

Faculty of Science Course Syllabus
Department of Mathematics and Statistics

Math 2002 --- Intermediate Calculus 2
Winter Term 2019/20

Instructor: Robert Milson

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Lectures: 10:35-11:25 MWF, CS 127

Office Hours: 12:30-13:30 MWF, Chase 203

Laboratories: 0

Tutorials: 0

Course Description

Topics include multiple integrals and changes of variables, and vector calculus, with an emphasis on Green's and Stokes' theorems. The course also includes an introduction to second order ordinary differential equations.

Course Prerequisites

PREREQUISITES: MATH 2001.03

Course Objectives/Learning Outcomes

The student will master the following techniques and concepts:

- 3 dimensional integration
- cylindrical and spherical coordinate systems
- the change of variables formula
- line and contour integrals
- Green's Theorem
- flux and volume integrals
- Stokes and Divergence theorems
- solution methods for 2nd order linear ODEs
- applications to vibration and oscillation models

Course Materials

- Stewart, multi-variable calculus available at the bookstore
- Additional information available via Dalhousie's brightspace system

Course Assessment

20% online assignments

30% 2 hour midterm test (date TBA)

50% 3 hour final examination (to be scheduled by the registrar)

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

A+ (90-100) **B+** (77-79) **C+** (65-69) **D** (50-54)



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A (85-89) **B** (73-76) **C** (60-64) **F** (<50)
A- (80-84) **B-** (70-72) **C-** (55-59)

Course Policies

- Be sure to plan your term to include the dates and times of the tests and the examination. Conflicts with travel arrangements, jobs, etc. cannot be accommodated.
- Calculators, textbooks, and notes are not allowed in tests.

Course Content

Sections 15.7- 17.4 of the text

Faculty of Science Course Syllabus (Section B)

Please ensure that the following information on University Policies and Student Resources is available to all students in your course. This document may be posted on your Brightspace course site, or elements may be copied into your **Course Syllabus, Section A**.

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>)

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Missed or Late Academic Requirements due to Student Absence (policy)

https://www.dal.ca/dept/university_secretariat/policies/academic/missed-or-late-academic-requirements-due-to-student-absence.html

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>