

CSC281 Syllabus (Spring 2020)

Course title: Discrete Mathematics for Computer Science

Instructor: Dr. Aqil M. Azmi (aqil@ksu.edu.sa)

Office: 2150

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Credit hours: 3 + 1

Prerequisites: Math151 + Stat324

Prerequisites to: CSC311 and CSC339

Goals of the course: Summarized primarily as the ability to do valid mathematical reasoning; combinatorial analysis; and dealing with discrete structures (such as trees and graphs).

Textbook(s):

K.H. Rosen, *Discrete Mathematics and Its Applications*, 7e/8e, McGraw-Hill, 2011.

Topics (tentative):

Logic and Proofs (§1); Sets (§2.1); Sets Operations (§2.2); Functions (§2.3); Sequences and summation (§2.4); Integers and division, Primes and GCD, Integers (§4.1-4.5); Mathematical induction (§5.1); Strong induction (§5.2); Recursive definitions and structural induction (§5.3); Counting (§6); Discrete Probability (§7.1-7.3); Advance counting (§8); Relations (§9); Graphs (§10); and Trees (§11) [grayed out topics – time permitting].

Exam dates:

Midterm-I: Sun, 8 March 2020

Midterm-II: Sun, 5 April 2020

Evaluation:

Tutorial participation/attendance	5 points
Class attendance	2 points (bonus)
Term Group project	15 points
Midterm exams (2)	40 points
Final exam	40 points