E0 228 Aug 3:1

Combinatorics

Instructor

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Teaching Assistant

Email:

Department: Computer Science and Automation

Course Time: Tue, Thu, 3:30-5 PM

Lecture venue: CSA 252

Detailed Course Page:

Announcements

Brief description of the course

Teaches elementary notions and techniques of combinatorics.

Prerequisites

None.

Syllabus

Basic combinatorial numbers, selection with repetition, pigeon hole principle, Inclusion-Exclusion Principle, Double counting; Recurrence Relations, Generating functions; Special combinatorial numbers: Sterling numbers of the first and second kind, Catalan numbers, Partition numbers; Introduction to Ramsey theory; Combinatorial designs, Latin squares; Introduction to Probabilistic methods, Introduction to Linear algebra methods.

Course outcomes

Basic notions and techniques of combinatorics. Can be very useful in theoretical computer science. Also for researchers in other aspects of computer science.

Grading policy

20, 20, 40 percentage each for 1st mid term, 2nd mid term, and final exams and

20 percentage for assignments.

Assignments

Resources

R. P. Grimaldi, B. V. Ramana, "Discrete and Combinatorial Mathematics: An applied introduction", Pearson Education (2007)