

KEYANO COLLEGE

FORT CHIPEWYAN

COLLEGE PREPARATION PROGRAM

FALL 2014

Room FC-113

Lecture F

MATHEMATICS 20-3

Instructor: Maureen Clarke

Office Hours: Monday 3:00 – 3:50
Tuesday 3:00 – 3:50
Wednesday 3:00 – 3:50
Thursday 3:00 – 3:50
Friday 9:00 – 9:50

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Course Hours: Monday 9:00 – 9:50
Tuesday 9:00 – 9:50
Wednesday 9:00 – 9:50 10:00 – 10:50
Thursday 9:00 – 9:50

Hours of Instruction: 5 50-minute classes per week

Credits: 5

Length of course: 16 weeks Sept 2 – Dec 12

Prerequisite: Math 10-3

Text: MathWorks 11 Workbook
Pacific Educational Press
Vancouver, Canada
ISBN: 978-0-9867141-3-9

Course Description:

This course further develops the concepts introduced in Math 10-3. The focus on the development of spatial sense through direct and indirect measurement is expanded to include the modeling and scale calculations of 3 dimensional objects. Problems and diagrams requiring the manipulation and application of formulas related to slope and rate of change are added to those of volume, capacity and surface area. Students

create and interpret statistical data expressed within graphs, and they prepare budgets, credit calculations and compare services provided by financial institutions.

Course Outcomes:

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 20-3, students will be able to:

- Solve problems that require the manipulation and application of formulas related to slope and rate
- Demonstrate an understanding of slope as rise over run and rate of change by solving problems
- Solve problems that involve creating and interpreting graphs, including bar graphs, histograms, line graphs, and circle graphs
- Solve problems that require the manipulation and application of formulas related to:
 - volume and capacity
 - surface area
 - slope and rate of change
 - simple interest
 - finance charges
- Demonstrate an understanding of slope:
 - as rise over run
 - as rate of change
 - by solving problems
- Solve problems by applying proportional reasoning and unit analysis
- Solve problems that involve two and three right triangles
- Model and draw 3-D objects and their views
- Draw and describe exploded views, component parts, and scale diagrams of simple 3-D objects
- Demonstrate an understanding of financing institution services used to access and manage finances
- Demonstrate an understanding of credit options, including credit cards and loans
- Solve problems that require the manipulation and application of formulas related to simple interest and finance charges
- Solve problems that involve personal budgets

Course Content and Proposed Schedule:

Chapter 1: Slope and Rate of Change	Sept 3 - 15
1.1 Rise Over Run	
1.2 Grade, Angle of Elevation and Distance	
1.3 Rate of Change	
Chapter 2: Graphical Representations	Sept 16 - 25
2.1 Broken Line Graphs	
2.2 Bar Graphs	
2.3 Histograms	
2.4 Circle Graphs	
Chapter 3: Surface Area, Volume, and Capacity	Sept 29 – Oct 9
3.1 Surface Area of Prisms	
3.2 Surface Area of Pyramids, Cylinders, Spheres & Cones	
3.3 Volume and Capacity of Prisms and Cylinders	
3.4 Volume and Capacity of Spheres, Cones, and Pyramids	
Chapter 4: Trigonometry of Right Angles	Oct 13 - 21
4.1 Solving for Angles, Lengths and Distances	
4.2 Solving Complex Problems in the Real World	
Chapter 5: Scale Representations	Oct 22 – Nov 6
5.1 Scale Drawings and Models	
5.2 Two-Dimensional Representation	
5.3 Three-Dimensional Representation	
Chapter 6: Financial Services	Nov 10 - 20
6.1 Choosing an Account	
6.2 Simple and Compound Interest	
6.3 Credit Cards and Store Promotions	
6.4 Personal Loans, Lines of Credit, and Overdrafts	
Chapter 7: Personal Budgets	Nov 24 – Dec 4
7.1 Preparing to Make a Budget	
7.2 The Budgeting Process	
7.3 Analyzing a Budget	

Review and Completion of Outstanding Work

Dec 8 – 11

FINAL EXAM TBA

EVALUATION:

Assignments	20%
Quizzes/Tests	30%
Unit Projects/Midterm	20%
Final Exam	30%
Total	100%

Grade Point:

Descriptor	Alpha Grade	4.0 Scale	Percentage
Excellent	A ⁺	4.0	91 – 100
	A	3.8	85 – 90
	A ⁻	3.7	80 – 84
Good	B ⁺	2.7	76 – 79
	B	2.7	73 – 75
	B ⁻	2.7	70 – 72
Satisfactory	C ⁺	2.3	67 – 69
	C	2.0	64 – 66
PROGRESSION PASS	C ⁻	1.7	60 – 63
Poor	D ⁺	1.3	57 – 59
MINIMUM PASS	D	1.0	50 – 56
Failure	F	0,0	0 – 49

Overall Expectations:

Please turn off cell phones, MP3 players and any other electronic devices before coming to class.

Assignments: Assignments must be dated and submitted to the instructor no later than 4:00 pm on the day on which the assignment is due. Late assignments will be accepted but a penalty of 2% per date to a maximum of 10% will be deducted from the

assignment mark. Exemptions for assignments may be granted in exceptional circumstances beyond the control of the student. A 5% bonus mark will be given to all assignments that are turned in on time.

Punctuality: Punctuality is important. Students are expected to be ready to begin work when the class is scheduled to begin. Therefore, students are encouraged to arrive at class a minute or two early so that they may organize their working materials by starting time. Late arrival is detrimental to the student and inconsiderate of the instructor and other students. Arrival in good time is associated with success and is considerate of the instructor and other students.

Attendance: Students are expected to attend all classes. Should a student miss a class for any reason, it is his/her responsibility to cover the work missed and be ready for the next class.

If you want to be assured of success in this course, the following three things will most often grant that to you.

1. Attend every day and get involved in the class. When you can't attend, cover the work done anyway.
2. Ask a question when you do not understand the work and keep asking until you get an explanation you can understand. Feel free to ask for help from the Skill Center, your peers and the instructor. Remember that the Skill Center is for "support", not to "teach" you course content due to lack of attendance.
3. Do all of the daily work given or give it your very best effort and get help with the parts you are unable to complete.

STUDENTS RIGHTS AND RESPONSIBILITIES

Students should be aware of their rights and responsibilities as laid out in the Keyano College Credit Calendar 2014 – 2015. The calendar may be found online or a paper copy may be available in the office to read.

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.

Disability Services provides educational services to students with disabilities.

Both Counselling and Disability Services are located in CC167.

Important Dates
Fall 2014

Orientation Day	September 2
First Day of Class	September 3
Last day to ADD Courses	September 9
Tuition is due (\$100 late fee charged after this date)	September 9
Last day to DROP Courses with full refund (\$100 deposit is non-refundable)	September 16
Last day to WAIVE SAKC health and dental plan or add family	September 16
Last day to submit Keyano College Fall Awards Applications	September 30
Last day to WITHDRAW with a refund (50%)	October 10
Last day to WITHDRAW (Grade of W)	November 26

Authorizations

The course outline for **Math 20-3F - Fall 2014** has been authorized by the following individuals:

Maureen Clarke (Course Instructor)

Lisa Turner (Chair)

Guy Harmer (Dean)

Course Outline Effective Date: September 3, 2014