General Information
Lecturer: Chengbo Wang (cwang@math.jhu.edu)
Office: Krieger 222
Office Hours: Monday 1:00 PM–2:45 PM in Krieger 222 or by appointment
Course Webpage: http://www.math.jhu.edu/~cwang/CoursePage/417s09
Grader: Longzhi Lin (lzlin@math.jhu.edu), his Math Help Room Schedule is on Friday
11:00AM-1:00PM in Krieger 213.

Lecture: Tuesday and Thursday 12:00 PM–1:15 PM in Krieger Hall 304

hard copy is on reserve.
Supplemental Readings: Partial Differential Equations, Walter Strauss. A hard copy is
also on reserve.

Course Description
Separation of variables and expansions of solutions.
The heat equation: fundamental solutions, maximum principles.
Laplace’s equation: Poisson’s formula, maximum principles, Green’s functions, Dirichlet
and Neumann problems, eigenvalue problems.
The wave equation: Cauchy problem, Poisson’s solution, energy inequalities, domains of
influence and dependence.
Characteristics. well-posed problems.

(Suggested) Prerequisites:
110.201 Linear Algebra
110.202 Calculus III—Calculus of Several Variables
110.302 Differential Equations with Applications

Grading Policy
The grade for this course will be determined by the following:
Homework 30%, Midterm Exams 40%, Final 30%.

Exams
There will be two in-class midterm exams scheduled (Tentative) on February 24 and
April 7. The final exam will be held on Saturday, May 9, 9-12 Noon, Krieger 304.

You are expected to attend class and take exams as they are scheduled. If you have time
conflicts with an exam or need special arrangements, you must notify the instructor in
writing at least one week in advance.

There will be no make-up exams. For excused absences, the grade for a missed exam
will be a weighted average of the grades for all subsequent exams. Unexcused absences
count as a 0. Documentation of illness etc. must be obtained from the Office of Academic
Advising.
Homework
A strong commitment to solving problems outside the classroom is crucial for your success in this course. Homework will be collected weekly on Tuesdays, except on the weeks of the midterms. Assignments will be posted on the course webpage. Late homework will not be accepted.

It is very important that you show your work on each assignment, as your grades will largely be based on what you have demonstrated, not the answer on the bottom line. Please take care to hand in a neat, legible assignment and staple the pages together in the corner.

You are permitted to discuss homework problems with other students. This collaboration should not extend to the process of writing up solutions. The work that you turn in should be written by you, in your own words, without supervision or other well-meaning influence from anyone else. You can also get assistance from our Math Help Room at Krieger 213. The Math Help Room is open Monday - Thursday from 9 am to 9 pm and Fridays from 9 am - 5 pm.

Special Aid
If you are a student with a disability requiring accommodations, or believe you might have a disability requiring accommodations, please contact Dr. Richard Sanders, in the Office of Student Disability Services (http://web.jhu.edu/disabilities), 385 Garland, (410) 516-4720, studentdisabilityservices@jhu.edu. To arrange for testing accommodations, the request must be submitted to the instructor at least 7 days (including the weekend) before each of the midterms or final exam. You may make this request during office hours, after class or by sending me an email.

Academic Ethics
Cheating is wrong. Cheating hurts our community by undermining academic integrity, creating mistrust, and fostering unfair competition. The university will punish cheaters with failure on an assignment, failure in a course, permanent transcript notation, suspension, and/or expulsion. Offenses may be reported to medical, law, or other professional or graduate schools when a cheater applies.

Violations can include cheating on exams, plagiarism, reuse of assignments without permission, improper use of the Internet and electronic devices unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Ignorance of these rules is not an excuse.

The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. See the guide on "Academic Ethics for Undergraduates" and the Ethics Board Web Site (http://ethics.jhu.edu/) for more information.