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

Lisa Turner
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Office Hours

Monday	2:00 – 2:50 in CC245A
Tuesday	2:00 – 2:50 in CC245A
Thursday	2:00 – 2:50 in CC245A

Hours of Instruction

Monday	12:00 – 1:50 in Room S210
Tuesday	12:00 – 1:50 in Room S210
Thursday	12:00 – 1:50 in Room S210

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. Casio fx-260 solar is preferred
Geometry set, including 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

- o Square root
- o Cube root
- demonstrate an understanding of irrational numbers by
  - o representing, identifying and simplifying irrational numbers
  - o 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:
  - o rise and run
  - o line segments and lines
  - o rate of change
  - o parallel lines
  - o perpendicular lines
- describe and represent linear relations, using
  - o words
  - o ordered pairs
  - o table of values
  - o graphs
  - o equations
- represent a linear function, using functional notation
- determine the characteristics of the graphs of linear relations, including the:
  - o intercepts
  - o slope
  - o domain
  - o range
- relate linear relations expressed (in the following formats) to their graphs:
  - o slope-intercept form ($y=mx+b$)
  - o general form ($Ax+By+C=0$)
  - o slope-point form $(y-y_1=m(x-x_1))$
- determine the equation of a linear relation (given the information below) to solve problems
  - o a graph
  - o a point and the slope
  - o two points
  - o 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	30%
Midterm Exam (Chapters 2, 3, 4)	35%
Final Exam (cumulative)	35%

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

Grading System

Descriptor	4.0 Scale	Percent
	4.0	96 – 100
Excellent	4.0	90 – 95
	3.7	85 – 89
	3.3	81 – 84
Good	3.0	77 – 80
	2.7	73 – 76
	2.3	69 – 72
Satisfactory	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	Sept. 6 - 17	Chapter 2: Trigonometry
2	Algebra and Numbers	Sept. 18 - Oct. 16	Chapter 3: Factors and Products Chapter 4: Roots and Powers
	Midterm Exam – Chapters 2, 3, 4 **Tentatively** Scheduled for Monday, October 22, 2018		
3	Relations and Functions	Oct. 23 - Nov. 20	Chapter 5: Relations and Functions Chapter 6: Linear Functions
4	Systems of Equations	Nov. 22 - Dec. 6	Chapter 7: Systems of Linear Equations
	Final Exam – All Chapters Scheduled Between December 10-18, 2018		

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 December 19, 2018.

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

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	Sept 3 Labour Day	4 Orientation Day	5	6 *First Day of Math 10C Introduction and Chapter 2*	7
2	10 *Chapter 2*	11 *Chapter 2*	12	13 *Chapter 2*	14
3	17 *Chapter 2*	18 *Chapter 3*	19	20 *Chapter 3*	21
4	24 *Chapter 3*	25 *Chapter 3*	26	27 *Chapter 3*	28
5	Oct 1 *Chapter 3*	2 *Chapter 3*	3	4 *Chapter 4*	5
6	8 Thanksgiving Day Holiday	9 *Chapter 4*	10	11 *Chapter 4*	12
7	15 *Chapter 4*	16 *Chapter 4*	17	18 *Midterm Exam Review*	19
8	22 *Midterm Exam*	23 *Chapter 5*	24	25 *Chapter 5*	26
9	29 *Chapter 5*	30 *Chapter 5*	31	Nov 1 *Chapter 5*	2
10	5 *Chapter 5*	6 *Chapter 6*	7	8 READING DAY	9 READING DAY
11	12 Remembrance Day Holiday (in lieu)	13 *Chapter 6*	14	15 *Chapter 6*	16
12	19 *Chapter 6*	20 *Chapter 6*	21	22 *Chapter 7*	23
13	26 *Chapter 7*	27 *Chapter 7*	28	29 *Chapter 7*	30
14	Dec 3 *Chapter 7*	4 *Chapter 7*	5	6 *Review and Last Day of Classes*	7
15	10 EXAMS	11 EXAMS	12 EXAMS	13 EXAMS	14 EXAMS
16	17 EXAMS	18 EXAMS	19	20	21

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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 and Wellness Services, 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 9:00 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 Text Anxiety. Individual appointments can be made by calling 780-791-8934.

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