

MATH 10C-A, Mathematics 10C*6 credits, 6 hours lecture*

Topics covered include linear SI metric and Imperial measurement and conversions; surface area and volume of 3D objects; right triangle trigonometry; apply the power laws with integral and rational exponents; perform all operations (addition, subtraction, multiplication, division) on polynomials; factor polynomials; identify, describe, interpret and analyze relations and functions; evaluate functional notation; determine domain and range; graph and define linear relations; solve linear systems of two relations.

*Alberta Education Course Equivalency: Math 10C**Prerequisite: AFM 009 or permission of the Program Chair***Instructor**

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Office Hours

Monday 10:00 – 10:50 in the Skill Centre
Tuesday 10:00 – 10:50 in the Skill Centre
Thursday 10:00 – 10:50 in the Skill Centre

Hours of Instruction

Monday 8:00 – 9:50 in CC235
Tuesday 8:00 – 9:50 in CC235
Thursday 8:00 – 9:50 in CC235

Required Resources:

Pearson: Foundations and Precalculus Mathematics 10 by Garry Davis et al, ISBN 0-321-62684-2

Other Supplies:

Scientific calculator or a graphing calculator

Ruler

Graph paper

Course Outcomes:

Upon successful completion of the course, the student shall be able to:

- develop and apply the primary trigonometric ratios to solve problems that involve right triangles
- demonstrate an understanding of powers with integral and rational exponents
- demonstrate an understanding of factors of whole numbers by determining the
 - Prime factors
 - Greatest common factor

- Least common multiple
- Square root
- Cube root
- demonstrate an understanding of irrational numbers by
 - representing, identifying and simplifying irrational numbers
 - ordering irrational numbers
- demonstrate an understanding of the multiplication of polynomial expressions (limited to monomials, binomials and trinomials)
- demonstrate an understanding of common factors and trinomial factoring
- interpret and explain the relationships among data, graphs and situations
- demonstrate an understanding of relations and functions
- demonstrate an understanding of slope with respect to:
 - rise and run
 - line segments and lines
 - rate of change
 - parallel lines
 - perpendicular lines
- describe and represent linear relations, using
 - words
 - ordered pairs
 - table of values
 - graphs
 - equations
- represent a linear function, using functional notation
- determine the characteristics of the graphs of linear relations, including the:
 - intercepts
 - slope
 - domain
 - range
- relate linear relations expressed (in the following formats) to their graphs:
 - slope-intercept form ($y=mx+b$)
 - general form ($Ax+By+C=0$)
 - slope-point form ($y-y_1=m(x-x_1)$)
- determine the equation of a linear relation (given the information below) to solve problems
 - a graph
 - a point and the slope
 - two points
 - a point and the equation of a parallel or perpendicular line
- solve problems that involve systems of linear equations in two variables, graphically and algebraically.

Evaluation:

Assignments	20%
Weekly Quizzes	10%
Tests (3 in total)	30%
Final Exam (cumulative)	40%

The minimum pre-requisite for progression is 1.7 or 60% (refer to Grading System below)

Grading System

Descriptor	4.0 Scale	Percent
Excellent	4.0	96 – 100
	4.0	90 – 95
	3.7	85 – 89
Good	3.3	81 – 84
	3.0	77 – 80
	2.7	73 – 76
Satisfactory	2.3	69 – 72
	2.0	65 – 68
Minimum Prerequisite	1.7	60 – 64
Poor	1.3	55 – 59
Minimum Pass	1.0	50 – 54
Failure	0.0	0 – 49

Proposed Schedule of Topics

Unit #	Unit Topic	Approximate Time	Text References
1	Measurement	2 weeks	Chapter 2: Trigonometry
2	Algebra and Numbers	2 weeks	Chapter 3: Factors and Products
Test #1 on Chapters 2 and 3 - Tentatively Scheduled for February 3, 2020			
2	Algebra and Numbers	2 weeks	Chapter 4: Roots and Powers
3	Relations and Functions	2 weeks	Chapter 5: Relations and Functions
Test #2 on Chapters 4 and 5 - Tentatively Scheduled for March 5, 2020			
3	Relations and Functions	2 weeks	Chapter 6: Linear Functions
4	Systems of Equations	3 weeks	Chapter 7: Systems of Linear Equations
Test #3 on Chapters 6 & 7 - Tentatively Scheduled for April 2, 2020			
Final Exam – All Chapters - Scheduled Between April 14 – 22, 2020			

