COMP-106
Discrete Mathematics
for Computer Science and Engineering
(Fall 2019 Syllabus)

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Teaching Assistants: To be announced

Lectures: Tuesday/Thursday 10:00-11:15, Rm: SNA-A52

Text Book: Kenneth H. Rosen, Discrete Mathematics and Its Applications, McGraw-Hill

Course Objectives: COMP 106 is a course targeting freshman Computer Science and Engineering students. It focuses on teaching the fundamentals of logic and mathematical thinking, functions, predicates, sets, relations, formal proof techniques, mathematical induction and recursion, algorithms and complexity, relations, and theory of computation. This course aims at preparing you to future courses for which mathematical thinking and algorithm development will be essential.

Course Outline: (Unordered)

- Logic, proof techniques, sets, functions.
- Algorithms, complexity of algorithms.
- Number theory.
- Mathematical induction, recursive algorithms.
- Recurrence relations, divide-and-conquer relations, generating functions.
- Relations, representing relations, equivalence relations.
- Theory of computation, languages, grammars, finite state machines.

Grading: (Tentative) Homeworks and in-class quizzes (20%), midterm exam (35%), final exam (45%).

Quizzes: During class hours, quizzes may be given to students, in order to make them follow the course attentively, better understand the material, and to improve their skills. All class-work will be graded, and will affect the final letter grade of each student.
Students will not be allowed to exchange any information during quizzes. The course instructor may permit the students to use their notes on certain quizzes; however, sharing notes will not be allowed.
There will be no warnings and no makeups for quizzes.

Homeworks: Homeworks are given in order to expose students to more complex problems, and to evaluate their abilities and knowledge. Students should be prepared to spend considerable time for preparing these homeworks.
Late homeworks can be submitted within the two days following the due date. Late submissions will be subject to a grade reduction of 1 point (out of 10) per each late day.

Moral Expectations: The students taking this course are expected to submit their own work in all midterms, projects, homeworks and in class quizzes.
In quizzes, students show how well they have learnt the daily material. Therefore they must not exchange any information.
In homeworks, students enhance their knowledge and show their skills. They can have ideas or tips from others on how to do things, but they must not exchange any written material and files, work together, or let others do their work (even partially).
In exams, all forms of information transfer between students, and any talking will be considered as cheating.
Finally, being a part of a dishonest plot intentionally (for example, helping others cheat, doing others' homeworks, giving your homeworks to others) will also be considered as cheating.
Please be aware that, in past semesters, a number of students had to face the Disciplinary Committee for various incidents of academic dishonesty in computer engineering courses. **In case of cheating in any of the homework assignments, all homework points ($\sim 20\%$) will be cancelled.**

Course webpage: http://home.ku.edu.tr/$\sim$ yyemez/comp106/