

SCM 457/657 Quantitative Methods for Logistics Management

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Textbooks or Learning Resources: **None assigned** Any MGRS 352 Textbook; Internet FAQ for neural networks, fuzzy systems, and genetic algorithms, any books on Visual Basic for Applications for Excel

COURSE OBJECTIVES: To introduce the student to the advanced concepts, methods and software used to solve problems encountered by logistics managers. Problem solving, modeling and independent study will be emphasized.

TENTATIVE SCHEDULE

<u>Week</u>	<u>Topic</u>
Aug 24	Introduction, Decision Support Models, Analytical Tools, VBA – procedures, functions, and variables, Project 1
Aug 31	VBA, Macros and Excel – Input/Output, Decisions, Loops, Exercise 1
Sept 7	VBA continued, Exercise 1 discussion, Exercise 2
Sept 14	VBA and databases, Exercise 2 discussion, Exercise 3
Sept 21	Developing a decision support system with Excel and VBA, Exercise 3 discussion
Sept 28	Data mining, OLAP, Excel Pivot Tables, Exercise 5 discussion
Oct 5	Web Languages – HTML, XML, JavaScript, Java, Exercise 4
Oct 12	Gathering Data with the Web – CGI, ASP, Perl, Cold Fusion, PHP, Exercise 4 discussion, Exercise 5
Oct 19	Questionnaire Design and Data Mining, Exercise 6
Oct 26	Neural Networks, Exercise 6 discussion, Exercise 7
Nov 2	Neural Networks, Exercise 7 discussion, Project 1 due
Nov 9	Fuzzy Logic, Project 2
Nov 16	Simulation
Nov 23	Developing a simulation model with Simul8, Project 2 due, Project 3
Nov 30	Genetic Algorithms, Evolutionary Algorithms, Chaos, and Complexity

Dec 7 TEST

Dec 14 Final Exam, Project 3 due

This schedule is subject to change.

OFFICE HOURS: Tues. 11:15 P.M. to 1:00 P.M. , 6:15 P.M. to 7:00 P.M..

All other times by appointment. To schedule an appointment send an e-mail message. When sending an e-mail message be sure to include your name, when , where, and why you wish to meet. All electronic messages will receive a reply. All calls to my home will be screened and ignored.

GRADING POLICY: Project 1, Test - 50%

Project 2 - 10%

Project 3 - 10%

Exercises – 5%

Exam - 25%

Grading for projects, exams and contributions will conform to the +/- grading system approved by the Board of Regents. Any scores will be translated to letter grades according to the following scale. **All projects are to be done individually. Any form of collaboration will be considered cheating and will result in a grade of F for all involved. Any project that is turned in after the due date will be devalued one full letter grade per class meetings after the due date. A grade of I may be assigned for the course if any project is not completed with a passing grade before the end of the course. One semester will be allowed to remove an I. Every time that you are called on to contribute to an exercise discussion and you are not prepared or not present without being excused will cause the Exercise grade to be lowered by one grade.**

<u>Score range</u>	<u>Equivalent Letter Grade</u>	<u>Grade Point Value</u>
94 - 100	A	4.0
90 - 93	A -	3.7
87 - 89	B +	3.3
83 - 86	B	3.0
80 - 82	B -	2.7
77 - 79	C +	2.3
73 - 76	C	2.0
70 - 72	C -	1.7
67 - 69	D +	1.3
63 - 66	D	1.0
55 - 62	D -	0.7
00 - 54	F	-8.0

The final grade for the course will be determined by weighted averaging the grade point value of projects and exam scores.

Project and Exercise Instructions: All project assignments are individual assignments and not group projects. However, consultation with the instructor, advice from users on Internet bulletin boards or class discussion is permitted. Any other form of help or detailed discussion of a

project with any individual(s) will be considered a form of cheating and will result in a grade penalty. **Students taking the course for graduate credit must do the A project for all projects. Students may work with others on exercises.**