

**MAT 517. Partial Differential Equations and Fourier Series**  
**A. Lutoborski, Syracuse University**  
**Spring 2014.**

**Classes:** Section 1, TTh, 11:00-12:20, Carnegie Building, Room 311.

**Instructor:** Professor Adam Lutoborski, Department of Mathematics,  
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**Office Hours:** Wednesdays 3:00-4:45, Thursdays 3:45-4:45.

**Text:** "Partial Differential Equations. An Introduction." by W.A. Strauss, John Wiley, 2nd edn.

**Prerequisites:** MAT 414 or MAT 485.

**Course Description:** The course discusses the basic material on partial differential equations and on the use of Fourier series in the solution of partial differential equations. Boundary value problems in rectangular, cylindrical and spherical coordinates are studied. We will cover select sections (marked with a star) from Chapters 1,2,4,5,6 of the text.

**Homework:** Homework will be assigned after each class. It will be the basis for weekly quizzes. The best way to learn course material is to do problems.

**Exams, Final Exam:** There will be 2 exams: Exam 1 after Chapter 2 is covered and Exam 2 after Chapter 5 is covered. Precise dates will be announced in class. (tentatively scheduled: Exam 1, week 5: Feb 10-14, Exam 2 week 10: Mar 24- 28, Final exam will be on May 2, Friday, 12:45- 3:45 pm. There will be absolutely no make-ups for any reason. If you miss a test for a valid reason, the final exam grade will count correspondingly. Exams will be preceded by a review. Everyone is required to take the final exam.

**Course Grades:** Course grades will be determined by: 2 tests: 50% (25% each), quizzes: 25%, final exam: 25%.

**Disability-Related Accommodations:** Students who are in need of disability-related academic accommodations must register with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498. Students with authorized disability-related accommodations should provide a current Accommodation Authorization Letter from ODS to the instructor and review those accommodations with the instructor. Accommodations, such as exam administration, are not provided retroactively; therefore, planning for accommodations as early as possible is necessary. For further information, see the ODS website, Office of Disability Services <http://disabilityservices.syr.edu/>

**Academic Integrity:** The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>

**Homework:**

<b>Section</b>	<b>Strauss Problems</b>
1.1	2,5,7,10,11,12
1.2	1,2,5,6,8,9
1.5	3,5,6
2.1	1,2,3,5,8,9
2.2	2,3,5
2.3	1,4,5,6
2.4	1,4,7,8,11,16
4.1	2,3,4
4.2	1,2,3,4
5.1	1,2,4,8,9
5.2	1,2,7,11,15
6.1	1,2,5,6,11
6.2	1,3,7
6.3	1,2,3