

Math 22/CS 22

Discrete Mathematics  
Course Information

Spring 2009

BLOCK: Block F+: Tuesday and Friday 12:00–1:15

INSTRUCTOR: Kim Ruane

EMAIL: [kim.ruane@tufts.edu](mailto:kim.ruane@tufts.edu)

OFFICE: Bromfield-Pearson 211

OFFICE HOURS: (Fall 2008) Tu 10:30-11:30, Wed 12:30-1:30, Fri 12-1

PHONE: 7-2006

BLOCK: Block L+: Tuesday and Thursday 4:30–5:45

INSTRUCTOR: Anselm Blumer

EMAIL: [ablumer@eecs.tufts.edu](mailto:ablumer@eecs.tufts.edu)

OFFICE: Halligan Hall

PREREQUISITES: Math 11 or Comp 11.

TEXT: *Kenneth Rosen, Discrete Mathematics and its Applications, 6th Edition*

ISBN: 978-0-07-288008-3

#### COURSE DESCRIPTION:

Discrete mathematics is the study of mathematical structures that are *discrete* - i.e. do not support or require the notion of continuity. More concretely, discrete mathematics is used for counting objects, understanding relationships between finite (and countable) sets, analyzing processes involving a finite number of steps. In this course, a variety of topics will be covered including: logic, set theory, proof methods and strategies, functions and relations, and graph theory. This course is meant to provide mathematical maturity that is necessary in order to be successful in higher mathematics courses as well as computer science courses.

The main goal is to teach you how to understand and create mathematical arguments. This is also an excellent skill to have when writing programs. Many of the problems you do in the course will require a mathematical argument rather than a computation which is generally a new and challenging type of math course for most students. (and much more fun in my opinion!).

The course is cross-listed as both Math 22 and CS 22. The two sections will cover roughly the same material although there could be some slight deviation or change in order of the topics in the two sections. There will be separate problem sets and exams.