

## Course Syllabus MATH 2513

<b>Instructor(s):</b>	Mr. Joey Bernard	<b>Class Day(s):</b>	M, T, W, F
<b>Email:</b>	<a href="mailto:bernardj@unb.ca">bernardj@unb.ca</a>	<b>Time:</b>	11:30-12:30
<b>Phone:</b>	449-5853	<b>Class Location:</b>	Carleton 106
<b>Office Location:</b>	Tilley 417 OR Marshall D'Avray 233A	<b>Office Hours:</b>	

*We recognize and respectfully acknowledge that all UNB course interactions take place on unsundered and unceded traditional lands of the Wolastoqiyik.*

### Office Hours: How to Contact Me

While I won't have regular office hours at the beginning of the term, if students need more scheduled time, this will be updated. I am always open to scheduled meetings.

I can be contacted either by email or through Teams.

Materials for the course will be available in D2L.

### About the Course

#### Course Description:

Functions of several variables, partial derivatives, multiple integrals, vector functions, Green's and Stokes' Theorems.

#### Course Prerequisites:

MATH 1013 and MATH 1503

#### Textbook(s):

*Text: CLP Calculus Textbooks by Feldman, Rechnitzer and Yeager*

*Optional Text: Calculus: Early Transcendentals (8th edition) by James Stewart*

*The CLP calculus textbooks and problem books were written for standard university Calculus 1, 2, 3 and 4 courses at the Department of Mathematics, UBC. These books are available to the public free of charge at <https://www.math.ubc.ca/CLP/>. We will mostly use CLP-3, with some topics being covered in CLP-4.*

### Course Topics and Outcomes:

Topics covered in the course are:

- Part I: Vectors and Partial derivatives lines and planes; quadric surfaces, functions of several variables, partial derivatives; tangent plane, differentials, chain rule; directional derivative, gradient, maximum and minimum; Lagrange multipliers
- Part II: Multiple integrals double integrals, iterated integrals, double integrals in polar coordinates, triple integrals in cartesian, cylindrical and polar coordinates, applications
- Part III: Vector calculus vector functions, line integrals; Green's theorem; curl and divergence; parametric equations; surface integrals; Stokes' theorem, divergence theorem

## Grading, Marks, and Course Policies

### Grading Scale

Letter Grade	Grade Points
A+	4.3
A	4.0 (Excellent)
A-	3.7
B+	3.3
B	3.0 (Good)
B-	2.7
C+	2.3
C	2.0 (Satisfactory)
D	1.0
F	0.0

### Course Marking Scheme

Item	Description	Value
Assignments	Weekly assignments	35
Quizzes	Weekly in class quizzes	35
Final	Take home final	30
<b>Total:</b>		<b>100</b>

### Course Policies:

1. Students are expected to make every effort to attend all classes.
2. Assignments will be due one week after being handed out.
3. Assignments are to be uploaded to D2L, quizzes will be done in class.

4. Extensions for assignments will be decided on a case-by-case basis.

## Assignment/Quiz Schedule

The intended schedule is found below. It is subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better student learning. Students will be notified if and when changes are made (stay up-to-date via D2L Brightspace).

Day/Date	Topics
May 7	Quiz 1
May 14	Assn. 1
May 21	Quiz 2
May 28	Assn. 2
June 4	Quiz 3
June 11	Assn. 3
June 17-21	READING WEEK
June 25	Quiz 4
July 9	Assn. 4
July 16	Quiz 5
July 23	Assn. 5

## Services for Students with Disabilities

### FREDERICTON

If you are a student with a disability of any type (physical, mental, learning, medical, chronic health, sensory; visible or invisible) you are strongly encouraged to register with the UNBF Student Accessibility Centre (SAC) (<https://www.unb.ca/fredericton/student-services/academic-success/accessibility-centre/>) so that you may receive appropriate services and accommodations. Once you are registered with SAC, you'll receive an accommodation letter you can share with instructors. If you would like to discuss your needs with the instructor, please book a time for a confidential appointment.

