MATH 30-2, Mathematics 30-2

5 credits, 6 hours lecture

Course Description

Topics covered include properties of angles and triangles; oblique triangle trigonometry; systems of linear equations; operations (addition, subtraction, multiplication, division) on rational expressions; solve rational equations; logarithms; numerical and logical reasoning Extensions to the core materials include a Business/Arts Prep module focusing on linear inequalities; probability; permutations, combinations and the fundamental counting principle and/or a Trades prep module which explores measurement involving triangles, quadrilaterals and regular polygons, including transformations on 2D shapes or 3D objects.

Alberta Education Course Equivalency: Math 30-2

Pre and Co-requisites

Prerequisite: Math 20-2 or Math 20-1 or permission from the Program Chair.

Course Learning Outcomes (CLOs)

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

Topic: Set Theory
CLO1:Demonstrate an understanding of the type of sets, set notation, relationship between sets, intersection and union of two sets
CLO2: Solve problems that involve the application of set theory.

Topic: Counting Methods
CLO3: Solve problems that involve the Fundamental Counting Principle.
CLO4: Solve problems that involve permutations.
CLO5: Solve problems that involve combinations.

Topic: Probability
CLO6: Demonstrate an understanding of odds and relate them to probability
CLO7: Solve problems that involve counting Methods
CLO8: Solve problems that involve the probability of mutually exclusive and non- mutually exclusive events
CLO9: Solve problems that involve independent events

Topic: Polynomial Functions

CLO10: Demonstrate an understanding of the terminology and properties related to polynomial functions
CLO11: Analyzing graphs of polynomial functions
CLO12: Demonstrate an understanding of the characteristics of polynomial functions using its equation, match equations to their graphs

Topic: Exponential and Logarithmic Functions
CLO11: Solve problems that involve exponential equations.
CLO12: Represent data, using exponential and logarithmic functions, to solve problems.
CLO13: Demonstrate an understanding of logarithms and the laws of logarithms
CLO14: Solve problems that involve exponential equations.
CLO15: Represent data, using exponential and logarithmic functions, to solve problems.

Topic: Sinusoidal Functions

CLO16: Represent data, using sinusoidal functions, to solve problems.
CLO17: Demonstrate an understanding of Sinusoidal Functions

Evaluation

Assessment Type	Percentage
Daily Textbook Work (In class assignments)	5%
Assignments	21%
Quizzes	15%
Exams	29%
Final Exam	30%

Course Completion Requirements

Minimum passing mark of 50% or D is required.

Grading Scale

4.0 Grade Scale	Alpha Grade	Percentage Grade
4.0	A+	93-100
4.0	A	85-92.9
3.7	A-	80-84.9
3.3	B+	77-79.9
3.0	B	74-76.9
2.7	B-	70-73.9
2.3	C+	67-69.9
2.0	C	64-66.9
1.7	C-	60-63.9
1.3	D+	55-59.9
1.0	*D	50-54.9
0.0	F	0-49.9

Land Acknowledgement

We respectfully acknowledge that Keyano College is on Treaty No. 8 Territory, the ancestral and traditional territory of the Cree, Dene, and Métis people.

Review Date: November 26, 2024

Every effort has been made to ensure that information in this course outline is accurate at the time of publication. Keyano College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.

Keyano College reserves the right to modify the syllabus, curriculum, or schedule of any course/program, or to cancel a course/program entirely, at any time and for any reason. Such changes may be necessary due to unforeseen circumstances, regulatory requirements, or to ensure the highest quality of education.

Students will be notified of any significant changes as soon as possible. Keyano College is not responsible for any inconvenience or disruption caused by these changes. It is the responsibility of the students to stay informed about any updates or modifications to their courses.