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MTH181 Syllabus

Fall 2024

Discrete Mathematics with Applications (5th ed.) S. Epp

Week of 9/2:

Labor Day *(No class Tuesday)*
Introduction: What is math?
Some mathematical results

Week of 9/9:

Some set theory notation
Logic: Statements, & Boolean operations on statements
Implications, truth tables, biconditionals
De Morgan's Laws
Add/Drop/Audit deadline is Wednesday
Proving statements: Modus Ponens, Modus Tollens
Tautologies & contradictions

Week of 9/16:

Quantifiers
Rational numbers
Exam I

Week of 9/23:

Multiply quantified statements and proof
Even, odd, prime, composite
Proving existentials
Disproving universals by counterexamples

Week of 9/30

Cases
Contradiction
Contrapositive

Week of 10/7:

Exam II
Sets, subsets, Venn diagrams
Pass/Fail deadline is Wednesday

Week of 10/14:

Indigenous People's Day *(Class* does *meet on Tuesday)*
Set operations & identities
Partitions

Week of 10/21:

Introduction to combinatorics & probability
Multiplication & addition principles

Week of 10/28:

Mental Health Day *(No class Tuesday)*
Inclusion/exclusion (De Moivre)

Week of 11/4:

Pigeonhole principle
Permutations & Combinations

Week of 11/11:

More on Permutations & Combinations
Exam III
Veterans Day*is Monday*
Withdrawal deadline is Friday

Week of 11/18:

Pascal's triangle
Binomial theorem

Week of 11/25:

Proof by (weak) induction
Thanksgiving

Week of 12/2:

Examples

Week of 12/9:

Exam IV
Last class is Tuesday