SYLLABUS - Math 232(091)

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Textbooks: *Introduction to Mathematical Structures and Proofs,* by Larry J. Gerstein.
Contemporary Abstract Algebra 6e, by Joseph A. Gallian.

Evaluation: Total, 450 points.
Exam 1, 100 points; Exam 2, 100 points; Homework, 100 points; Final Exam, 150 points.

Week	Date	Section	Topic
1	Oct 3 - Oct 7	Chapter 1	Propositions, Truth tables Conditional statements
2	Oct 10 - 14		Proofs
3	Oct 17 - 21		Logical equivalence Tautologies and Contradictions
4	Oct 24 - 28	Chapter 2	Sets & Russell's paradox Quantifiers Set inclusion, Union, Intersection, Complement
5	Oct 31 - Nov 4		Indexed Sets Power Sets Ordered Pairs & Cartesian Products
6	Nov 7 - 11		Partitions and Equivalence Relations
7	Nov 14 - 18		Mathematical Recursion & Induction Examples
		First Exam	
		Id al-Adha	
8	Dec 5 - 9	Chapter 3	Functions Surjections, Injections, Bijections Sequences Composition of functions
9	Dec 12 - 16	Chapter 4	Finite and Infinite Sets Cardinality Countability & Uncountability
10	Dec 19 - 23	Chapter 6	The Integers Operations and Order Divisibility and Primes
11	Dec 26 - Dec 30		Fundamental Theorem of Arithmetic Congruence
12	Jan 2 - Jan 6		Divisibility Tests Euler's Function
		Second Exam	
13	Jan 9 - Jan 13	Chapter 5	Permutations Symmetry & Cycles
14	Jan 16 - Jan 20		Decomposition & Transpositions Order, Even & Odd Permutations Signum and the 14-15 Puzzle
15	Jan 23 - Jan 27		Groups and Subgroups Lagrange's Theorem