Intermediate University Mathematics II (MAT 101)
Spring 2016 , Section 6

Instructor: Nizhum Rahman

Contact Information: Ph: 01784100855

Class Details: MW15:20-16:50, BC5014

Grade Distribution:

Letter Grades	Marks
A	85 and above
A-	80-84
B+	75-79
B	70-74
B-	65-69
C+	60-64
C	55-59
C-	50-54
D+	45-49
D	40-44
F	Below 40

Assessment Procedure:

Quiz/ class tests	25%
Midterm exam	35%
Final Exam	40%

- No quiz or test will be repeated for absence of any student.
- **Question and schedule of the final exam will be common for all the sections.**

Lecture Plan & Course Content:

Lecture No.	**Topic details**	**References**
Lecture 1	Definition of Sets, Representation, Classification, Set Operations, Venn Diagrams, Venn – Euler Diagram to Solve Practical Problems	Unit 1; Chapter-1 Page no: 1-10
Lecture 2	Types of Numbers, Modulus, Interval Diagrams, Interval Notations, Solving Set Operations Using Interval Notations.	Unit 1; Chapter-2 Page no: 1-4
Lecture 3	Proper and Improper Fractions, Partial Fraction Method, Finding Roots and Nature of the Roots of Quadratic Equations,	Unit 1; Chapter-3 Page no: 1-4
Lecture 4	**Class Test-1**	
Lecture 5	Definition of Surds, Surds Operation and Simplification, Introduction to Indices	Unit 1; Chapter-3 Page no: 4-10
Lecture 6	Indices Operations, Solving Equations, Idea of Logarithm and their Operation	Unit 1; Chapter-3 Page no: 11-20
Lecture 7	Concept of Different Coordinate Systems, Distance Between two Points, Point Dividing a Line into Certain Ratio, Concept of Slope, Slope of a Line	Unit 1; Chapter-4 Page no: 1-5
Lecture 8	Condition for Parallel and Perpendicular Lines, Right Triangle and Related Theorems, Supplementary Problems Solving on Chapter-4	Unit 1; Chapter-4 Page no: 5-6
Lecture 9	**Class Test-2**	
Lecture 10	Equation of Straight Lines	Unit 1; Chapter 5 Page no: 1-4
Lecture 11	Review (Lecture 1 to Lecture 10)	
Lecture 12	**Mid Term**	
Lecture 13	Introduction to Matrices, Classification, Representation, Different Forms of a Matrix, Addition, Subtraction, Scalar Multiplication of Matrix	Unit 2; Chapter-1 Page no: 1-7 Unit-2; Chapter-2 Page no: 1-4
Lecture 14	Dot Product and Matrix Multiplication	Unit-2; Chapter-3 Page no: 1-8
Lecture 15	Matrices Determinant & Cramer's rule	Unit 2; Chapter-4 Page no: 1-9

Lecture 16	Inverse of Matrix	Unit 2; Chapter-5 Page no: 1-3
Lecture 17	**Class Test-3**	
Lecture 18	Introduction to Function, Domain, Range	Unit 3; Chapter-1 Page no: 1-6
Lecture 19	Graphs of a Function(Mainly $x^2, x^3, x^4, \sqrt{x}, \lvert x \rvert, \frac{1}{x}$ & Piecewise Functions)	Unit 3; Chapter-2 Page no: 1-15
Lecture 20	Limits and Continuity	Unit 3; Chapter-3 Page no: 1-12
Lecture 21	Introduction to Differentiation, Power Rule, Product Rule	Unit 3; Chapter-4 Page no: 1-6
Lecture 22	Quotient Rule, Chain Rule, Differentiation of Some Common Functions	Unit 3; Chapter-4 Page No: 6-12
Lecture 23	Review(Lecture 13 to Lecture 16)	
Lecture 24	Review(Lecture 18 to Lecture 22)	
Lecture 25	Review	
	Final Exam	