KINGDOM OF SAUDI ARABIA
Ministry of Higher Education
AL-IMAM MUHAMMAD IBN SAUD
ISLAMIC UNIVERSITY

Deanship of Preparatory Programs

المملكة العـــــــربية السعوديـة
وزارة التعليم العالي
جامعة الإمام محمد بن سعود الإسلامية
عمادة البرامج التحضيرية
قسم الرياضيات بكلية العلوم

Syllabus

2st Semester 1434/1435 Hijri

Course Code	Course Name	Credit Hours	Lec	Lab	Tut.	Pre-requisite
MAT 050	Mathematics-1 for Applied Sciences	4	3	0	2	None
Course Supervisor	Dr. Emad Selouma					
e-mail	Emadms74@yahoo.com					
office	SR-73					
Class Meetings	As scheduled					

Course's Objectives: The main objective of this course is to develop a good grasp and critical thinking of the high school mathematics.

Text Book: PRECALCULUS-1, for Applied Science Track. Compiled by Mathematics Committee, Dept of Mathematics, PEARSON Education

Website:

Grading:

- Attendance and Participation 4%
- Quizzes (around 4 quizzes, 4% each)..... 16%
- Mid-term-1 Exam 20%
- Mid-term-1 Exam 20%
- Final Exam 40%
- **TOTAL..... 100**

Attendance: Attendance will be taken in the first 5 minutes of the lecture (lectures). If you came late, you should remind me at the end of the class to consider your attendance for the second lecture, otherwise, you will be marked absent for the two lectures. Accepted excuses for absence should be submitted within two weeks after the absent lectures.

Classroom Participation: It is expected that you participate in the discussion at lectures by asking and answering questions, raising issues, and making observations and constructive comments.

Cheating and Dishonesty: Each student should write and submit his own work either on exams or on exercises and other course material. Any kind of cheating or dishonesty throughout the course is considered a serious offence and will be dealt with strictness and no mercy.

Attention: Don't use or leave open your mobile phone throughout lectures. Violating this may result in lowering your grad or expelling from the classroom.

Course schedule

Week	Date	Chapter	Title	Sections	Contents
1-4	25-3-1435 H-17-4-1435 H	0	Basic Concept of Algebra Prerequisites	Sets of numbers	Natural numbers and integers, rational numbers and operations on them, irrationals and the real numbers, intervals and absolute values.
				Exponents and Radicals	Integer exponents, Scientific Notation Rational exponents, Radicals.
				Polynomials and Rational Expressions	Polynomials, Degree of a polynomial, Special Product Formulas, Euclidean division and remainder theorem. Factor Polynomials, Rational expressions and operations on them.
5-6	23-4-1435 H-1-5-1435 H	1	Equations, Inequalities, and Modeling	Linear Equations	Linear equations, Constructing Models to Solve Problems Equations and Graphs in Two Variables Linear Equations in Two Variables
				Quadratic Equations	Quadratic Equations Completing square Method
				Linear and Absolute Value Inequalities	Linear and Absolute Value Inequalities
Midterm 1 exam					
				Functions	Domain of a function, graphs of functions and relations, Linear

7-8	8-5-1435 H-15-5-1435 H	**2**	**Functions and graphs**		**functions. some special cases.**
				Operations with Functions	**Families of Functions, Transformations, and Symmetry**
					Operations with Functions **Inverse Functions** **Constructing Functions with Variation**
Spring vacation					
9-10	29-5-1435 H-6-6-1435 H	**3**	**Polynomial and Rational Functions**	**Quadratic Functions and Inequalities**	**Quadratic Functions and Inequalities,** **Zeros of Polynomial Functions,** **The Theory of Equations.**
				Rational Functions and Inequalities	**Miscellaneous Equations** **Graphs of Polynomial Functions** **Rational Functions and Inequalities**
11-12	13-6-1435 H-20-6-1435 H	**4**	**Exponential and logarithmic Functions**	**Exponential and logarithmic Functions**	**The exponential function. The real number and The exponential function**
					The logarithmic function. Exponents, logarithms and their laws. More Equations and Applications
Midterm 2 exam					
13-14	27-6-1435 H-5-7-1435 H	5	**Systems and Matrices**	**Systems and Matrices**	**Properties of Matrices** **Systems of Linear Equations** **Matrix Solution of Linear Systems**
				Determinant Matrix and Inverses	**Determinant Solution of Linear Systems** **Matrix Inverses**

15	12-7-1435 H		**Review**	
16	19-7-1435 H		**Final Examinations**	