

THE UNIVERSITY OF BRITISH COLUMBIA OKANAGAN

**MATH 317 – Calculus IV
COURSE OUTLINE**

Winter 2008 Term 2

Section 001

Classroom Schedule: Tu, Th 12:30 – 14:00

SCI 396

Instructor: Dr. Sylvie Desjardins

Office: SCI 387

Office Hours: Tu 15:00–16:00, W 11:00–12:00, or by appointment

E-mail: sylvie.desjardins@ubc.ca

Phone and Voicemail: 807-8767

Website: Assignments, handouts, and important dates will be posted on the course website. Please check it frequently. Log in at <http://people.ok.ubc.ca/sdesjard/>

This course is suitable for mathematics and science majors with an interest in applied mathematics or physics.

Textbook: *Multivariable Calculus*, 6th Ed., James Stewart, Thomson, Brooks/Cole, 2008.

Course Objectives:

- To introduce students to the various differential operators defined on scalar or vector fields, and the theorems associated with these operators,
- To present problem solving techniques for line integrals and multiple integrals, and
- To introduce students to the use of computer packages such as Maple to explore functions and vector fields in the context of vector calculus.

Course Requirements:

Prerequisites: UBCO MATH 200.

Preparation for classes: The student should read the sections of the textbook corresponding to the current lectures and work regularly on assigned practice questions.

Tests: There will be several quizzes given every other week based on suggested problems in the textbook. There will be one midterm exam written in class. Written solutions are expected to be clear and concise but also mathematically complete and well organized. You must see me in advance or have a medical certificate if you miss tests.

Evaluation: The following weights will be used in determining the overall grade in the course

Quizzes	25%
Midterm	25%
Final Exam *	50 %

* To pass the course, students must obtain at least 40% on the final exam.

Lecture Topics:

1. Review of Space Curves
2. Vector Fields & Line Integrals
3. Green's Theorem
4. Curl & Divergence
5. Surface Integrals
6. Stokes' & Divergence Theorem
7. Advanced Topics

ACADEMIC INTEGRITY

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the break down of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. **For example, incidences of plagiarism or cheating usually result in a failing grade or mark of zero on the assignment or in the course.** Careful records are kept to monitor and prevent recidivism. A more detailed description of academic integrity, including the policies and procedures, may be found at <http://web.ubc.ca/okanagan/faculties/resources/academicintegrity.html>. If you have any questions about how academic integrity applies to this course, consult with the instructor.

DISABILITY ASSISTANCE

If you require disability-related accommodations to meet the course objectives, please contact the Coordinator of Disability Resources located in the Student Development and Advising area of the student services building. For more information about Disability Resources or academic accommodations, please visit the website at <http://okanagan.students.ubc.ca/current/disres.cfm>.