DISCRETE MATHEMATICS FOR COMPUTER – CS3653

Syllabus

1. GENERAL INFORMATION

Instructor name: Email:

Credit: 3 (3 lecture).

Prerequisite: Calculus I (Math 2144).

2. COURSE INFORMATION

- Course description:

Courses provides the concepts of set theory, formal logic and proof techniques, relations and functions, combinatorics and probability, undirected and directed graphs, Boolean algebra, switching logic.

- Course objectives:

At the completion of this course, a student should be able to Understand the Theory and applications of discrete mathematical models fundamental to analysis of problems in computer science

3. BOOK AND MATERIALS:

- Required textbook:

Discrete Mathematics and Its Applications (7th Edition) by Kenneth H. Rosen, McGraw-Hill Education Publisher, 2011.

4. GRADING PROCEDURES:

Assignments, Projects, Class attendance/participation: 30%

Midterm Examinations: 20%

Final Examination: 50%

5. COURSE OUTLINE:

Week	Topic	Assignments
1	The Foundations: Logic and Proofs	

2	Basic Structures: Sets, Functions, Sequences, and Sums	
3	Basic Structures: Sets, Functions, Sequences, and Sums (con't)	
4	The Fundamentals: Algorithms, the Integers, and Matrices	
5	The Fundamentals: Algorithms, the Integers, and Matrices (con't)	
6	Induction and Recursion	
7	Counting	
8	Mid Term Exam	
9	Discrete probability	
10	Advanced Counting Techniques	
11	Relations	
12	Relations (con't)	
13	Graphs (con't)	
14	Graphs (con't)	
15	Graphs (con't)	
16	Final Exam	

6. COURSE REQUIREMENTS:

- Assignments: Exercises are in corresponding sections of the required book.

- Projects or Team Class Projects: Projects are given by the instructor after finishing a chapter.

- Class attendance/participation: Evaluated by checking in the Attendance Book

- Final Examination: Students are directly tested and automatically marked on computers.

7. ACADEMIC INTEGRITY POLICIES:

- Student may not use Vietnamese languague in class, or will be reduced 2% final marks

- Be punctual to come and leave the class.

- Maximum cancellation time per semester is 6 hours per class.

8. COMMENTS AND NOTES:

- Preparation for Class: It is expected that the students read related chapter in textbook and lecture noted before each class. This will help to capture the topics presented and discussed during class hours.

- Use of Class Time: Class time will be used mainly for lectures and discussions. A small part of class hours is used for testing. House works will be discussed on individual basis.

- Class Attendance: Due to the broad range of topics discussed throughout the course and their inter-relationship, it is requested that the students should attend the class regularly.

- Assignment Requirement: Assignments of each session must be submited by email before the next session begins.

Instructor's Signature