ORIGINAL COURSE IMPLEMENTATION DATE: September 2004
REVISED COURSE IMPLEMENTATION DATE: September 2020
COURSE TO BE REVIEWED (six years after UEC approval)**:** November 2025
Course outline form version: 05/18/2018

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

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

Course Code and Number: MATH 410	**Number of Credits:** 3 Course credit policy (105)

Course Full Title: History of Mathematics
Course Short Title:
(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)

Faculty: Faculty of Science	**Department (or program if no department):** Mathematics & Statistics

Calendar Description:

Surveys the development of mathematical thought from antiquity to the present day. Students will examine historically significant writings, important contributions and famous problems stemming from a variety of cultures. Mathematical material will be considered within the cultural and historical context.

Note: Recommended for students considering a career in teaching as well as those wishing to know how their math courses fit into general and intellectual history.

Prerequisites (or NONE):	21 credits in mathematics courses numbered above 110.
Corequisites (if applicable, or NONE):	
Pre/corequisites (if applicable, or NONE):	

Antirequisite Courses *(Cannot be taken for additional credit.)*
Former course code/number:
Cross-listed with:
Dual-listed with:
Equivalent course(s):
(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Typical Structure of Instructional Hours

Lecture/seminar hours	50
Tutorials/workshops	
Supervised laboratory hours	
Experiential (field experience, practicum, internship, etc.)	
Supervised online activities	
Other contact hours:	
Total hours	**50**

Labs to be scheduled independent of lecture hours: ☐ No ☐ Yes

Special Topics *(Double-click on boxes to select.)*
This course is offered with different topics:
☒ No ☐ Yes *(If yes, topic will be recorded when offered.)*

Independent Study
If offered as an Independent Study course, this course may be repeated for further credit: *(If yes, topic will be recorded.)*
☒ No ☐ Yes, repeat(s) ☐ Yes, no limit

Transfer Credit
Transfer credit already exists: *(See **bctransferguide.ca**.)*
☒ No ☐ Yes
Submit outline for (re)articulation:
☒ No ☐ Yes *(If yes, fill in transfer credit form.)*

Grading System
☒ Letter Grades ☐ Credit/No Credit

Maximum enrolment (for information only): 24

Expected Frequency of Course Offerings:
Every second year *(Every semester, Fall only, annually, etc.)*

Department / Program Head or Director: Ian Affleck	**Date approved:**	June 18 2019
Faculty Council approval	**Date approved:**	October 4, 2019
Dean/Associate VP:	**Date approved:**	October 4, 2019
Campus-Wide Consultation (CWC)	**Date of posting:**	November 8, 2019
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	November 22, 2019

Learning Outcomes:

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

1. Discuss verbally and in writing significant milestones in the development of mathematics.
2. State the major contributions of prominent mathematicians (or groups of mathematicians) and situate them in time and place.
3. Outline the structure and content of historically significant mathematical writings.
4. Explain how major developments in mathematics arose out of, and in turn affected, contemporary issues.
5. Demonstrate, on paper and in front of the class, the solutions of some historically important mathematical problems, using techniques available at the time.
6. Give demonstrations or lead class discussions about topics on which they have done individual research.

Students will also learn to find information in the subject area and to compare the reliability of various sources.

Prior Learning Assessment and Recognition (PLAR)

☒ Yes ☐ No, PLAR cannot be awarded for this course because

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

This course will involve both lectures and seminars. Students will be required to make short presentations and will be expected to contribute significantly to class discussions. Students will be expected to do extensive reading. Guest speakers and films will be incorporated where appropriate. Evaluation will include participation, assignments (mathematical and non-mathematical), a midterm test, a project, and a final exam.

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.)*

	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1.	Katz, Victor J	*A History of Mathematics: An Introduction*. 3rd ed.	☐	Addison Wesley	2008
2.	Kline, Morris	*Mathematical Thought from Ancient to Modern Times*		Oxford UP	1990
3.					
4.					
5.					

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

Students will be expected to make use of internet resources and UFV library resources, including inter-library loans.

Typical Evaluation Methods and Weighting

Final exam:	35%	Assignments:	20%	Field experience:	%	Portfolio:	%
Midterm exam:	15%	Project:	20%	Practicum:	%	Other (presentation):	10%
Quizzes/tests:	%	Lab work:	%	Shop work:	%	Total:	100%

Details (if necessary):

The weighting of the various components may vary from instructor to instructor and from year to year, although there must be a comprehensive final exam worth from 30% to 50% of the final grade. Students must obtain at least 40% on the final exam in order to pass the course.

Typical Course Content and Topics

1. Prehistoric beginnings; the idea of number.
2. Counting, calculation, astronomy, geometry, and problem solving in ancient civilizations, including Mesopotamian, Chinese, Egyptian, Indian.
3. Indigenous mathematical systems (Maya, Inca and others): numerals, numerical systems, quipu, geometry
4. Greek mathematics: abstraction, geometry, number theory, conics, and algebra.
5. Medieval mathematics in China, India, the Islamic world, and Europe.
6. The Renaissance in Europe: trigonometry, more algebra, logarithms; relationships between mathematics and the arts, navigation, and astronomy of the era.
7. The development of calculus from analytic geometry to complex analysis.
8. Origins and development of probability and statistics.
9. The rise of abstract algebra.
10. Number theory from the Greeks to today.
11. Topics in twentieth century mathematics (e.g. set theory, topology, influence of computers, game theory).