

CS 3305.001 Spring 2005
CRN 10884

Instructor: Nancy Van Ness

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Note that information can be found on WebCT

Office Hours

MW 3 - 5 PM

TRF 7:30 - 9 AM

M 7 - 8 PM

TA: to be assigned

Time: MWF: 10 – 10:50 AM

Location: ECSS 2.305

Book: *Discrete Mathematics and Its Applications, fifth edition* by Kenneth H. Rosen, McGraw-Hill, ISBN 0 – 07 – 242434 – 6

Material: Discrete Mathematics covers a side variety of subjects. This is a fast paced course and you will be asked to do homework almost daily. The topics, while varied, all have in common an abstraction of underlying concepts and a looking for abstract patterns that exist in the data. The Chapters to be covered are as follows:

Chapter 2: Section 2.2 only. Growth functions. Big O, Big Θ , Big Ω

Chapter 6: Advanced counting techniques. This is a difficult chapter and contains recurrence relations, setting up and solving techniques, divide-and-conquer algorithms, generating functions and applications of the Inclusion-Exclusion Principle

Chapter 7: This chapter goes into detail about relations and their properties. Included are the various ways relations can be represented, closures of relations and equivalence and partial orders.

Chapter 8: This is an introduction to graphs with basic definitions and includes ways in which graphs may be represented, isomorphisms, Euler and Hamilton paths, and the shortest-path problem.

Chapter 9: This is an introduction to trees and includes tree traversal, spanning trees and minimum spanning trees.

Homework: There will be almost daily homework due. It will count 10%. However, approximately 1/3 of this will be dropped. Plan wisely. **NO LATE HOMEWORK WILL BE ACCEPTED. NO EXCEPTIONS.**

Exam: There will be 2 Midterm Exams and a Final. Each Midterm will count 20%. The final will count 30%.

Quizzes: There will be weekly quizzes that will count 20%. Approximately 1/3 of these will be dropped and there will be no makeup quizzes because of the drops.

Important Dates:

First day classes	Monday, January 10
Graduation application deadline	Tuesday, January 18
Adding a Course (last day)	Friday, January 14
Martin Luther King Day NO SCHOOL	Monday, January 17
Census Day (Last Day to drop without "W")	Wednesday January 26
Undergrad WP or WF begins	Monday February 14
Midterm #1	Monday, February 16
Incomplete removal deadline	Monday, March 7
Spring Break	March 7 – March 12
Undergrad last day to withdraw with WP/WF	Monday, March 14
Midterm #2	Monday, March 21
Last Day of Classes	Monday, April 25
Final Exam	8 AM Friday, April 29

Students are expected to be courteous to all other students. Therefore it is requested that all cell phones be turned off during class.

Cheating will not be tolerated. All students suspected of cheating will be subject to the University's code on cheating. Penalties may include a zero on the exam or an "F" in the course or other penalties may apply.

The Computer Science Department is in the process of being accredited by Accreditation Board for Engineering and Technology, Inc. or ABET (see: <http://www.abet.org/>)

About ABET

ABET, Inc., the recognized accreditor for college and university programs in applied science, computing, engineering, and technology, is a federation of 31 professional and technical societies representing these fields. Among the most respected accreditation organizations in the U.S., ABET has provided leadership and quality assurance in higher education for over 70 years. ABET currently accredits some 2,500 programs at over 550 colleges and universities nationwide. Over 1,500 dedicated volunteers participate annually in ABET activities. ABET also provides leadership internationally through agreements such as the [Washington Accord](#), and offers educational credentials evaluation services to those educated abroad through [ECEI](#). ABET is recognized by the [Council on Higher Education Accreditation](#).

This means that all undergraduate courses have a list of objectives. At the moment, the following are listed as the objectives for this class.

<p>Ability to use Big O in context of algorithmic complexity</p> <p>Ability to construct and solve recurrence relations</p> <p>Ability to use the principle of inclusion and exclusion to solve problems</p> <p>Ability to understand binary relations and their applications</p> <p>Ability to recognize and use equivalence relations and partial orderings</p> <p>Ability to use and construct graphs and graph terminology</p> <p>Ability to apply the graph theory concepts of Euler and Hamilton paths</p> <p>Ability to identify and use planar graphs and shortest path problems</p> <p>Ability to use and construct trees and tree terminology</p> <p>Ability to use and construct binary search trees</p>
