

SYLLABUS

Course Organization:

Instructor: Dr. Kemal Akkaya
Office: FANER 2138
Office Phone: 453-6054
E-Mail Address: kemal@cs.siu.edu
Office Hours: T: 11am-12pm, W: 2-4pm

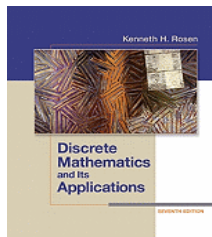
TA: Mr. Jayanthan Raveendiran
Office: FANER 3127
Office Phone: 453-6035
E-Mail: jayanthan.raveendiran@siu.edu
Office Hours: R: 2:15-3:15pm, F: 11:30am-1:30pm

Course Schedule: Regular: T: 9-10:50am, R: 9:9:50am, **Study Session:** R: 10-10:50am, PARK 108

Course Web Site: The lectures, home-works, quizzes and other announcements will be made available through the course web site at <http://www.cs.siu.edu/~cs215>. The lecture notes will be both in ppt and pdf format. They will be available before the class. Home-works, class-works, quizzes and their solutions will also be posted by your TA. It is your responsibility to check the announcements on the web site frequently to follow what is new about the course.

Required Textbook:

Discrete Mathematics
and Its Applications
by
Kenneth H. Rosen. 7th
edition.
McGraw Hill
Publisher.



Grading:

12 Homework Assignments (2% each)	24%
7 Quizzes (2% each)	14%
Group Project	10%
2 Midterm Exams (15% each)	30%
Final Exam	22%

Homework Assignments: 12 assignments will be given during the semester to be done at home. The assignments will typically include simple questions from your textbook. The more exercise you solve, the better you will understand the topics.

Quizzes: There can be pop-up quizzes in the class regarding the topics covered in the previous classes. This requires you to be prepared on what have been discussed in the previous lectures by reading the text/lecture notes and doing as many practice exercise as possible.

Group Project: In order to improve the students' ability to work with a team, there will be a group project. The groups will choose a Discrete Math topic (not covered in the class) determined by the instructor and prepare an essay to explain the topic.

Study Sessions: There will be study sessions led by the TA for 50mins each week. In these study sessions, the TA will solve exercises and give tips in understanding the topics. Occasionally the instructor may also attend for covering some topics. Everyone should plan to attend.

Late Assignments: All home-work assignments are due by the end of class on the date established by the instructor or the TA as the due date. Your grade is based on timely work accomplished during the semester. Late assignments will lose 10% of the total points for each day they are late and will not be accepted after the solution is posted (within one week).

Attendance: It is essential that students attend all weekly meetings. During each class period concepts, various exercises and quizzes will be discussed. Should you have to miss a class, it is your responsibility to find out what was discussed in the class.

Exam Policy: The exams will be closed-book and closed-notes. The final exam will be comprehensive. No early or late final/exam will be given. And there will be no make-up unless a medical report is provided.

Academic Integrity: By enrolling in this course, each student assumes the responsibilities of an active participant in SIUC's scholarly community in which everyone's academic work and behaviors are held to the highest standards of honesty. If we catch anyone cheating, we will take the maximum action possible against them, including reporting the matter to the appropriate university authorities. Please cooperate by doing your own work and not seeking inappropriate help from your classmates. You may, of course, discuss assignment solutions and assignments amongst yourselves, as long as that discussion does not lead to an exchange of solutions.

Emergency Procedures: SIUC is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Tentative Course Schedule:

Week	Chapter	Tentative Topics	Assignment/Exam
PART I – BASIC MATH			
1	1	Logic, Propositional Logic,	HW1
2	1	Predicate Logic and Quantifiers	HW2
3	1	Methods of Proof, Proof Strategy	HW3
4	2	Sets, Set Operations	HW4
5	2	Functions, Sequences and Summation	HW5
6	4	Mathematical Induction, Proofs by Induction	HW6, Project Group Formation Deadline
7	5	The Basics of Counting, Pigeonhole Principle, Permutations and Combinations, Binomial Coefficients	Exam I & Project Assignment
8	6	Discrete Probability, Probability Theory, Expected Value and Variance	HW7
PART II – COMPUTER SCIENCE FUNDAMENTALS			
9	3	Algorithms, Growth of Functions, Complexity of Algorithms	HW8
10	3, 7	Integers and Division, Applications of Number Theory, Matrices, Recurrence Relations	HW9
11	8	Relations, n -ary Relations	HW10
12	8	Representing Relations, Closures, Equivalence Relations, Partial Orderings	HW11
13	11	Boolean Functions, Representing Boolean Functions, Logic Gates	Exam II
14	11, 12	Combinational Circuits, K-Maps, Finite State Machines	HW12
15		Final Exam: Friday, May 11th, 12:50-2:50pm	