Math*3100 – Differential Equations II

Fall 2016

Instructional Support

Matthew Demers, Ph.D
Richards 2523, Extension 56933
mdemers@uoguelph.ca

Meeting Times

Lectures:
Mon, Wed, Fri, 10:30 – 11:20 am, MCKN 115

Labs:
Mon, 12:30 – 1:20 pm, MCKN 121

Office Hours:
To be determined

Learning Resources

Course Website:
Course materials, news, announcements, new assignments, weekly practice problems, and grades are posted regularly on the Courselink website. It is your responsibility for keeping up-to-date with it. Check it every day.

Required Text:
There is no required text for this course. The primary resource for this class will be the notes that we create every day together in class.

Recommended Text:
Elementary Differential Equations and Boundary Value Problems – 10th Edition, by William E. Boyce and Richard C. DiPrima. If you find an older version for cheaper, that will work just fine. This text will be used for extra background reading and practice problems for certain topics, though we will go "off-track" at a few points.

Communication and Email Policy:
Please feel free to ask any questions during or just after lectures. Be an active part of every class discussion if you can!

If you have a question about a specific math problem, I ask that you make sure that you first ask among your friends and classmates, as they may have already found a way to have solved it or spoken to me. Take advantage of the discussion boards available to you on Courselink!

I do check my email every day, and I try my best to reply as quickly as I can. If you do ask me a question about a specific math problem you are stuck on, it would be extremely helpful for you to include a picture of the work you have done, so I can more easily see where you might have done wrong. You are expected to take advantage of office hours if you have any questions about course notes, practice problems, or tests!

Assessment

Lab Assignments:
Most weeks*, there will be a short assignment given in your lab tutorial, from the material of the week before. You may work individually, or in groups of up to three, and your completed assignment must be submitted before the end of the lab. Be sure that each student involved in a submitted assignment signs the submitted work!

*NOTE: NO Lab Assignment will be given in the first week (September 12) or the week of Thanksgiving Day (October 10). In those weeks, the TA will organize the tutorial as an optional extra help session.

Tests:
There will be three tests during the semester. Tests will be held during class time (location to be determined) and be 45 minutes in duration. Non-programmable calculators will be permitted, but no other aids will be allowed. The times are:

Friday, October 7, 10:30 – 11:20 am
Friday, October 28, 10:30 – 11:20 am
Friday, November 18, 10:30 – 11:20 am

Final Exam:
The final exam will be held Wednesday, December 7, 7:00 – 9:00 pm. More details about the final exam and the location will be shared in class and on Courselink toward the end of the semester.

Distribution:
Lab Assignments: 2% apiece up to a maximum of 20%**
Test 1: 15%
Test 2: 15%
Test 3: 15%
Final Exam: 35% (**+2% for each missed lab assignment)

Course Grading Policies

Academic Consideration:
When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration.

Accommodation of Religious Obligations:
If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor at the start of the semester to make alternate arrangements. See the undergraduate calendar for information on regulations and procedures for Academic Accommodation of Religious Obligations.

Missed assignments:
The weight of any missed lab assignments will be automatically transferred to the final exam. Late assignments will not be accepted.

Missed midterm tests:
Missed tests will receive a grade of 0% unless academic consideration can be granted. If accommodation is granted, the weight of the missed test will be added to the final exam. There will be no makeup tests.

Passing grade:
In order to pass the course, you must receive a final grade of at least **50%**.

Calendar Description

This course continues the study of differential equations. Power series solutions around regular singular points including Bessel equations are presented. First order linear systems and their general solution by matrix methods are thoroughly covered. Nonlinear systems are introduced along with the concepts of linearization, stability of equilibria, phase plane analysis, Lyapunov's method, periodic solutions and limit cycles. Two-point boundary value problems are discussed and an introduction to linear partial differential equations and their solution by separation of variables and Fourier series is given.

Important Dates

Thursday, September 8: First day of classes
Monday, October 10: Thanksgiving Day (no classes scheduled)
Tuesday, October 11: Fall Study Break Day (no classes are scheduled)
Friday, November 4: 40th class day; this is the last day you may drop courses
Thursday, December 1: Tuesday class schedule is in effect
Friday, December 2: Last day of classes; Monday class schedule is in effect

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar.

A tutorial on Academic Misconduct produced by the Learning Commons can be found at http://www.academicintegrity.uoguelph.ca/ .

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Student Accessibility Services (formerly the Centre for Students with Disabilities) feels that providing services for students with disabilities is a shared responsibility among students, faculty and administrators.

This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment.

For more information, contact SAS at Extension 56208, visit their office in the University Centre Level 3, or send an email to csd@uoguelph.ca.