



Course Outline

UNIVERSITY STUDIES

MATH 100A
Engineering Calculus I
Fall 2012

3 CREDITS
5 HOURS PER WEEK

INSTRUCTOR: Matthew Morin

Instructor Information

Name: Matthew Morin
Phone Number: 780-791-4831
Email: matthew.morin@keyano.ca
Office Number: S211E
Office Hours: Monday: 13:00 – 13:50
Tuesday: 13:00 – 13:50
Wednesday: 13:00 – 13:50
Thursday: 13:00 – 13:50
Friday: 13:00 – 13:50

Hours of Instruction

Monday	09:00 – 10:50	Room S105	(Lab / Tutorial)
Tuesday	10:00 – 10:50	Room S110	(Lecture)
Thursday	14:00 – 14:50	Room S212	(Lecture)
Friday	10:00 – 10:50	Room S110	(Lecture)

Course Description

This course covers rectangular and polar coordinates, analytic geometry, transcendental functions, limits, continuity, derivatives and applications, Taylor polynomials, integration and applications.

Prerequisites

Math 31 or equivalent

Required/Recommended Resources

Textbook: *Calculus, Early Transcendentals*; James Stewart (7th edition).

Moodle: Course information will be available through Moodle.
<http://ilearn.keyano.ca>

WebAssign: Subscription to WebAssign (<http://webassign.net/>) is required for the completion of homework and lab assignments.

Calculator: Any scientific calculator should be sufficient.

Course Outcomes

The student will be able to:

1. To understand the basic concepts of the derivative and the integral.
2. To apply calculus to concrete problems.
3. To deepen your skills at visualizing functions.

Evaluation

Assignments	2.5%
Lab Assignments	20%
Quizzes	7.5%
Midterm Examination	25%
Final Examination	45%
Total:	100%

Assignments

The basic “at-home” Assignments will be assigned on an approximately week-by-week basis and will be weighted equally. Students are responsible to pay attention in-class or check Moodle often to keep apprised of the due dates of these assignments. Assignments will be completed using *WebAssign*, a software program that our textbook uses.

You should work out the problems in each assignment by hand (on paper) before attempting to submit your solution through WebAssign. It is strongly recommended that you keep all this written work together in a notebook so that you have it to refer to for studying purposes.

During our “lab” meeting times, we will also have equally weighted assignments to complete and answers to upload to WebAssign during the period given. This is meant to ensure that all of us keep up with the material at hand. Students may seek help from the instructor, but everyone is meant to perform any calculations necessary to solve the problems on their own.

As with the at-home assignment, you should keep all written work for these lab assignments. Please note that the lab assignments are worth much more than the at-home assignments.

Please pay careful attention to the information that follows on Inappropriate Academic Behaviour such as cheating and plagiarism. The penalty for such behaviour is a zero on the assignment and no opportunity to resubmit the assignment.

Tests

Tests will be written and are closed-book. Basic scientific calculators are allowed, but graphing calculators are not. The topics covered by each test will be described in-class and will be posted on Moodle.

Grading System

Standing	Letter Grade	Grade Points
Excellent	A+	4.0
	A	4.0
	A-	3.7
Good	B+	3.3
	B	3.0
	B-	2.7
Satisfactory	C+	2.3
	C	2.0
	C-	1.7
Poor	D+	1.3
Min Pass	D	1.0
Failure	F	0.0

Performance Requirements

Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a student's learning experience. Second, attending class is a good way to keep informed of matters relating the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course. Please refer to pages 32 to 36 of the Credit Calendar.

Student Preparation

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and/or notes that may be due.

Plagiarism and Cheating

Every student expects to be treated and evaluated fairly in a course. Plagiarism and cheating robs everyone of this right.

No student may submit words, ideas or data of another student or person as his or her own in any writing, project, assignment, quiz, electronic presentation, exam etc. Any work used that is not the student's own must be clearly cited as belonging to someone else. There are penalties for using other's work and not citing it. The Student's Rights & Responsibilities document clearly outlines these penalties and the appeal process.

