

The University of Western Ontario  
London, Ontario

**APPLIED MATHEMATICS 2411**  
Applied Mathematics for Engineering II

2012-2013  
Course Outline

**INSTRUCTOR:**

B. Tudose                      MC 286                      e-mail: [btudose@uwo.ca](mailto:btudose@uwo.ca)

**LECTURE:**                      M W F                      8:30AM - 9:30AM                      3M 3250

**TUTORIAL:**                      F                      10:30AM - 11:30PM                      SH 3345

**TEXTBOOKS:**

- *Advanced Engineering Mathematics*, 7th edition, by Peter V. O'Neil, Thomson 2011.
- *Calculus, A Complete Course*, 7th edition by R. A. Adams and C. Essex, Pearson 2010.

**COURSE CONTENT:**

This is a course for chemical, civil and green process engineering students that combines analytical treatment of ordinary and partial differential equations with multiple variable calculus.

Topics to be covered are:

1. First order differential equations.
2. Higher order differential equations.
5. Laplace transforms.
4. Systems of differential equations.
6. Fourier analysis.
7. Partial differential equations.
8. Multiple integration.

## EVALUATION:

**Homework:** The best way to learn is to solve as many problems as possible. All of the problems assigned in lectures are to be considered official assignments and are to be completed *within* a week of when they are assigned. Homework will not be submitted for grading.

**Attendance:** Some material taught may not be in any of the textbooks, therefore attendance of lectures is mandatory. Students are responsible for ensuring they are informed of what problems are assigned by keeping careful records in class.

**Evaluation:** there will be several one-hour tests during tutorials, a midterm exam in December and a final exam in April. The dates of the exams will be announced in class.

**Weights:** Tests: 30%, Midterm: 30%, Final exam: 40%.

**Make-ups:** if you have a justified absence (with form issued by the Dean's office) for a test, your mark for the other tests will be prorated. No make-up tests will be administered. If you are ill (with medical certification) at the time of the midterm exam, your final exam will be prorated to 70%. There will be no make-up midterm exam given. Please see the addendum below.

## Addendum to all Applied Mathematics Course Outlines

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)