

MA1025 (4-0) Finite Mathematics for Operations Research Sample Syllabus

Coordinator: Craig Rasmussen

Text: *Introduction to Mathematical Structures and Proofs*, L.J. Gerstein, Springer-Verlag/Jones and Bartlett, 1996.

Week	Sections	Topics
1	1.1, 1.2 1.3	Propositions, Theorems, Logical Connectives Conditional Statements
2	1.4, 1.5 2.1	Logical Equivalence, Proof Structures and Strategies Fundamentals of Sets
3	2.3, 2.4	Quantifiers, Set Inclusion
4	2.5, 2.7	Set Operations, the Power Set
5	2.10	Mathematical Induction, Recursion
6	2.6, 2.8	Indexed Sets, Cartesian Products EXAM I
7	2.9, 3.1	Set Partitions, Relations; Functions: Definitions/Examples
8	3.2, 3.3	Functions: Properties, Composition
9	4.1, 5.2 5.2	Cardinality and Fundamentals of Counting Sum and Product Rules
10	5.3,5.8	Permutations; Binomial Coefficients
11		Problem Solving, Review
12		FINAL EXAM