Syllabus for

cmpe220 Discrete Computational Structures

(3+0+0) ECTS 5

2016 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
TA	Yigit Yildirim, yigit.yildirim@boun.edu.tr
	Buse Buz, busebuzz@gmail.com
Student TA	Yigit Yildirim, yigit.yildirim@boun.edu.tr
Course Schedule	TTW 568 @ NH304, NH304, NH305
PS Schedule	WW 910 @ NH203

Grading

Quizzes, Homeworks	10 %
Midterm 1	25 %
Midterm 2	30 %
Final	35 %
Presentations	as bonus

Exams are not open book any more. You can bring one-page (A4) of your handwritten notes to exams.

Text Book

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

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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

Important Dates (Tentative)

Week	Due	Action
4	12.10.2016/09:00	hw 1
6	25.10.2016/13:00	mt 1
8	07.11.2016/09:00	hw 2
11	29.11.2016/13:00	mt 2
13	12.12.2016/09:00	hw 3
-	TBA	final

ABET

Course Learning Outcomes (CLO)

- CLO1: Understand formal descriptions

- CLO2: Explain using formal notation

- CLO3: Be able to do proofs

- CLO4: Write math in LaTeX

Course Learning Outcome Contribution to Student Outcome

Student Outcomes	CLO1	CLO2	CLO3	CLO4
(g) an ability to communicate effectively	x	x		x
(o) knowledge of discrete mathematics	x			