

Robert Gross  
MATH4412: Partial Differential Equations  
MWF Noon, McGuinn 121  
Spring, 2024

OFFICE: Maloney 515, 617-552-3758

OFFICE HOURS: Monday, Wednesday, and Friday, 1–2; Wednesday and Friday, 3–5; and by appointment.

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CLASS HOME PAGE: <http://fmwww.bc.edu/gross/MATH4412>

ALTERNATIVE: <http://sites.bc.edu/rob-gross/MATH4412>

TEXT: *Partial Differential Equations*, third edition, by Nakhlé Asmar

**Prerequisites:** The prerequisite for MATH4412 is MATH4410, Ordinary Differential Equations. The course will rely heavily on some of the material from that class.

This course investigates the classical partial differential equations of applied mathematics (diffusion, Laplace/Poisson, and wave) and their methods of solution (separation of variables, Fourier series, transforms, Green's functions, and eigenvalue applications). Additional topics will be included as time permits.

**Homework:** Homework will be assigned weekly, and is due at the start of class. Late homework will generally not be accepted, because solutions will typically be made available the day that the assignment is due. Homework answers must be written neatly using standard size paper. *Answers longer than a single page must be stapled. A paper clip is not acceptable.* If you do not follow these standards, your work will not receive credit.

**Examinations:** There are two examinations, scheduled for Friday, March 1, and Monday, April 29. The final examination for MATH4412 is scheduled for Friday, May 10, at 9AM. The final examination time is chosen by the Registrar and will not change.

**Grading:** The two examinations count for 23% and 27% of your grade, respectively. The final examination counts for 35% of your grade. Homework and class participation counts for the remaining 15% of your grade.

### Academic Integrity

You may share ideas when working on homework assignments, but you should write up your solutions individually. Copying someone else's work is plagiarism. Any violations of the College's policy on academic integrity will be dealt with severely. For more information, refer to

<https://www.bc.edu/content/bc-web/academics/sites/university-catalog/policies-procedures.html>

and select "Academic Integrity Policies."

### Learning Disabilities

If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan (617-552-8093, [dugganka@bc.edu](mailto:dugganka@bc.edu)) at the Connors Family Learning Center regarding learning disabilities and ADHD, or the Disability Services Office, (617-552-3470, [disabsrv@bc.edu](mailto:disabsrv@bc.edu)) regarding other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.