



COURSE OUTLINE FOR REMOTE LEARNING

1. **Course:** MATH 375, Differential Equations for Engineers and Scientists - Spring 2020

Lecture 01: MWF 18:00 - 19:50 - Online

Instructor	Email	Phone	Office	Hours
Dr Kexue Zhang	kexue.zhang@ucalgary.ca	TBA	ZOOM	Tue 9:30-10:30 Thu 9:30-10:30 Sat 9:30-10:30

Remote Learning Supplemental Information:

Some aspects of this course are being offered in real-time via scheduled meeting times. For those aspects you are required to be online at the same time. Please refer to the details below for more complete information.

Remote Learning Details:

1. We will meet Mondays, Wednesdays, and Fridays at 18:00 via Zoom for interactive lectures. The lectures will be recorded and shared.
2. The course notes will be posted on D2L.
3. The listed office hours will meet via Zoom for answering questions from the lectures.
4. Office hours are also available by appointment.
5. Weekly tutorials will meet via Zoom.
6. Zoom is now integrated with D2L. Information is available on elearn.ucalgary.ca/zoom.

All the Zoom meeting details will be listed on D2L on a weekly basis.

Course Site:

D2L: MATH 375 L01-(Spring 2020)-Differential Equations for Engineers and Scientists

Note: Students must use their U of C account for all course correspondence.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Mathematics 277 or both Mathematics 267 and 177.

Antirequisite(s):

Credit for Mathematics 375 and either 376 or Applied Mathematics 311 will not be allowed.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Assignments (6) - WeBWork	24%	Assignment 1: May 17, 2020 Assignment 2: May 26, 2020 Assignment 3: May 31, 2020 Assignment 4: June 07, 2020 Assignment 5: June 12, 2020 Assignment 6: June 21, 2020
Flex	6%	June 21, 2020 An average of the best 4 assessments of the 6 assignments.
Midterm - WeBWork	30%	June 02, 2020. The exam will be open from 13:00 on June 02 to 13:00 on June 03. Once you start the exam, you will have 120 minutes to complete. You have to complete the exam by 13:00 on June 03.
Final - WeBWork	40%	To be scheduled by the Registrar. The exam will be open for 24 hours. Once you start the exam, you will have 150 minutes to complete. You have to complete the exam by the end of this 24-hour period.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	76%	72 %	68 %	64%	59%	55 %	50 %

Bear in mind that a grade of D or lower will result if the student's score in the final exam is less than 45%. This is to ensure that those students who receive a C- or better have a reasonable chance to succeed in courses that require this course as a prerequisite.

This course has a registrar scheduled final exam.

4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

5. Scheduled Out-of-Class Activities:

The following out of class activities are scheduled for this course.

Activity	Location	Date and Time	Duration
Midterm	WebWork	Tuesday, June 2, 2020 at 1:00 pm	24 Hours

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a conflict with the out-of-class-time-activity, please contact your course coordinator/instructor no later than **14 days prior** to the date of the out-of-class activity so that alternative arrangements may be made.

The exam will be open from 13:00 on June 02 to 13:00 on June 03. Once you start the exam, you will have **120 minutes** to complete. You have to complete the exam by 13:00 on June 03.

Note: In the unlikely event that a student has not been able to write the midterm (because of an appropriate [see deferred final exam reasons <https://www.ucalgary.ca/registrar/exams/deferred-exams>] excused absence), the instructor may grant an alternative time to write the exam after (not prior) the scheduled time.

6. Course Materials:

Recommended Textbook(s):

William F. Trench, *Elementary Differential Equations with Boundary Value Problems*. Digital Commons at Trinity University.

Textbook: Our text is an open-access text available at

<https://digitalcommons.trinity.edu/textbooks>

Assignments: We will be using the Webwork system for our on-line assignments. They can be accessed at <https://webwork.ucalgary.ca/webwork2/P2020MATH375L01/> or directly from the course's D2L site. Each student will have an account and will be able to do the assignments using any electronic device with internet access. All **six** assignments will count toward your overall grade. Do not wait until the last night to work on your assignment. Start early so you have enough time to seek help with the problems you might find challenging. If you understand the lectures, you shouldn't have any difficulty doing the assignment problems.

Homework: will be posted weekly on D2L in the form of worksheets. You are responsible for finding out what problems have been assigned. Even though the homework problems are not collected, you should do as many of the assigned problems as possible. Experience shows that students who do little or no homework, usually don't do well in the course. Help is available from the Teaching Assistant, during the tutorials and from the Instructor during the office hours.

Assignments and homework are critical components of the course to help prepare you for the exams as well as help you self-assess your progress in the course.

Announcements: course announcements and other relevant material, will be available at the course's D2L website. You are strongly advised to visit the site regularly to check for eventual new announcements and updates.

7. Examination Policy:

No aids are allowed on tests or examinations.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. Human Studies Statement:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Center:** For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>)
- d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/ fabrication of experimental values in a report. **These are only examples.**
- e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Mathematics & Statistics, Mark Bauer by email bauerm@ucalgary.ca or phone [403-220-4189](tel:403-220-4189). Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.

- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](#) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](#) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Course Outcomes:

- classify ordinary and partial differential equations, check whether a given function is a solution of a given equation or a given initial value problem, distinguish between general and particular solutions;
- apply the general theory of second and higher order linear ordinary differential equations to design the characteristic equation for equations with constant coefficients and Cauchy-Euler equations, construct the general solution, solve non-homogeneous equations using methods of undetermined coefficients or variation of parameters;
- solve certain types of first order ordinary differential equations (linear, separable, Bernoulli and exact equations), develop and solve equations arising in various fields of science and engineering;

Electronically Approved - May 04 2020 17:46

Department Approval

Electronically Approved - May 05 2020 14:56

Associate Dean's Approval for arrangements for remote learning and out of regular class-time activity