

**Vanderbilt University**  
**MATH 4110 — Partial Differential Equations**  
**Instructor: Marcelo Disconzi ([marcelo.disconzi@vanderbilt.edu](mailto:marcelo.disconzi@vanderbilt.edu))**

1. GENERAL INFORMATION.

Instructor: Marcelo Disconzi.

email: [marcelo.disconzi@vanderbilt.edu](mailto:marcelo.disconzi@vanderbilt.edu).

Instructor's office: Stevenson Center 1515.

Instructor's office phone: 615-322-7147.

Lecture time and location: Tuesday and Thursday, 11:00am-12:15pm, at Stevenson Center 1313.

Course webpage:

<http://www.disconzi.net/Teaching/MAT4110-Fall-17/MAT4110-Fall-17.php>

Office hours: Thursdays, 4:00-7:00pm, or by appointment.

2. COURSE INFORMATION.

2.1. **Textbook.** No textbook is adopted. Some references students can use are:

- An introduction to partial differential equations, by Yehuda Pinchover and Jacob Rubinstein.
- Partial differential equations: an introduction (2nd edition), by Walter Strauss.
- Partial differential equations (2nd edition), by Lawrence Evans.

2.2. **Prerequisites.** Either 2410, 2600, or 2501, and either 2400, 2420, or 2610.

2.3. **Description.** Classification of equations: equations of elliptic, parabolic, and hyperbolic type. Separation of variables, orthonormal series, solutions of homogeneous and nonhomogeneous boundary value problems in one-, two-, and three-dimensional space. Emphasis will be put on both the importance of mathematically sound arguments and on techniques devised to treat common applications. If time allows, more advanced material may be covered.

3. GRADING POLICY AND EXAMS DATES.

The course will have two Midterms and a Final Exam, constituting 20%, 25% and 35% of the grade, respectively. The remaining 20% will be covered by assignments given throughout the semester. You will be allowed to take a make-up test only in very special circumstances. If you miss an exam, contact the instructor as soon as possible.

Extra credit work may be assigned. Extra credit assignments will not carry a specific number of points towards your total grade, *unless otherwise specified*. The primary goal of such extra assignments is to help the course instructor to decide on borderline cases. For example, suppose your final grade corresponds to a B+, but it is sufficiently close to the cutoff for an A-. In such a case, having done all or most of the extra credit problems may lead the instructor to decide that you deserve a little boost in your grade, giving you an A-.

If this policy is not clear, please talk to your lecturer during his office hours.

Description	Date and Location	Points
Midterm 1	Sept 28, in class	20
Midterm 2	Nov 2, in class	25
Final Exam	Saturday, Dec 16, 3pm, location TBA	35
Assignments	to be announced	20
<b>TOTAL</b>		<b>100</b>

**Important:** there will be no alternate time for the Final Exam.

Other important dates:

Aug 30	Last day to unconditionally add a class
Setp 6	Last day to drop a class with no entry on the record
Oct 12-13	Fall break (no classes)
Oct 20	Last day to withdraw from a course (with a grade of W)
Nov 20-24	Thanksgiving Break (no classes)
Dec 1	Dead week begins

Note: classes meet on Labor Day (Sept 4).

The Open Enrollment Period ends on Wednesday, August 30th. This is the deadline for students to add a course or to make other changes in YES. Between August 31st and September 6th, any withdrawals or adjustments in level or in grading status must be completed using the add/drop form. If only the "DROP" section of the form is filled out the instructor may sign the form. If a student wishes to make any change that involves filling in the ADD section of a drop/add card (whether or not it also involves filling in the DROP section), then the student must see the DUS (John Rafter) or the Assistant DUS (Jakayla Robbins) in person. Per Math Department policy, the only changes to a math course that will be approved is a change to the level of the course (e.g. switching from Math 1301 to Math 1300 or vice versa).

**3.1. Homework problems and schedule.** An up-to-date schedule will be maintained on the course webpage. Homework problems, along with their due date, will be posted on the course webpage.

#### 4. COURSE POLICIES

**4.1. Calculators.** Calculators will not be used on the tests.

**4.2. Classroom Policy.** Students are not allowed to use electronic equipment such as cell phones, music players, or computers during class. Texting during class is not acceptable.

**4.3. Honor Code.** All work submitted for credit must be the students own and is subject to the provisions of the Vanderbilt Honor Code. Details can be found at the Honor Council web site: <http://studentorgs.vanderbilt.edu/HonorCouncil>.

**4.4. Classroom recording policy.** The use of technologies for audio and video recording of lectures and other classroom activities is allowed only with the express permission of the instructor. In cases where recordings are allowed, such content is restricted to personal use only unless permission is expressly granted in writing by the instructor and by other classroom participants, including other students. Personal use is defined as use by an individual student for the purpose of studying or completing course assignments. When students have permission for personal use of recordings, they must still obtain written permission from the instructor to share recordings with others.

**4.5. Accommodation Procedure.** A student who needs course accommodations due to a disability, special arrangements in case the building must be evacuated, or has emergency medical information that needs to be shared with the instructor, should contact the instructor as soon as possible. Equal Opportunity, Affirmative Action, and Disability Services (<http://www.vanderbilt.edu/ead>) at Vanderbilt provides specific accommodations for students with physical or learning disabilities. Upon receiving appropriate documentation from the student, the EAD will make arrangements with the instructor for the accommodations.

4.6. **Attendance.** The student who misses a class meeting is responsible for any assignments and/or announcements made. Office hours will not be utilized to re-teach material presented in class. The stated attendance policy of the College of Arts and Science applies in this course: Students are expected to attend all scheduled meetings of classes in which they are enrolled; they have an obligation to contribute to the academic performance of all students by full participation in the work of each class. The faculty of the College of Arts and Science recognizes that occasions arise during the academic year that merit the excused absence of a student from a scheduled class or laboratory during which an examination, quiz, or other graded exercise is given. Examples include participation in sponsored university activities (e.g., debate team, varsity sports), observance of officially designated religious holidays, serious personal problems (e.g., serious illness, death of a member of the students family), and matters relating to the students academic training (e.g., graduate or professional school interviews). Conflicts arising from personal travel plans or social obligations do not qualify as excused absences.

4.7. **Anonymous feedback.** Students are encouraged to bring suggestions and to discuss with the course instructor any concerns they may have, including something they think is not being properly handled in the course. If you do not feel comfortable doing that, you have the opportunity to send some anonymous feedback on the course webpage.