Syllabus for

cmpe220 Discrete Computational Structures

(3+0+0) ECTS 5

2019 Fall

Catalog Definition

Propositional logic and proofs. Set theory. Functions and relations. Algebraic structures. Groups and semi-groups. Graphs. Lattices and Boolean algebra.

Web Site

http://www.cmpe.boun.edu.tr/courses/cmpe220.

General Information

Instructor	Haluk O. Bingol, bingol@boun.edu.tr
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Course Schedule	Section 01: WFF 934 @ A2, A2, A2
	Section 02: WWF 785 @ A3, A3, A3
PS Schedule	FF 78 @ A2

Grading

Quizzes, Homeworks	10 %
Midterm 1	25 % (30-Oct-2019)
Midterm 2	30 % (27-Nov-2019)
Final	35 %
Presentations	as bonus

Exams are not open book any more. You can bring one-page (A4) of your handwritten notes to exams. Do not to forget a copy for yourself since cheatsheets will be submitted with the exam paper.

Text Book

- Discrete and Combinatorial Mathematics, 5e; Grimaldi; *Addison-Wesley*, 2004; [QA39.2 .G7478]

Reference Books

- Introduction to Discrete Structures; Preparata and Yeh; *Addison-Wesley*, 1973, [QA162.P7]
- Applied Abstract Algebra; Lidl and Pils; *Springer-Verlag*, 1984, [QA162.L53]
- Discrete Mathematics and Its Applications, 6e; Rosen; *McGraw-Hill*, 2007, [QA39.3.R67]

Weekly Program (Tentative)

week	**Subject**
1	Logic and Proof
2	Sets and Functions
3-4	Binary Relations
5	Algebraic Structures
6-7	Integers, Division, Primes
8	Induction, Recursion, Recurrence Relations
9-10	Counting
11-13	Graphs and Trees

ABET

Course Learning Outcomes (CLO)

- CLO1: Understand formal descriptions
- CLO2: Explain using formal notation
- CLO3: Be able to do proofs

Course Learning Outcome Contribution to Student Outcome

Student Outcomes	CLO1	CLO2	CLO3
(g) an ability to communicate effectively	x	x	
(o) knowledge of discrete mathematics	x		