

# Course Outline Form: Fall 2015

## General Information

**Course Title: Adv Partial Differential Equat, Math 4270**

### **Course Description:**

The course will discuss the classification of partial differential equations; it will cover theory, applicable methodologies, and examples of the hyperbolic, elliptic, and parabolic types of partial differential equations; it will provide introduction to certain transformation methods and non-linear equations. The course will be based on selected material from Chapter 7-12 of the textbook. Some topics from Chapter 2-6 will be briefly reviewed. Most lectures will follow the textbook. Not all topics will be covered at the same level of depth. The objective of this course is to familiarize the students with the above-mentioned topics and the related techniques.

**Credit Weight: 0.5**

**Academic Department (or campus):** Mathematics and Statistics

**Campus:** University of Guelph Main Campus

**Semester Offering:** Fall 2015

**Class Schedule and Location:** LEC Tues, Thur 11:30AM - 12:50PM, CRSC, Room 403

## Instructor Information

**Instructor Name:** Prof. Anna Lawniczak

**Instructor Email:** alawnicz@uoguelph.ca

**Office location and office hours:** MacN 522, Tue. & Th. 1:30-2:30

## GTA Information

**GTA Name:** Not Applicable

**GTA Email:** Not Applicable

**GTA office location and office hours:** Not Applicable

## Course Content

**Specific Learning Outcomes:** (1) demonstrate basic foundation of partial differential equations; (2) improvement of mathematical reasoning; (3) improvement of mathematical technical competence; (4) improvement of the ability of thinking critically and independently; (5) improvement of effectively communicate mathematical ideas.

**Lecture Content:** The lecture content, i.e. the covered material, will follow the selected material from the course-required textbook. Not all course topics will be covered at the same level of depth.

**Labs:** Not Applicable

**Seminars:** Not Applicable

**Course Assignments and Tests:** There will be 2 in class tests during the term plus the final exam. The marks are assigned as follows:

- Test I - 30%, Thursday, October 22, 2015
- Test II - 30%, Thursday, November 19, 2015
- Final Exam - 40%, on Monday, December 14, 2015, at 7:00 pm – 9:00 pm, Room TBA

Requests for academic consideration because of illness or of a compassionate nature when term tests are missed must be made in writing and be accompanied by official certificate whenever possible. See the academic calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

The University policy must be followed when the final exam is missed

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/index.shtml>

There will not be graded take home assignments. However, from each covered topic, i.e. part of the covered material, there will be assigned problems and material to read from the textbook. The assigned reading material and the assigned problems will be announced in class and posted on CourseLink at the time when the corresponding topic is covered. The solutions to the problems will not be collected and graded. Solutions to selected problems will be posted on CourseLink. The term tests and the final exam will be based on the assigned problems and the covered material. One week before each term test information about which material and which problems are covered by the term test will be provided in class and in CourseLink. The final exam will be based on all the covered material of the entire course and all the assigned problems.

**Final examination date and time:** Monday, December 14, 2015, at 7:00 pm – 9:00 pm, Room TBA

**Final exam weighting:** Final Exam - 40%

## Course Resources

**Required Texts:** “Elementary Applied Partial Differential Equations” by Richard Haberman, Pearson, Fifth Edition, 2013

**Recommended Texts:** T. Myint-U, L. Debnath, “Partial Differential Equations for Scientists and Engineers”, PTR Prentice Hall, Inc.

**Lab Manual:** Not applicable

**Other Resources:** Not applicable

**Field Trips:** Not applicable

**Additional Costs:** Not applicable

## **Course Policies**

### **Grading Policies**

Requests for academic consideration because of illness or of a compassionate nature when term tests are missed must be made in writing and be accompanied by official certificate whenever possible. See the academic calendar for information on regulations and procedures for Academic Consideration:

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The University policy must be followed when the final exam is missed

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/index.shtml>

There will not be graded take home assignments. However, from each covered topic, i.e. part of the covered material, there will be assigned problems and the material to read from the textbook. Students are expected to do the assigned problems and read the assigned material from the textbook. The assigned reading material and the assigned problems will be announced in class and posted on CourseLink at the time when the corresponding topic is covered. The solutions to the problems will not be collected and graded. Solutions to selected problems will be posted on CourseLink. The term tests and the final exam will be based on the assigned problems and the covered material. One week before each term test the information which material and which problems are covered by the term test will be provided in class and in CourseLink. The final exam will be based on all the covered material of the entire course and all the assigned problems.

**Course Policy on Group Work:** Not applicable

### **Course Policy regarding use of electronic devices and recording of lectures**

*Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.*

## **University Policies**

### **Academic Consideration**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

### **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:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

### **Accessibility**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible.

For more information, contact CSD at 519-824-4120 ext. 56208 or email [csd@uoguelph.ca](mailto:csd@uoguelph.ca) or see the website: <http://www.uoguelph.ca/csd/>

### **Course Evaluation Information**

Please see <http://www.mathstat.uoguelph.ca/files/TeachevaluationformF10.pdf>

### **Drop date**

The last date to drop one-semester courses, without academic penalty, is **Friday, November 06, 2015**. For regulations and procedures for Dropping Courses, see the Academic Calendar:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

### **Additional Course Information**

#### ***E-mail Communication***

***As per university regulations, all students are required to check their University of Guelph e-mail account regularly. University of Guelph e-mail is the official route of communication between the University and its students and between the instructor and the course students***

#### **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:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/>