Course Texts: R. Haberman, Applied Partial Differential Equations, 4th edition (optional)
S.V. Shabanov, Lecture notes on applied partial differential equations. A free PDF copy will be posted in the course webpage.

Course Content: The course covers the topics of Chapters 1-5 and 7-12 of the Haberman's book. However, the course will closely follow the online notes rather than the said book. Good class notes will also be sufficient to cover all topics of the course. The detailed course content, lecture topics and corresponding homework assignments will be posted in the course webpage along with references to relevant sections of the textbook and the online lecture notes. Please check the course webpage regularly. The main objective of the course is to learn basic problems for partial differential equations and some standard methods to solve them.

Prerequisites: Students are expected to be familiar with ordinary differential equations and methods to solve them. Basic knowledge of differentiation and integration of functions of several variables is necessary (Calculus 3). The knowledge of basic ideas of linear algebra is not mandatory but will be helpful to comprehend the content of the course.

Exams: There will be four exams and the final exam. Dates of the exams will be posted a week in advance in the course webpage. A half of the exam problems will be taken straight 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 two weeks or so prior the exam. The exact dates of the exams and topics covered in each exam will be posted in the homework page. One formula sheet is allowed on exams (no restriction on the content; it may include formulas, math love mantras, or anything that helps). The final exam is cumulative. No electronic devices are permitted on the exams. Makeups for missed exams only with written medical excuse. If all students agree, the exams can be arranged in evening hours (to eliminate a time limit "pressure" of in-class exams).

Special accommodation: Students requesting special accommodation for exams must first register with the Dean of Student Office. The Dean of Student Office will provide documentation to the student who must then provide this documentation to me when requesting accommodation.

Student honor code: Zero tolerance to any kind of cheating on written assignments (such as use of any unauthorized written or printed notes, copying solutions from your class mates, and similar). When caught cheating, the course grade is an F, no exception.

Homework assignments will be posted in the course webpage. Homework is not turned in. Some of the homework problems will be discussed in class. Solving these problems is essential for understanding the course and attaining a good grade. Do homework regularly as it makes over a half of your grade (via tests). You may ask for help and hints to solve homework problems during office hours.

Each assignment is graded out of 100 pts (if no extra credit problem is offered). All regular problems are worth the same, that is, each problem gives you 100/N pts, N is the number of problems in the assignment, when solved correctly. There is a small partial credit for incomplete solutions. Students who score 90 and above on each of the four exams may take a take-home final exam instead of the regular (in-class) final exam. The take-home final will be posted and must be turned in a day or so (the exact time and place will also be posted). Its score counts as the final exam score. In your course grade, the exam average counts 80% and the final exam counts 20%:

G = 0.8 EA + 0.2 F

where **EA = (E1+E2+E3+E4)/4** is the exam average and **F** is the final exam score.

Extra credit: One extra non-standard question in all exams, if answered correctly, adds 10-20 pts toward your assignment score. One extra non-standard problem will be given in the final exam. The perfect score can therefore exceed 100 pts when the extra credit question is correctly answered.

The grade thresholds

A: G>85; A-: G>80; B+: G>75; B: G>70; B-: G>65; C+: G>60; C: G>55; C-: G>50; D+: G>45; D: G>40; F: G<40

No credit for class attendance. You may leave or come any time without asking my permission. However the class attendance is strongly recommended as the material will be presented in the order different from that in the textbook. Also, examples relevant for written class assignments will be discussed along with some of homework problems.