

THE UNIVERSITY OF WESTERN ONTARIO
DEPARTMENT OF MATHEMATICS

Mathematics 1225B
Methods of Calculus

Summer Evening 2017

NOTE: Many science/technically oriented courses and programs, at Western and at other universities, require a full-year calculus course (such as Calculus 1000A and 1501B). Mathematics 1225B may not be appropriate and will not serve as a prerequisite for Calculus 1301B or 1501B.

INSTRUCTOR: V. Olds, volds@uwo.ca, MC 103G, 519 661-2111 X86520

TEXTBOOK: (required)

Applied Calculus for the Managerial, Life, and Social Sciences Tenth edition, by S. T. Tan, published by Nelson. Custom package with text and Student Solutions Manual ISBN: 9781337596619 or text ISBN: 9781305657861 and Student Solutions Manual ISBN: 9781305657885 if purchased separately.

Note: There are a few topics missing from this *hardcover* text. Supplemental material covering these topics is posted on the course web site.

OR *Math 1225A/B Methods of Calculus (Excerpts from Tan et al)* Custom Edition, published by Nelson. Custom package with text and Student Solutions Manual ISBN: 0176705538 or text ISBN: 0176588906 and Student Solutions Manual ISBN: 0176588914 if purchased separately. (This is the *Revised Edition*, which has many typos corrected. Used copies of ISBN: 0176637680 (text) and ISBN: 0176649697 (solutions) may be used, but a student using these needs to be sure to consult the errata list on the course web site for the typos.)
Note: This *custom* text does contain all of the course material.

PREREQUISITES:

Ontario Secondary School MCV4U or equivalent (High School Calculus), or Mathematics 0110A/B.

ANTIREQUISITES:

Applied Mathematics 1201A/B, 1413, Calculus 1301A/B, 1501A/B. **If Calc 1000A/B or 1500A/B was completed after Sept. 1 2016 it is an antirequisite** (but not if it was completed before that time).

COURSE OUTLINE:

Logarithmic, exponential and trigonometric functions; integration, applications of integration (area, volume); techniques of integration, improper integrals; functions of several variables, Second Partial Test, Lagrange Multipliers; differential equations.

LECTURE SCHEDULE:

There are 12 classes, 7:00 - 9:30 p.m. on Mondays and Wednesdays, from June 19 through July 26. (Includes Mon. July 3. UWO is closed Fri. June 30 for the Canada Day holiday.) Each lecture corresponds to one week of classes during a regular fall or winter term, so *a lot* of material will be covered in each class. The accelerated pace of the Summer Evening format means the course is very intense. Students must be prepared to work hard at this course, starting from the very first class.

WHAT IS EXPECTED OF THE STUDENT?

Attend all classes, make a serious effort to understand all course material, and do all assigned homework. Be aware of all information, and make use of materials, posted on the course web site. The student must assume responsibility for any missed classes. It is up to the student to seek out help when needed. A schedule of Help Centres will be posted.

Please contact the course instructor if you require 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 x82147 for any specific question regarding an accommodation.

COURSE WEB SITE:

Some supplemental material and extra homework problems for the hardcover text will be posted on the OWL web site. Various other materials, such as practice tests and solutions to many of the homework exercises, are also posted, as are the Lecture Notes from the Online version of this course. In addition, there are forums on which students may post questions. Important information will be posted on the NEWS forum.

EVALUATION OF STUDENT PERFORMANCE:

Students will be assessed on the basis of Online Quizzes, 2 Term Tests, and a Final Exam.

The 2 Term Tests, each 90 minutes in length, will be held on:

Thursday July 6 2017, 5:30 - 7:00 p.m. and **Thursday July 20 2017, 5:30 - 7:00 p.m.**

Locations of these tests will be announced in class and/or on the course web site.

The Final Exam will be 3 hours in length, covering all of the course material. This exam will be scheduled by the Registrar's Office during the Summer Evening Exam Period.

Calculation of Final Grade:

Each Term Test will count for 20%, the Final Exam will count for 40% and the Online Quizzes will count for 10%.