## Your Wellbeing is Important.

It is normal for university students to experience mental and physical health challenges. If you or a friend encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with a mentor or academic advisor. Learn about resources that assist with wellness and academic success at the University of New Brunswick by visiting:

- <https://www.unb.ca/fredericton/studentservices/be-healthy-at-unb.html> (Fredericton)  
or
- [www.unb.ca/saintjohn/studentservices/](http://www.unb.ca/saintjohn/studentservices/) (Saint-John)

If you are in immediate crisis, please contact CHIMO helpline at 1-800-667-5005.

## Class Recording and Copyright

Anyone who wishes to video or audio record lecture presentations or distribute course notes or other similar materials provided by instructors must obtain the instructor's written consent beforehand. Otherwise, all such reproduction is an infringement of copyright and is absolutely prohibited and subject to academic penalties (see Academic Offences below). Classes may be recorded by students with documented disabilities for personal and private use.

## Plagiarism and Academic Offences

*"The purpose of education is to acquire knowledge, develop skills, and to grow as an individual. In order to achieve these goals one needs to approach one's courses in an honest manner. This requires individuals to submit work that is their own creation. Students often wonder why documenting their sources and maintaining a high level of academic integrity is so important, and why failure to do so is taken so seriously. Work undertaken at university is part of a centuries-long conversation. All work builds on that of your predecessors. Documenting your sources recognizes the efforts of others and places your contribution within the conversation. Therefore, your documentation/integrity shows courtesy for your sources and for your reader."*

Ken Craft

The university has carefully defined what it considers plagiarism, and these regulations are found in the UNB calendar section B.19 IX Academic Offences:

Plagiarism includes:

1. quoting verbatim or almost verbatim from any source, regardless of format, without acknowledgement;
2. adopting someone else's line of thought, argument, arrangement, or supporting evidence (such as, statistics, bibliographies, etc.) without indicating such dependence;
3. submitting someone else's work, in whatever form (essay, film, workbook, artwork, computer materials, etc.) without acknowledgement;
4. knowingly representing as one's own work any idea of another.

**NOTE:** In courses which include group work, a penalty may be imposed on all members of the group unless an act of plagiarism is identified clearly with an individual student or students.

Please note that plagiarism is not difficult to spot; web sources can be quickly traced through a variety of specialty search engines. Professors are required to follow the disciplinary procedures outlined in the calendar (B.17. IX. A. 1-2).

**OTHER ACADEMIC OFFENCES** you need to be aware of include:

1. Cheating on examinations, tests, assignments or reports, including but not limited to:  
Impersonating a candidate at an examination or test or in connection with any assignment in a course or availing oneself of the results of impersonation.  
Obtaining, through theft, bribery, collusion, purchase, or other improper manner,
  1. an examination or test paper prior to the date and time for writing the examination or test;
  2. academic materials belonging to another person, e.g., laboratory reports, assignments, papers, computer materials, datasets.
2. Falsifying or knowingly submitting false assignments or credentials, records, transcripts, or other academic documents.
3. Submitting a false health or other certificate.
4. Submitting identical or substantially similar work for one course or program of study, which has been or is being submitted for another course or program of study, without the prior express knowledge and approval of the instructors.
5. Interfering with the right of other students to pursue their studies.
6. Knowingly aiding or abetting any of the above offences.
7. Tampering with, or altering, in any deceptive way, work subsequently presented for a review of the grade awarded.

Penalties for plagiarism and other academic offences range from a minimum of F (zero) in the assignment, exam or test to a maximum of suspension or expulsion from the University, plus a notation of the academic offence on the student's transcript.

For more information, please see the Undergraduate Calendar, University Wide Academic Regulations, Regulation VIII.A, or visit: <http://go.unb.ca/tlsPb0XX5>. It is the student's responsibility to know the regulations.