Syllabus

Instructor:
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Lectures:
Tuesday 9:10 - 12:10, Room 306, Common Building

Grading:
Midterm 40%, Final 40%, Homework 20%

Textbook:

Web Site:

Schedule/Outline:
• Introduction and Foundations. logic and proofs 3/6
• Basic Structures. 3/13 sets, functions, decidability, countability
• Fundamentals. 3/20, 3/27 algorithms, growth of functions, complexity of algorithms, congruences, RSA cryptosystem, matrices
• Induction and Recursion. induction, recursion, program correctness 4/3
• Discrete Probability I. probabilistic algorithm, expectation 4/10
• Midterm. 4/17
• Discrete Probability II. variance, Chebyshev’s inequality 4/24, 5/1
• Advanced Counting Techniques. recurrence relations and their solutions, generating functions 5/8, 5/15
• Graphs. terminologies, representations, Euler and Hamilton paths, reduction from satisfiability 5/22, 5/29
• Trees. binary tree, traversal, spanning tree 6/5, 6/12
• Final. 6/26