MATH 363 Discrete Mathematics

Instructor

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Course Information

Location: Wong Building 1020
Time: MWF 1:35 PM-2:25 PM
Prerequisites: MATH 264 or MATH 265 and MATH 263.
Restriction: Open only to students in the Faculty of Engineering.

Textbook

Discrete Mathematics and Its Applications by Kenneth Rosen. 4th, 5th or 6th editions. No exercises will be assigned from this book.

Outline

Topics included in this course:

1. **Logic and proofs** Propositional logic, truth tables, predicates, quantifiers, inference, mathematical reasoning, method of proof and induction.

2. **Sets and functions**

3. **Graphs and trees** Handshaking lemma, Eulerian cycles, Hamiltonian cycles, shortest path, matching in bipartite graphs, connectivity, planarity, colouring.

4. **Combinatorics** Counting, inclusion-exclusion, recurrences, pigeon-hole principle, binomial theorem, recurrences, discrete probability, partially ordered sets and lattices, derangements (if time permits)

Evaluation

max(20% Assignment+20% Midterm + 60% Final, 20% Assignment+80% Final)

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