

**The University of Western Ontario**  
**Introduction to Partial Differential Equations**  
**AM 3815 - Fall 2011**

**Basic Course Information**

Req. Text      *Partial Differential Equations: An Introduction* (2<sup>nd</sup> edition, e-version), by Walter A. Strauss (Wiley)  
ISBN 978 0 470 47318 4

Access code can be purchased at Bookstore Extras in the UCC (formerly the used bookstore), or at [www.bookstore.uwo.ca](http://www.bookstore.uwo.ca) (click on "order access codes").

Pre-reqs      (i) [Mathematics 1600A/B](#) or the former Linear Algebra 1600A/B; [Applied Mathematics 2402A](#) or the former Differential Equations 2402A; [Calculus 2303A/B](#) or [2503A/B](#); or (ii) [Calculus 2402A/B](#) and [Applied Mathematics 2503A/B](#). In each course a minimum mark of 60% is required.

Websites      [www.webct.uwo.ca](http://www.webct.uwo.ca)

Lectures      1:30-2:30 pm, M/W/F, UCC 58

Instructor      Geoff Wild  
Assistant Professor, Department of Applied Mathematics  
Middlesex College 265  
[gwild@uwo.ca](mailto:gwild@uwo.ca)

Office Hrs      Thurs 1:30-2:30 pm, MC 265

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

**Course Description**

Boundary value problems for Laplace, heat, and wave equations; derivation of equations; separation of variables; Fourier series; Sturm-Liouville Theory; eigenfunction expansions; cylindrical and spherical problems; Legendre and Bessel functions; spherical harmonics; Fourier and Laplace transforms.

**Evaluation**

Homework	10 %
In Class Tests	45 %
Final Exam	45 %

Homework

Five homework assignments will be set throughout the term. Each assignment will be worth 2 % of the final grade. Homework will be evaluated for completeness and clarity only.

In Class Tests

There will be three 50-minute, non-cumulative tests throughout the term. Each test will be worth 15 % of the final grade, and each will take place during a scheduled lecture period:

Friday Sep. 30

Friday Oct. 28

Friday Nov. 25

Provided you have followed the procedures outlined below (see addenda), and provided you have secured the approval of your dean, you can apply your final exam mark to any test missed due to illness or other extraordinary circumstances.

### Final Examination

The Final Examination will be three hours and will be cumulative. The Final Examination will be held during the Final Examination period and will be scheduled by the university. Students seeking a make-up exam for any reason must secure approval from the appropriate dean (see addenda).

## **Addenda**

### Academic Accommodation Due to Illness

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to your faculty's Dean's Office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from your faculty's Dean's Office immediately. For further information please see:

<http://www.uwo.ca/univsec/handbook/appeals/medical.pdf>

A student requiring academic accommodation due to illness, should use the Student Medical Certificate when visiting an off-campus medical facility or request a Records Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found here:

[https://studentservices.uwo.ca/secure/medical\\_document.pdf](https://studentservices.uwo.ca/secure/medical_document.pdf)

### Academic Integrity

You should familiarize yourself with University of Western Ontario's Scholastic Offence Policy. The policy describes the university's process for dealing with scholastic offences, including a list of sanctions:

<http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf>

The Office of the Ombudsperson produces a student guide on cheating, plagiarism and other scholastic offenses:

<http://www.uwo.ca/ombuds/student/cheating.html>

### Accessibility Statement

Please contact the course instructor if you require material in an alternate format, or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 extension 82147 for any specific questions regarding accommodation.