MATH 10C INT, Mathematics 10C  
6 credits, 16 weeks, 6 hours lecture

Topics covered include linear SI metric and Imperial measurement and conversions; surface area and volume of 3D objects; right triangle trigonometry; power laws with integral and rational exponents; 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 system of two relations

Alberta Education Course Equivalency: Math 10C  
Prerequisite: AFM 009 or permission of the program chair

INSTRUCTOR

Gillian Whalen  
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780-559-2434  
587-646-4358

https://meetings.keyano.ca/intgillianwhalen/  
gillian.whalen@keyano.ca

OFFICE HOURS

Monday  11:00 – 12:00, 1:00 – 2:00  
Tuesday  4:00 – 5:00  
Wednesday  1:00 – 2:00  
Thursday  2:00 – 3:00

HOURS OF INSTRUCTION

Tuesday  9:00 – 10:50  
Wednesday  11:00 – 12:50  
Thursday  11:00 – 12:50

REQUIRED TEXTBOOKS AND SUPPLIES

Text:  MATHEMATICS 10 (McGraw-Hill Ryerson)  
Scientific calculator or a graphing calculator  
Ruler, Algebra Tiles, graph paper, binder, ruled paper, pencils, pen, eraser, and scissors.

***ilearn access is required to download course materials and to complete and submit assignments.
General Math Program Outcomes

Students will
✓ Develop spatial sense and proportional reasoning
✓ Develop algebraic reasoning and number sense
✓ Develop algebraic and graphical reasoning through the study of relations

Course Outcomes

Upon successful completion of Math 10C, students will be able to:
✓ Solve problems that involve SI and Imperial units of linear measurement
✓ Apply proportional reasoning to problems that involve conversions between SI and Imperial units of measure
✓ Solve problems, using SI and Imperial units, that involve the surface area and volume of 3-D objects, including right cones, right cylinders, right prisms, right pyramids and spheres
✓ 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:
  • slope-intercept form \( y = mx + b \)
• general form \((Ax+By+C=0)\)
• slope-point form \((y-y_1=m(x-x_1))\)

to their graphs
✓ determine the equation of a linear relation, given:
• a graph
• a point and the slope

**EVALUATION**

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
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<tbody>
<tr>
<td>3 Unit Assignments</td>
<td>10%</td>
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<tr>
<td>6 Chapter Assignments</td>
<td>30%</td>
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<tr>
<td>6 Chapter Tests</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
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<tr>
<td><strong>Total Grade</strong></td>
<td>100%</td>
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The minimum pre-requisite for progression is 1.7 (refer to Grading System)
GRADING SYSTEM

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>4.0 Scale</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>4.0</td>
<td>96 – 100</td>
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<tr>
<td></td>
<td>3.7</td>
<td>85 – 89</td>
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<tr>
<td>Good</td>
<td>3.0</td>
<td>77 – 80</td>
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<td></td>
<td>2.7</td>
<td>73 – 76</td>
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<tr>
<td>Satisfactory</td>
<td>2.3</td>
<td>69 – 72</td>
</tr>
<tr>
<td>Minimum Prerequisite</td>
<td>2.0</td>
<td>65 – 68</td>
</tr>
<tr>
<td>Poor</td>
<td>1.3</td>
<td>55 – 59</td>
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<tr>
<td>Minimum Pass</td>
<td>1.0</td>
<td>50 – 54</td>
</tr>
<tr>
<td>Failure</td>
<td>0.0</td>
<td>0 – 49</td>
</tr>
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Performance Requirements

1. Students are required to attend via Adobe Connect for each class, so success is improved by regular attendance. Extended or frequent absences cannot easily be accommodated and could impact your overall mark. Some suggestions for handling occasional absences include:
   a. Checking the Calendar of Events and PowerPoint slides covered in each chapter by logging into ilearn Keyano (http://ilearn.keyano.ca)**.
   b. Finding a “classroom buddy” who you can contact for details regarding what you have missed, because exact slides and daily homework will not be recorded on ilearn. Classes that have been recorded will be available on the course calendar to view.
   c. Keeping in touch with me via email. Office hours which are online, are for you to seek extra help and to see me with concerns about the course.

2. To ensure that everyone is evaluated fairly, and that you receive your marks and feedback in a timely fashion, assigned work will receive:
   a. Full marks when received on the due date. Students will need to scan and email assignments by the end of the scheduled class to be considered on time. All assignments must be scanned in PDF form.
   b. A mark of zero, if received after I have returned them …

3. To ensure that it is your learning, your thoughts, and your work that is being evaluated,
   a. Work submitted by non-attending students may not be marked, so please keep in touch!
   b. Any work showing evidence of copying or plagiarism will receive a mark of zero (see “Student Rights and Responsibilities” in the Credit Calendar).
   c. A missed exam (midterm) may be written at an alternate time only under certain exceptional circumstances, at the instructor’s discretion. The instructor must be contacted within 24 hours of the scheduled exam, and documentation (e.g. a doctor’s note) provided.
   d. The final exam will be written on the date scheduled by the College; otherwise, the procedure for “Deferred Final Examination” in the Credit Calendar is to be followed. If you are unable to write on the scheduled date, contact must be made within 48 hours with the chairperson to determine eligibility for special examinations or deferred examinations (appropriate documentation is required).
**Should you have trouble logging into ilearn Keyano, please contact any member of the library staff, or email Keyano Information and Technology Services (ITShelpdesk@keyano.ca) during business hours.**

**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

Penalties for academic offences range from a verbal reprimand to dismissal from the College, and in certain circumstances may involve legal action.

**Specialized Supports**

**Counselling and Disability Services**

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career and academic counselling.

**SKILL Centre**

The SKILL Centre is a learning space in the Clearwater Campus at Keyano College where students can gather to share ideas, collaborate on projects and get new perspectives on learning from our tutorial staff.

The SKILL Centre, through a variety of delivery methods, provides assistance in skill development to Keyano students. Assistance is provided by instructors, staff and student tutors. Individuals wishing to improve their mathematics, writing, grammar, study, or other skills, can take advantage of this unique service.
Authorization
This course outline has been reviewed and approved by the Program Chair.

Gillian, Whalen, Instructor

Lisa Turner, Chair  Date Authorized

Guy Harmer, Dean  Date Authorized