CSCI 26 –Discrete Mathematics for Computer Science

SYLLABUS

Schedule No: 54050

Class Hours	Room No
Tuesday 8:00 a.m. - 8:50 a.m.	FEM 4E
Thursday 8:00 a.m. - 9:50 a.m.	FEM 12

Instructor: Sharon Owens
Phone: 638-3641 ex-3497
Office Hours: Tuesday, Wednesday, and Friday: 10:00 a.m. - 10:50 a.m., or by appointment
E-Mail Address: Sharon.owens@do1.scccd.cc.ca.us

Course Objectives:

Upon successful completion of the course, students will be able to understand the basic concepts of discrete mathematics, sets and logics; relations and functions; prove principle using mathematical induction method; fundamentals of graph theory.

Course Outline:

- **Logic and Proofs**: Propositions; Conditional Propositions and Logical Equivalence; Quantifiers; Proofs; Mathematical Induction.
- **The Language of Mathematics**: Sets; Number systems; Relations; Functions.
- **Algorithms**: Notations for Algorithms; The Euclidean Algorithm; Recursive Algorithm.
- **Counting Methods and the Pigeonhole Principle**: Basic Principles; Permutations and Combinations; Algorithms for Generating Permutations and Combinations; The Pigeonhole Principle.
- **Recurrence Relations**:
- **Graph Theory: Paths and Cycles**: Hamilton Cycles and the Traveling Salesperson Problem; Representations of Graphs; Isomorphisms of Graphs; Planar Graphs.
- **Trees**: Terminology and Characterizations of Trees; Spanning Trees; Binary Trees; Tree Traversals; Decision Trees and the Minimum Time for Sorting.
- **Boolean Algebras and Combinatorial Circuits**: Combinatorial Circuits; Properties of Combinatorial Circuits; Boolean Algebras.

Course Prerequisite:

Programming Concepts and Methodology II (CSCI 41).

Textbook:

Discrete Mathematics, 4th Edition. By Richard Johnsonbaugh. Prentice Hall

Attendance:

Attendance will be taken in each class. Tardiness will be count as absence. Students may be dropped from the class if they fail to attend the first class session of the semester. During the semester up to final drop date, any student who missed more than 6 hours classes may be dropped. College policies on attendance may be found in the Reedley College Class Schedule.

Homework and assignment:

Assignments will be made on a regular basis. Homework is assigned for each of the sections presented in the course. The homework varies in length depending the material covered. Assignments provide students with the necessary practice to acquire the skills taught in the course and provide a means of monitoring student progress. Consistent and timely completion of written assignments is absolutely essential to the successful completion of the course. Homework should be done on 8.5" by 11" lined paper, stapled on upper left hand corner, with your name and chapter/section number on the upper right hand corner.

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Quizzes:

There will be unannounced short quizzes (i.e. 5 - 10 minutes) in the class. Each quiz worth **ten points**. There are **no** makeup quizzes, so attendance is very important.

Tests:

There are chapter tests at end of each chapter which worth **100** points each. Early tests can be arranged with a very good reason. A more difficult late test can only be arranged if you have an excuse verified by an impartial party (i.e. a doctor or a court clerk).

Grading:

50% of final grade points are from the average test score.
40% of final grade points are from the average of homework.
10% of final grade points are from the average of quizzes.
Final grade is assigned using following scale:

90-100	points	A
80- 89	points	B
70- 79	points	C
60- 69	points	D
< 60	points	F

Important Dates:

Class begin:	Monday	01/10/2000
Drop deadline date:	Friday	03/10/2000
No classes:	1/17/2000 (M), 2/18/2000 (F), 2/21/2000 (M), 4/17- 4/22 (Spring Break)	
Final Examine:	**Thursday 05/18/2000**	**8:00 a.m. - 10:00 a.m.**