The remaining 10% weight will be assigned to whichever of the 3 tests/exams is the student's best mark.

Notes:

1. The Tests and Examination will all have some multiple choice questions and some written answer questions.
2. **NO calculators or other electronic devices or any other aids are allowed on tests and exams.**
3. See Absence / Missed Work policy on next page.

ABOUT THE QUIZZES: See Quiz Schedule posted on the course web site.

Each quiz consists of 8 multiple choice questions, generated at random from a test bank of relevant questions. Each quiz is available for several days, from 12:05 a.m. EDT on the first day until 11:55 p.m. EDT on the last day. During this quiz window, the student may make up to 2 quiz attempts. If a second attempt is made, the *higher* of the 2 results will be used as the mark for that quiz. Note that since each quiz attempt is randomly generated from the question bank, the questions on a second quiz attempt are unlikely to be identical to questions on the first attempt. The best 5 of the student's 6 quizzes will each count for 2% in the final grade.

Although there is no time limit on a quiz attempt, it is *strongly* recommended that students be aware of the time they spend on a quiz and make a concerted effort to complete the quiz within 30 minutes. This amount of time is considered more than generous and allows *more* time per question than on the tests/exam. A student who has trouble completing quizzes in this time may have difficulty completing the exams.

MAKEUPS:

Any request to reschedule any test or exam must be made through your Dean's Office. Requests for makeup quizzes should be made to the instructor. (NO makeups will be allowed for Quiz 6.) All such requests should include the reason(s) for the request. The granting of such requests is wholly at the discretion of the instructor and/or Academic Counsellor. If needed, makeups for the 2 term tests will be held 5:00 - 6:30 p.m. on the **Monday** after the scheduled test.

ABOUT THE HOMEWORK:

To aid students in preparing for the assignments, quizzes and examinations, a list of assigned problems is provided. The list is posted on the course web site. There are separate exercise lists for the 2 texts. These problems are mostly from the text, but for the hardcover text there are additional questions posted on the course web site. These problems are representative of the level of understanding expected of students in this course. It is expected that **all** of these problems will be completed, and solutions reviewed, to ensure sufficient understanding of each unit. These homework exercises are not submitted for grading and do not count in the final grade.

Note that simply reading the solutions **does not** constitute *doing* the homework. The solutions are provided to assist you in determining where you have made mistakes and/or how to approach the problem. But you *cannot learn math without doing the practice problems for yourself.*

SENATE POLICY ON PREREQUISITES:

Prerequisite checking is the **student's responsibility**. Unless you have either the prerequisites 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.

STATEMENT ON ACADEMIC OFFENCES:

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

ABSENCE / MISSED WORK:

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 Dean's Office as soon as possible* and contact *your instructor immediately*. It is the student's responsibility to make alternative arrangements with his or her 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 the Dean's Office immediately. For further information concerning UWO's Policy on Accommodation for Medical Illness please refer to this policy at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_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 Record's 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

A makeup will be held for each term test as well as for the final exam. Only students with prior permission from their instructor will be allowed to write the makeup for a test. Only students with a Recommendation for Special Exam from their Dean's Office will be allowed to write a makeup for the Final Exam. Any student who misses a portion of the Class Work component of the grade for any legitimate reason should contact your instructor as soon as possible. Supporting documentation may be required. In the case of missed Class Work, or if a student is unable to write the scheduled makeup for a Term Test due to a documented prolonged or recurring absence or other legitimate conflict, your instructor will decide whether to accommodate by rescheduling or by reweighting that component of the grade.

SUPPORT SERVICES

Office of the Registrar

UWO	www.registrar.uwo.ca
Brescia	www.brescia.uwo.ca/academics/registrar-services
Huron	www.huronuc.on.ca/CurrentStudents/StudentLifeandSupportServices/AcademicResources
King's	www.kings.uwo.ca/academics/academic-deans-office/

Student Development Services www.sdc.uwo.ca

Learning Skills Services <http://sdc.uwo.ca/learning/>

USC <http://westernusc.ca/services/>

Academic Calendar www.westerncalendar.uwo.ca

ITS www.uwo.ca/its/helpdesk

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