

Discrete Mathematics
MATH 200

Piedmont College

Spring 2006

Class: Stewart Hall 118, Period 10, TTh 11:00AM-12:15PM

Prerequisites: MATH 101, or permission of instructor.

Text: Epp, Susanna S. *Discrete Mathematics with Applications, Third Edition*. Brooks/Cole, 2004.

Instructor: Paul Brooks, **Phone:** 778-8500 x1294, **Email:** pbrooks@piedmont.edu, **Office Hours:** Tentatively, M 9-11AM and 2:30-5PM, Th 1:30-4PM, F 9-11AM. You can also email or call to make an appointment.

Course Website: <http://cyrus.piedmont.edu/users/pbrooks/disc/>

Course Description: An introduction to the notation, language, and methods associated with various topics within the broad field of discrete mathematics.

Attendance: The Mathematics Department policy dictates that students should attend a minimum of 80% of the class meetings in this course. **Grades:** Grades will be based on quizzes, tests, and class projects (50%), homeworks (20%), a final exam (20%), and class participation (10%). **Tests:** Thursday, February 2; Thursday, February 23; Tuesday, April 20. **Final Exam:** Wednesday, May 3, 2006, 10AM-12PM.

Student Outcomes: At the end of the course, students should be able to:

- Prove a set identity using correct notation.
- Describe the difference between a relation and a function, and determine if a function is one-to-one or onto.
- Produce and interpret a truth table for a logical expression.
- Find the negation of a universal conditional statement.
- Determine when an example/counterexample is sufficient to validate a statement, and when a proof is needed.
- Calculate probabilities for various five-card poker hands.
- Determine the maximum flow through a network.

Course Outline:

Section	Corresponding Chapter
Set Theory	5
Relations, Functions	10, 7
Graph Theory	11
Logic and Proof	1-4
Combinatorics and Probability	6

Collaboration policy and academic integrity: The policy may vary for different assignments. In general, you are encouraged to work in groups on assignments outside of class, but you must write up/type up your own solutions and you must understand what you turn in. No collaboration is allowed on quizzes or the final. Infractions will be handled according to the policy on Academic Integrity in the Piedmont College Handbook 2005-2006 (<http://www.piedmont.edu/handbook/>).

Special Considerations: Piedmont College makes every effort to provide reasonable and appropriate accommodations to students with disabilities. Accommodations must be coordinated through the Office of Academic Support by contacting the director at 1-800-277-7020 ext. 1359 or by email - dtaylor@piedmont.edu Students are responsible for providing accurate and current documentation of their disability and for making a written request to the Director of Academic Support before receiving accommodations. Students with special needs (disabilities, problems, or any other factors that may affect their performance or that require special instructional strategies) should also make these needs known to the professor/instructor during the first class session.

Tutoring: Tutoring is available from the Academic Support Center in Daniel Hall Room 305. Students with special needs may also seek assistance in this office.

Calculators: If you wish to use a calculator during a quiz or test, then you are responsible for bringing the calculator or making arrangements with the instructor prior to the date of the quiz or test.

Absences: Should you miss class, you are responsible for learning the material that is covered in class and for making up all work missed, regardless of the reason for the absence. You are also responsible for all announcements made in class and for adhering to decisions made by the class (i.e., changes to the syllabus). A grade of zero will be assigned for tests missed as a result of an unexcused absence. If you know that you will miss class on the day of a test or the day that an assignment is due, you must let the instructor know ahead of time. If you miss a test or fail to turn in an assignment on time as a result of unexpected circumstances, you must notify the instructor as soon as possible.

Late assignments: Homeworks that are turned in late will receive a grade of at most 50%. Assignments may be turned in during class, placed in the instructor's mailbox, or slid under the door to the instructor's office.

Emails: Emails to the instructor should be written using correct grammar and punctuation.