

Course Outline Form: Fall 2017

General Information

Course ID: MATH*4270

Course Title: Partial Differential Equations

Course Description: This course focuses on first and second-order partial differential equations, with examples and applications from selected fields such as physics, engineering and biology. Topics may include the wave equation, the heat equation, Laplace's equation, linearity and separation of variables, solution by Fourier series, Bessel, Legendre and Green's functions, an introduction to the method of characteristics and Fourier transforms. The classification of linear second-order partial differential equations is discussed.

Credit Weight: 0.5

Academic Department (or campus): Mathematics and Statistics

Campus: Guelph

Semester Offering: Fall

Class Schedule and Location: Tues/Thurs, ALEX 309, 11:30-12:50

Instructor Information

Instructor Name: H. Kunze

Instructor Email: hkunze@uoguelph.ca

Office location and office hours: MACN 507, Tuesday, 9:30-11:20

Course Content

Specific Learning Outcomes:

1. Numeracy and Quantitative Skills
2. Critical Thinking
3. Application of Knowledge
4. Knowledge of Methodologies
5. Communication
6. Depth of Understanding

Lecture Content:

The instructor will present lectures on the topics listed in the calendar course description. On occasion, the instructor may decide that handouts and/or computer demonstrations are appropriate.

Course Assignments and Tests:

	Value	Date
4 Assignments	30%	Due in class Thursdays at start of class
Midterm	20%	Thursday, October 19, in class
Final Exam	50%	Friday, December 15, 7-9pm

Final examination date and time: Friday, December 15, 7-9pm

Final exam weighting: 50%

Course Resources

Recommended Texts:

The lectures are the primary source of course material.

No text is required, as the lecture notes will contain all required information. If you would like to look at a reference text book, try R. Haberman, Applied Partial Differential Equations, any edition.

Grading Policies

The assignments you hand in are expected to contain your own work. Of course, you can talk about the questions with me and with each other, but please make sure that the bulk of the work you submit is truly your own work. There will be low tolerance for plagiarism or what I deem to be excessive collaboration.

Course Policy regarding use of electronic devices and recording of lectures

Electronic recording of classes is expressly forbidden.

University Policies

E-mail Communication

As per university regulations, all students are required to check their <mail.uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. . [See the undergraduate calendar for info on regulations and procedures for Academic Consideration.](#)

Drop date

Courses that are one semester long must be dropped by the end of the fortieth class day, November 3, 2017; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for [Dropping Courses](#) are available in the Undergraduate Calendar.

Copies of out-of-class assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student. When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required, however, interim accommodations may be possible while that process is underway. Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance, and not later than the 40th Class Day. More information: www.uoguelph.ca/sas

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor. [The Academic Misconduct Policy is detailed in the Undergraduate Calendar.](#)

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Resources

The [Academic Calendars](#) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.