



King Saud University
Department of Mathematics
Syllabus of

MATH 132, first semester 1443 H

Course code: MATH 132

Course title: Logic Mathematics

Pre-Requisite: None

Instructor: Aymen Ben Amira

Room AA 129/2, Building 4, Mathematics Department.

Text Book: Discrete Mathematics and Its Applications by Kenneth H. Rosen, Mc Graw Hill, 7th edition, 2012.

Course objectives

1. Basic mathematical logic,
2. Methods of proof,
3. Basics of set theory,
4. Relations, mappings (functions),
5. Equivalence of sets, finite sets, countable sets, cardinal numbers.

Course learning outcomes

Students completing this course successfully will be able to:

CLOs		Aligned PLOs
1	Knowledge and Understanding	
1.1	Explain fundamental concepts of logic mathematics.	K1
2	Skills:	
2.1	Communicate and argue some mathematical methods of proofs	S3
3	Values:	
3.1	Study, learn and work constructively.	V1

Course content

Week #	Topics
1-5	Mathematical Logic and Proof Methods
6-7	Sets and their Operations
8-9	Cartesian Product of Sets and its Properties
10-12	Binary Relations and their Properties
13-14	Mappings (Functions)
15	Equivalence of Sets, finite sets, countable sets, cardinal numbers

Homework assignments:

Chapters	Exercises
CHAPTER 1	Exercises on logic mathematics
CHAPTER 2	Exercises on proof methods
CHAPTER 3	Exercises on sets and set operations
CHAPTER 4	Exercises on relations
CHAPTER 5	Exercises on functions
CHAPTER 6	Exercises on cardinality of sets

Grading	Percentage	Date of the test
Midterm Exam 1	25%	25/10/2021
Midterm Exam 2	25%	22/11/2021
Tutorial	10%	weekly
Final Exam	20%	29/12/2021
Total (100)	100%	