

CS204 Discrete Mathematics

Fall 2013

Lectures	TR: 13:00 ~ 14:15
Classroom	IT Building (N1) 112
Course Web Page	ecl.kaist.ac.kr
Instructor	Prof. Soontae Kim
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Office	N1 903
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Office Hour	after class or via appointment

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Objective of the Course

You will study discrete things that can be listed, such as finite processes and sets of elements, in contrast to calculus, which is concerned with infinite processes and real numbers. Discrete mathematics is applied to all levels of digital system design and information technology. This course will provide you with important backgrounds required to study follow-up courses such as Logic Design, Data Structures, Algorithms, Computer Architecture, security, programming, etc.

Prerequisites

Basic math, some computer programming course such as CS101, CS109

Textbook

Dossey Otto Spence Eynden, Discrete Mathematics, 5th ed., Pearson Education, 2006.

Grading Policy

Homework assignments	20%
Midterm	25%
Final	35%
Term Project	10%
Attendance	10% (-1 for a miss attendance, two late attendances are

equal to one miss attendance)

Cheating is not allowed in any of exams and homework assignments. You will be given **zero** points for cheating. Show your own efforts.

Late homework submission will be given 50% points by next day of the deadline, after which no point will be given.

Do not move around and **do not make noises** during class hours. You will be asked to leave classroom in the above cases.

Sleeping is not allowed in class hours. Please leave the classroom when you are too sleepy. I will not count it as misattendance.

Course Schedule (subject to change)

Week	Date	Topic	Reading (textbook)	Activity
1	9/3	Introduction	Section 1.1, 1.2	
	9/5	No class		Travel to china
2	9/10	An introduction to combinatorial problems	Section 1.3, 1.4	
	9/12	Sets, relations, and functions	Section 2.1 , 2.2	
3	9/17	Sets, relations, and functions	Section 2.3	HW#1
	9/19	No class		Holiday
4	9/24	Coding theory	Section 3.1 3.2	
	9/26	Coding theory	Section 3.3	
5	10/1	Coding theory	Section 3.4, 3.5	
	10/3	No class		Holiday
6	10/8	Coding theory	Section 3.5, 3.6	HW#2
	10/10	Graphs	Section 4.1	
7	10/15	Graphs	Section 4.2	
	10/17	Graphs	Section 4.3	
8	10/22	Midterm		
	10/24	Midterm		
9	10/29	Graphs	Section 4.4, 4.5	
	10/31	Trees	Section 5.1, 5.2	
10	11/5	Trees	Section 5.3. 5.4	
	11/7	Trees	Section 5.5, 5.6	
11	11/12	Trees	Section 5.6	HW#3
	11/14	Matching	Section 6.1, 6.2	
12	11/19	Matching	Section 6..3	
	11/21	Network flows	Section 7.1, 7.2	
13	11/26	Network flows	Section 7.2, 7.3	HW#4
	11/28	Counting techniques	Section 8.1, 8.2, 8.3	
14	12/3	Counting techniques	Section 8.4, 8.5	
	12/5	Recurrence relations and generating functions	Section 9.1	
15	12/10	Recurrence relations and generating functions	Section 9.2, 9.3	Term project due
	12/12	Recurrence relations and generating functions	Section 9.5, 9.6	
16	12/17	Final exam		
	12/19	Final exam		