizzes (10%), 3 Midterm Exams (each worth 20%) and a Comprehensive Final Exam (worth 30%). Further details are listed below on each of these components.

Homework: No homework will be collected – but each student is urged to keep up with the homework that is assigned after each class. Weekly quizzes – see below - will instead be given to make sure that students are keeping up to date on a daily basis.

Quizzes: Weekly quizzes will be given to make sure that students are keeping up to date on a daily basis. I am hoping that there will be at least 11 quizzes given during the course of the semester and **your best 10 quizzes will count for a total of 10% of your final grade**. Usually, these quizzes will be given on Thursday but sometimes, due to a tight schedule, a quiz may be postponed until the following Tuesday. **NO MAKEUP QUIZZES WILL BE GIVEN.**

Midterm Tests: There will be three midterm tests (see schedule below for approximate test dates). **Each of these three midterms will be worth 20% of your final grade**. I am *tentatively* scheduling the following dates for each of our midterm examinations:

Midterm 1: February 10 (Tuesday)
Midterm 2: March 19 (Thursday)
Midterm 3: April 21 (Tuesday)

Comprehensive Final: The comprehensive final will be worth 30% of your final grade. This exam will be given on **Wednesday, May 6, 2:00 pm - 4:00 pm**. NO CHANGES CAN BE MADE IN THE FINAL EXAM TESTING SCHEDULE, PLEASE PLAN ACCORDINGLY.

COURSE OBJECTIVES: The purpose of this course is to study the theory and applications of linear algebra. Thus we will

- (1) learn the basics of solving first-order linear PDE's,
- (2) learn about classifying second-order PDE's into hyperbolic, parabolic, and elliptic equations ,
- (3) study the wave equation, heat equation, and Laplace's equation ,
- (4) the basics of Fourier analysis.

The chapters in the textbook that we will specifically study are:

- (1) Chapter 1 – First-Order Equations
- (2) Chapter 2 - Linear Second-Order Equations
- (3) Chapter 3 – Elements of Fourier Analysis
- (4) Chapter 4 – The Wave Equation
- (5) Chapter 5 – The Heat Equation
- (6) Chapter 6 – Dirichlet and Neumann Problems