

**The University of Western Ontario  
London, Ontario Canada**

**Department of Applied Mathematics  
APPLIED MATHEMATICS 2270B  
Course Outline Winter 2018-2019**

**Instructor:** Dr. Dan Goldman (Office HSA 21)

**Lecture 001**

Monday, Wednesday, Friday: 8:30am – 9:20am in UCC-56

**Tutorial 002**

Monday: 11:30am – 12:20pm in SH-3345

**Office Hours:** TBD plus by email appointment ([dgoldma2@uwo.ca](mailto:dgoldma2@uwo.ca)).

**Text:** Advanced Engineering Mathematics, 6th edition, Zill (required). May also use Advanced Engineering Mathematics, 5th edition, Zill and Wright ISBN 978-1-4496-9172-1

**Course Description:** This (half) course is designed to provide all second year engineering students with an introduction to the field of differential equations, with special emphasis on methods and applications that are most useful in the engineering sciences. Topics include first order differential equations of various types, higher order differential equations and methods of solving them, initial and boundary value problems, applications to mass-spring systems and electric RLC circuits, Laplace transform and its use for solving differential equations, systems of linear differential equations, orthogonal functions and Fourier series.

**Method of Evaluation:**

45% Quizzes (50 minutes each during Tutorial sessions. Tentative dates: Q1: Jan 28<sup>th</sup>, Q2: Feb 25<sup>th</sup>, Q3: Mar 25<sup>th</sup>)  
55% Final Exam (TBD)

**Attendance:** Attendance is not mandatory but highly recommended. All material in the lecture up to the end of the course can be considered testable. In addition, extra material covered in lectures can be tested in quizzes, tests and exams.

**Missing Quizzes:**

Missing a quiz will result in a grade of zero, except when permission is granted from

Engineering Student Services. If permission is granted to miss a quiz, a prorated mark will be assigned. There will be no make up for quizzes.

**Registration in Tutorials:**

Quizzes will be written during Tutorial session.

**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](https://studentservices.uwo.ca/secure/medical_document.pdf)

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**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>.