

CSC281 Syllabus (Fall 2022)

Course title: Discrete Mathematics for Computer Science

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Credit hours: 3 + 1

Prerequisites: Math151 + Stat324

Prerequisites to: CSC311 and CSC339

Course description: This course aims to understand and use (abstract) discrete structures that are the backbones of computer science. In particular, this class is meant to introduce logic, proofs, sets, functions, sequences, summations, number theory, counting, relations, graphs, and trees, emphasizing applications in computer science.

Textbook(s):

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

Topics (tentative):

Chapter #	Topic	Sections	# weeks
1	Logic	§1.1 – 1.5	2
2	Sets, Functions, Sequences, and Summation	§2.1 – 2.4	2
5	Proof techniques	§5.1 – 5.2 + §1.7 – 1.8	1
4	Number Theory	§4.1 – 4.6	3
6	Counting	§6.1 – 6.5	3
8	Advanced Counting	TBD time permitting	
9	Relations		
10	Graphs		
11	Trees		

Evaluation:

Homeworks	10 points
Term Group project	15 points
Quizzes	10 points
Midterm exam (1)	25 points
Final exam	40 points