- No learner can obtain information from another student during an exam.
- No learner can bring unauthorized information (paper or electronic) into an exam or quiz.
- No student can submit work done in another course for grading in this course without the written prior approval of the course instructor.
- No student can submit copyright protected or commercially produced materials as part or all of an assignment without proper citation & permission.

COLLEGE POLICIES

Equality, Equity and Respect

The Keyano College is committed to providing an environment of equality, equity and respect for all people within the College community. All members of this community are considered partners in developing teaching and learning contexts that are welcoming to all. Faculty, staff, and students are encouraged to use inclusive language to create a classroom atmosphere in which students' experiences and views are treated with equal respect and valued in relation to their gender, ethnic and cultural background, and sexual orientation.

Students should consult:

http://www.keyano.ca/Committees/IRA/Individual_Rights_Policy.asp

Accommodation for Students with Disabilities

Disability Support Services: Learner Assistance Program

If you have a documented disability or you think that you would benefit from some assistance from a Disabilities Counsellor, please call or visit the Disability Supports Office 780-792-5608 to book an appointment (across from the library). Services and accommodations are intended to assist you in your program of study, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, providing accommodations, and supporting your overall success at Keyano College.

Specialized Supports and Duty to Accommodate

Specialized Support and Duty to Accommodate are aligned with the office of Disability Support Services: Learner Assistance Program (LAP) guided by federal and provincial human rights legislation, and defined by a number of Keyano College policies. Keyano College is obligated by legislation to provide disability-related accommodations to students with identified disabilities to the point of undue hardship.

APPROXIMATE COURSE SCHEDULE

Week	Dates	Topic	Chapter Sections
1	Sept. 3—Sept. 7 (Classes begin Sept. 5)	Preliminaries	Topics from Chapter 1
2	Sept. 10—Sept. 14	Limits, Limit Laws, Continuity,	2.1, 2.2, 2.3
3	Sept. 17—Sept. 21	Limits at Infinity, The Derivative	2.5, 2.6, 2.7
4	Sept. 24—Sept. 28	The Derivative, Derivative Rules	2.8, 3.1
5	Oct. 1—Oct. 5	Derivative Rules	3.2, 3.3, 3.4,
6	Oct. 8—Oct. 12 (No Classes on Monday— Thanksgiving)	Implicit Differentiation, Derivatives of Logarithmic Functions	3.4 (cont.), 3.5, 3.6
7	Oct. 15—Oct. 19	Applications of the Derivative	3.7, 3.8, 3.9,
8	Oct. 22—Oct. 26	Midterm , Linear Approx., Taylor Polynomials, Hyperbolic Functions	3.10, 3.11
9	Oct. 29—Nov. 2	Min and Max Values, MVT	4.1, 4.2
10	Nov. 5—Nov. 9	How derivatives affect curves, l'Hopital	4.3, 4.4
11	Nov. 12—Nov. 16 (No Classes on Monday— Remembrance Day)	Curve Sketching, Antiderivatives	4.5, 4.7
12	Nov. 19—Nov. 23	Newton's Method, Antiderivatives Area/Distance Problem	4.8, 4.9, 5.1
13	Nov. 26—Nov. 30	Definite Integrals, Fund. Th. Of Calculus	5.2, 5.3
14	Dec. 3—Dec. 7	Indefinite Integrals, Substitution Rule	5.4, 5.5
	Dec. 10—Dec. 19	Exam Period	

Please Note: This course outline may be modified to facilitate unforeseen time constraints. Date and time allotted to each topic is subject to change.

IMPORTANT DATES TO REMEMBER

Sept. 3	Labour Day, College closed
Sept. 4	Orientation Day, No classes.
Sept. 5	First Day of Classes in Academic and Career & Upgrading Programs.
Sept. 18	Last day to drop courses for Academic programs.
Sept. 21	Fall Awards Application deadline.
Oct. 8	Thanksgiving Day, College closed.
Oct. 26	Last day to withdraw without academic penalty.
Nov. 12	Remembrance Day Holiday, No classes.
Nov. 27	Fall Awards Celebration
Dec. 7	Last day of classes for students in Certificate, Diploma, and University Programs
Dec. 10-19	FINAL EXAM PERIOD.



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Reviewed and approved by:

Louis Dingley, Chairperson

Date

Guy Harmer, Dean

Date