Calendar of Important Events - Dates on the following calendar are tentative; shaded areas indicate no Math 10C classes.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	January 6 First Day of Math 10C Intro & Lesson 2.1	7 Lesson 2.2/2.4	8	9 Lesson 2.5	10
2	13 Lesson 2.6	14 Lesson 2.7	15	16 Lesson 3.1/3.2	17
3	20 Lesson 3.3	21 Lesson 3.5	22	23 Lesson 3.6	24
4	27 Lesson 3.7	28 Lesson 3.8	29	30 Chapter 2&3 Review	31
5	February 3 Test #1	4 Lesson 4.2/4.3	5	6 Lesson 4.4	7
6	10 Lesson 4.5	11 Lesson 4.6	12	13 Lesson 5.1	14
7	17 Family Day College Closed	18 Reading Week - No Classes	19 Reading Week - No Classes	20 Reading Week - No Classes	21 Reading Week - No Classes
8	24 Lesson 5.2	25 Lesson 5.4	26	27 Lesson 5.5	28
9	March 2 Lesson 5.6	3 Review	4	5 Test #2	6
10	9 Lesson 6.1	10 Lesson 6.2	11	12 Lesson 6.4	13
11	16 Lesson 6.5	17 Lesson 6.6	18	19 Lesson 7.1	20
12	23 Lesson 7.2	24 Lesson 7.4	25	26 Lesson 7.5	27
13	30 Lesson 7.6	31 Review	April 1	2 Test #3	3
14	6 Final Exam Review	7 Final Exam Review	8	9 Final Exam Review & Last Day of Class	10 Good Friday - college closed
15	13 Easter Monday - college closed	14 Final Exams	15 Final Exams	16 Final Exams	17 Final Exams
16	20 Final Exams	21 Final Exams	22 Final Exams	23 Final Exams	24 Final Exams

Please Note:

Date and time allotted to each topic is subject to change.

Final exams are scheduled by the College. Do not book travel until April 24, 2020

Performance Requirements

Student Responsibilities

It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the Keyano College Credit Calendar.

More specific details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

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 to 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.

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.

Academic Misconduct

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own
- The use of unauthorized aids in assignments or examinations (cheating)
- Collusion or the unauthorized collaboration with others in preparing work
- The deliberate misrepresentation of qualifications
- The willful distortion of results or data
- Substitution in an examination by another person
- Handing in the same unchanged work as submitted for another assignment
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Student Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Student Code of Conduct Policies.

In order to ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on ilearn.keyano.ca. Then print the certificate, sign it, and show it to each of your instructors. Your course work will not be graded until you show this signed certificate.

Specialized Supports

The Student Academic Support Services (SASS) department: Accessibility Services, Skill Centre, Wellness Services and Student Life Department work together to support student success at Keyano College.

Accessibility Services (CC167) supports student success through group and individualized instruction of learning, study and test taking strategies, and adaptive technologies. Students with documented disabilities, or who suspect a disability, can meet with the Learning Strategists to discuss accommodation of the learning barriers that they may be experiencing. Students who have accessed accommodations in the past are encouraged to visit our office at their earliest opportunity to discuss the availability of accommodations in their current courses. Individual appointments can be made by calling 780-791-8934.

Skill Centre (CC119) provides a learning space where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff. Students visiting the centre have access to one-to-one or group tutoring, facilitated study groups, and assistance in academic writing. The Skill Centre's Peer Tutor program provides paid employment opportunities for students who have demonstrated academic success and want to share what they have learned. Tutoring is available free to any students registered at Keyano College on a drop in basis, from 8:30 am to 5:00 pm Monday through Friday. Additional evening hours are subject to tutor availability and are posted in the Skill Centre.

Wellness Services (CC260) offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators offer a safe and confidential environment to seek help with personal concerns. The Mindfulness Room in CC260 is available as a quiet space for students to relax during regular office hours. Wellness Service welcomes students to participate in any of the group sessions offered throughout the academic year addressing such topics as Mindfulness and Test Anxiety. Individual appointments can be made by calling 780-791-8934.

Student Life Department (CC210) is a place for students to go when they don't know who else can answer their questions. The staff will help students navigate barriers to success and if they don't know the answer, they will find it out. Student success is directly affected by how connected a student feels to their college. The student life department is there to help students get connected.

Please watch your Keyano email for workshop announcements from our Student Academic Support Services team.