

# CSCI 150 Discrete Structures

## Test out examination

What you should know for the test out examination of CSCI 150:

- Counting: Selections, ordered and non-ordered, with and without replacement
- Binomial coefficients, binomial theorem, Pascal triangle
- Sets, functions, and relations including equivalence and partial order relations, and one-to-one correspondences
- General knowledge of proofs
- Inclusion-exclusion and pigeon-hole
- Induction proofs and recurrences
- Divisibility, primes, congruence, modular arithmetic
- Graph theory, vertices, edges, cycles, trees, handshake-lemma, Euler's formula

Some possible resources (and textbooks):

(on-line references)

<http://www.cs.hunter.cuny.edu/~saad/courses/dm/dmbook.pdf>

<http://zimmer.csufresno.edu/~larryc/proofs/proofs.html>

Discrete Mathematics, Aduni.org

Discrete Mathematics Elementary and Beyond by Lovsz et al., Aduni.org.

(texts)

Discrete Mathematics and its Applications, by Rosen.

A First Course in Discrete Mathematics, by Anderson.

Discrete Mathematics for Computer Scientists, by Stein et al.

Discrete and combinatorial mathematics: An applied introduction, by Grimaldi R.

[July 10, 2013]