

The University of Western Ontario
London, Ontario

APPLIED MATHEMATICS 2411
Applied Mathematics for Engineering II

2014 - 2015
Course Outline

INSTRUCTOR:

B. Tudose MC 286 e-mail: btudose@uwo.ca

LECTURE: M W F 8:30AM - 9:30AM SEB 1200

TUTORIAL: F 10:30AM - 11:30PM SEB 2200

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://studentservices.uwo.ca/secure/index.cfm>

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

Mental Health Statement:

Students who are in emotional/mental distress should refer to Mental Health@Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Accessibility:

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

Support Services:

Learning-skills counselors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counseling.

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.

The website for Registrarial Services is <http://www.registrar.uwo.ca>.