

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: MATH 094

Number of Credits: 4 [Course credit policy \(105\)](#)

Course Full Title: Introduction to College Math I
 Course Short Title:

Faculty: Faculty of Science

Department: Mathematics and Statistics
 (As of Summer 2016: Upgrading and University Preparation)

Calendar Description:

Manipulation of algebraic expressions; zeroes of quadratic and polynomial functions; equations involving rational exponents, radicals, rational functions, and absolute values. Functions, with emphasis on notation, graphing, transformations, inverses, and compositions. Nonlinear systems and complex numbers. Applications include optimization, motion, and area problems.

Note: This course, followed by MATH 095, is recommended for students intending to major in a science, engineering, or technology program who do not have the required Grade 12 math prerequisites. MATH 094 and MATH 095 are together equivalent to provincial Mathematics 12 and they provide the foundation for calculus courses.

Prerequisites (or NONE): Principles of Math 12 or Pre-calculus 12; or at least a C in one of the following: Principles of Math 11, Pre-calculus 11, MATH 085, Applications of Math 12; or at least a B in Foundations of Math 12.

Corequisites (if applicable, or NONE):

Pre/corequisites (if applicable, or NONE):

Equivalent Courses (cannot be taken for additional credit)

Former course code/number:

Cross-listed with:

Equivalent course(s):

Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.

Transfer Credit

Transfer credit already exists: Yes No

Transfer credit requested (OReg to submit to BCCAT):

Yes No (Note: If yes, fill in transfer credit form)

Resubmit revised outline for articulation: Yes No

To find out how this course transfers, see bctransferguide.ca.

Total Hours: 60

Typical structure of instructional hours:

Lecture hours	60
Seminars/tutorials/workshops	
Laboratory hours	
Field experience hours	
Experiential (practicum, internship, etc.)	
Online learning activities	
Other contact hours:	
Total	60

Special Topics

Will the course be offered with different topics?

Yes No

If yes,

Different lettered courses may be taken for credit:

No Yes, repeat(s) Yes, no limit

Note: The specific topic will be recorded when offered.

Maximum enrolment (for information only): 36

Expected frequency of course offerings
 (every semester, annually, etc.): Annually: Fall

Department / Program Head or Director: Greg Schlitt

Date approved: October 28, 2013

Campus-Wide Consultation (CWC)

Date of posting: January 26, 2013

Faculty Council approval

Date approved: March 7, 2014

Dean/Associate VP: Lucy Lee

Date approved: February 21, 2014

Undergraduate Education Committee (UEC) approval

Date of meeting: March 28, 2014

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. utilize their algebraic skills in manipulating algebraic expressions
2. solve linear, quadratics, and absolute value equations and nonlinear systems of equations
3. find solutions for linear, quadratic, absolute value, and rational inequalities
4. recognize, formulate, solve, and interpret a variety of applied problems
5. solve problems using the language of functions as required for the study of calculus
6. use technology to enhance their understanding of topics represented by graphs
7. graph and analyze polynomial and rational functions

Prior Learning Assessment and Recognition (PLAR)

Yes No, PLAR cannot be awarded for this course because

<http://www.ufv.ca/media/assets/secretariat/policies/Course-Challenge-%28106%29.pdf>

Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)

Lectures mixed with problem sessions. Graphing calculators are used to aid in the understanding of topics.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials (if more space is required, download supplemental Texts and Resource Materials form)

	<u>Author Surname, Initials</u>	<u>Title (article, book, journal, etc.)</u>	<u>Current Edition</u>	<u>Publisher</u>	<u>Year Published</u>
1.	Bittinger, Beecher, et al	Algebra & Trig, Graphs & Models	5 th	Addison- Wesley	2006
2.			<input type="checkbox"/>		
3.			<input type="checkbox"/>		
4.			<input type="checkbox"/>		
5.			<input type="checkbox"/>		

Required Additional Supplies and Materials (Eg. Software, hardware, tools, specialized clothing)

A graphing calculator (without a computer algebraic system) is required.

Typical Evaluation Methods and Weighting

Final exam:	40%	Assignments:	15%	Midterm exam:	15%	Practicum:	%
Quizzes/tests:	30%	Lab work:	%	Field experience:	%	Shop work:	%
Other:	%	Other:	%	Other:	%	Total:	100%

Details (if necessary):

Grading system: Letter Grades: Credit/No Credit: Labs to be scheduled independent of lecture hours: Yes No

Typical Course Content and Topics

1. Basic algebra skills:
 - a) Exponents
 - b) Factoring
 - c) Rational expressions
 - d) Radicals
2. Solutions of equations:
 - a) Linear
 - b) Quadratic
 - c) Rational
 - d) Radical
 - e) Absolute value
 - f) Nonlinear systems

Typical Course Content and Topics continued:

3. Functions:
 - a) Notation
 - b) Evaluation
 - c) Transformations
 - d) Domain and range
 - e) Compositions
 - f) Inverses
 - g) Linear and quadratic applications
4. Graphing, use of technology to aid in graphing and in interpreting graphs:
 - a) Linear functions
 - b) Quadratic functions
 - c) Rational functions
5. Applications:
 - a) Uniform motion
 - b) Geometric
 - c) Optimization

For Administrative Use Only

Department code:

CIP Code:

Course Level Code:

PDC Code: