BA 3843 -- Winter/Spring, 2008
Decision Support Systems

Dr. Vicki L. Sauter — Telephone: 516-6281
Office: 226 CCB — FAX: 516-6827
Secretary: Mrs. Karen Walsh, 211 CCB — Secretary's Telephone Number: 516-6267
Electronic Address: Vicki.Sauter@umsl.edu — Home Page: http://www.umsl.edu/~sauter/
Mailbox: 210 CCB (generally open 8 am - 10 pm, Monday - Thursday; 8 am - 5:20 pm on Friday)

Office Hours: MW 1:30 - 2:00 pm
M 4:30 - 5:00 pm
or by SCHEDULED appointment

General Information

Acceptable Use Policy:	http://www.umsl.edu/help/userrights.html
Computing Information:	http://www.umsl.edu/technology/
Computer Lab Information:	http://www.umsl.edu/technology/instructionalcomputing/
Advanced MIS Lab Information:	http://www.umsl.edu/business/mis/MISlab.html
Library Information:	http://www.umsl.edu/services/library/library.html
UMSL Home Page	http://www.umsl.edu/
MIS Home Page	http://www.umsl.edu/business/mis

Text: V.L. Sauter, *Decision Support Systems: An Applied Managerial Approach*, New York: John Wiley & Sons, 1997.

Online Materials

Class Web Site	http://www.umsl.edu/~sauter/DSS/3843start.html
DSS Current Page	http://www.umsl.edu/~sauter/DSS/current.html
Readings	http://www.umsl.edu/~sauter/DSS/book/links.html
Web Help	http://www.umsl.edu/~sauter/help/index.html
Student Information Form	http://www.umsl.edu/~sauter/DSS/student_info.html
Group Evaluation Form	http://www.umsl.edu/~sauter/DSS/group_eval.html

Prerequisites: BA 3300 -- Business Statistics

Semester Goals: Decision Support Systems are tools decision makers use to gain a better understanding of their business. They are the "front-end" technology that is generally associated with a data warehouse, and which provides the modeling and analysis capabilities to help decision makers see avenues through which to gain competitive advantage. As the name suggests, a DSS focuses how models, data, and other analytical tools decision makers might use in the reasoned consideration of the options available to them. In the current environment in most businesses, DSS are being implemented as intranets and so require web-based technologies.

Assignments

Individual Assignments:

1. Blogs:

One primary difference between a Decision Support System and other systems is the inclusion of models – from descriptive statistical models to financial models to optimization models, and even artificial intelligence. So, we really need to focus on models – what they are and how they can be used to support decision making, as well as what happens when they are not present in decision making. Hence, to ensure that we all are regularly thinking about the modeling in terms of DSS, we will maintain "blogs" (a sort of a journal of news articles) on models this semester. Since we are in the election cycle, our blogs will focus on the models used in political modeling.

2. Technology Assignments:

Since the programming in advanced html and in javascript is new to most students in the class, we will have some homework assignments that ensure no one falls too far behind. These generally will be short assignments that demonstrate tools and functionality we discuss in class. Assignments will be intermittent, and will be announced in class. To start this effort, you must demonstrate that you can create a web page that has at least the following characteristics:

- Your page must have a theme that is displayed in the background, icons and layout of the page.
- You must include at least two images or graphics on your home page. You may either copy the image to your public_html directory, or you may create a direct link to the image's original site.
- You must include two or more buttons on the page.
- You must also include one or more tables in the design of your page.
- Your home page must have a title (what the browser displays at the top of the window).
- The page must have a link to the class page.
- The page should include a link to any other web pages you maintain.
- The body of the personal home page should have your name and a hot-linked e-mail address.
- Make use of the available headings to give a professional appearance to your page.
- You are free to add more and make your page more interesting and "cool."

Post the webpage on the internet and send the url to Professor Sauter. These preliminary pages are due by **February 6.**

3. "Networking" Activities:

Learning to network, and learning to learn about new topics is an important part of any IS Professional's life. Therefore, you are going to practice that activity this semester by attending at least three external events. These might include the IS Mentoring Program, the IS Programming Club, the Career Services Etiquette Banquet, the Executive Leadership Institute's Lunch Series, ITS' High Performance Computing Day, Student Night Seminars sponsored by the Institute of Internal Auditors and the Information Systems Audit and Control Associations, the local Web Developers Chapter, Saint Louis Visual Basic Users Group, the XPSTL Group, the Wireless SIG or any other IS-related seminar by a campus based or local professional organization (if it is not in this list, be sure to get permission before you go). The base grade will be the percentage of the expected events (3) you attend. So, if you have attended one event, this grade is 33.3, two events, the grade is 66.7, etc. You may get extra credit for up to three additional events. Any you attend above three will count as extra credit. To get credit for attendance, you must complete the required form and have it signed by some official of the organization or the event.

Group Assignments: For the Modeling Assignment and the Project, students will work in groups of 3-5, which will be created randomly by the instructor. However, she will take into account students' preferences for group members. No later than **February 4**, each individual must email the instructor with a list of names of individuals with whom he or she *does* want to work and a list of names of individuals with whom he or she would *prefer not* to work. Groups should be announced no later than **February 6**.

Modeling Assignment: Each group will examine some decision that is current in the local business or political community, and identify models that are being used to examine the question as well as those models which should be used to examine the question.

- What kind of decision or problem is being considered?
- Who are the decision makers?
- What options are they considering?
- What kinds of information are necessary to determine the benefits of the options under consideration?
- What kinds of models are necessary to examine that information?
- What kinds of problems in data collection and/or analysis are likely?
- How would you address those needs in a DSS?

The presentations will all occur on February 27, and will be scheduled by lottery. Students must also turn

in a URL for a discussion on February 27. Web pages should be informative and attractive, and include appropriate links.

Systems Development: Each student will get "hands-on" experience with the development of a decision support system/expert system. This semester, we will develop decision support systems to facilitate informed voting. The project teams will decide on the specific functions built into the system. However, theoretically, the system would be available to help both novice and experienced voters with a wide range of issue preferences.

The system must be able to accommodate a variety of decision making styles in these choices. These systems must include some "intelligence." That is, the system must be able to make some decisions on its own as a function of its "knowledge" of the user and/or its "knowledge" about the customer's interests. Students may (and are encouraged) to fabricate (or invent) any other data they need for the system; they are not expected to collect it. Groups are not required to use the provided information and may re-formulate information into other databases.

Systems and Final Reports: The groups will provide a disk or URL with the working system that they write as well as a report justifying their system. This paper must identify and justify the system characteristics. It must include a discussion of what the system does, and why your group elected to implement the system in the fashion chosen. This includes:

1. a description of the decision process
2. a justification for how the process would be improved with this system
3. the goals/objectives of the DSS
4. a discussion of how those goals/objectives meet the needs of the users
5. a discussion of how the DSS might be integrated into normal work processes
6. an explanation of what types of information will the system require, and how will that information be maintained
7. an explanation of what type(s) of modeling the DSS will use

Students will probably want to include a section, "what we wanted to do, but didn't know how or didn't get to." Papers must be typed (or word-processed), double-spaced with one-inch margins on all sides, and with page numbers. The maximum length for the paper is 10 pages. The paper and system will be due on **May 2** *(note this is the first day of final exams)***.**

While the entire group generally will receive the same grade, I reserve the right to assign grades differentially to reflect substantially different levels of work being completed by members of the group. At the end of the semester, group members must evaluate the amount of work done by others in the group using the Group Member Evaluation Form.

Exams:

There will be a midterm and a final exam.

Midterm exam: ***March 17***
Final exam: ***Monday, May 5 5:30 - 7:30 p.m.***

Make-up exams will be provided only if Dr. Sauter has been notified prior to the exam and if you have an acceptable reason for missing the exam. Under all other circumstances, a grade of zero (0) will be assigned.

Grading Policy:

The following proportions will be used for grading.

Networking Activities	5%
Technology Assignments	10%
Blog Assignments	10%
Decision Making Asgt	10%
DSS	25%
Midterm	20%
Final Exam	20%

Approximate letter grades will be assigned when exams and projects are returned. Students should remember, however, that the term average is a weighted average of the numerical grades, not an average of the approximate letter grades.

DROP POLICY: For the purposes of this policy, the "effective drop date" is the date which I am informed of the drop or the actual date of the drop, which ever is ***later***. Students can and may inform me by leaving me a note in my mailbox, leaving me a message (on voice mail or email) or by speaking to me in person or over the telephone.

A student may drop this class until **March 19** with a passing grade. (Note the University policy states that you may drop until February 9 without receiving a grade; this policy is simply an extension of the University policy.) Between **March 20 and April 5**, a student will receive either a passing grade (excused) or a failing grade (F) depending upon his or her performance (current grade) in the course. A student may withdraw after **April 5***only with and solely with* the approval of the dean of his or her division. If you want to withdraw after this date, go directly to your dean; do not ask for my signature -- my signature is not needed and I will not provide it. *Under **no** circumstance* may a student drop this class after **May 3, 2008.**

Academic Honesty: According to the University Standard of Conduct, Section 6.0101,

> *The Board of Curators recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work.*
>
> *Students have a special obligation to adhere to such standards.*

For the purposes of this class, cheating will include: plagiarism (using the writings of another without proper citation), copying of another (either current or past student's work), working with another on individually assigned work or exams, unauthorized marking on a graded paper or exam, or in any other way presenting as one's own work that which is not entirely one's own work. Further definitions and clarifications can be found in the University guidelines.

Any student who is caught cheating on any assignment or exam will receive a grade of zero (0) for that assignment or exam. Further, a recommendation will be made to the appropriate university officials that additional disciplinary action be taken.

CLASSROOM COURTESY: I realize that I should not have to tell you these things, and I apologize to those of you for whom this is unnecessary, but in the past few years I have noticed a significant increase in bad classroom manners and inconsiderate behavior. So please adhere to the following rules. Repeated violations of these will be grounds for reducing your course grade, and you will be reported to the Office of Homeland Security as a threat to national learning.

- Turn off your phones and pagers before entering class; do not talk on the phone in class.
- Come to class on time. In those rare cases where being late is unavoidable, please enter the classroom quietly and take a seat as close to the door as possible. If the class period is more than half done, don't bother to come to the class. Once in class, do not get up and leave unless it is truly an emergency.
- Open beverage cans and bottles and snack bags before class starts. If you eat during class, please do so quietly.
- Keep talking with your neighbor to a minimum. If you are confused about something in class, please ask me - that is my job and I'm happy to answer questions.
- When you use the laptop computers, do so quietly. Recently the typing by students has gotten so loud that it is very distracting both to me and the members of the class.
- Bring a handkerchief or tissue to class to blow your nose in case you get the sniffles.

■ I am not going to supervise your use of the computer in class. However, you are responsible for all the material covered in class -- if you do not pay attention and miss important material, I am not going to go over it again.

DISABILITIES: Please inform me of any physical disabilities that could affect your learning. I am happy to make reasonable accommodations to improve the learning environment, but I need to know about them in order to help. If, during the semester, you are experiencing a serious emotional trauma, please inform me of this before taking an exam; once an exam is taken the grade must be counted and no "retake" is possible.

Rights and Responsibilities of Computer Users

As part of its educational and research missions, the University of Missouri-St. Louis strives to provide quality computing facilities. These include large and small systems, communication networks, and personal computers, as well as associated software, files and data. Although computers affect how individuals communicate and interact with each other, computers do not change underlying societal values and established individual rights with respect to personal privacy and ownership of property. Computing facilities are recognized as community resources. Each computer user, therefore, is expected to act responsibly so as not to violate the rights of others. Access to computing resources is contingent upon prudent and responsible use. Inappropriate use of computing services and facilities will not be tolerated and may result in loss of computing privileges. In addition, disciplinary and/or legal action will be pursued for violation of these codes and statutes through appropriate University procedures.

SCHEDULE

Week	***Topics***	***Chapter***
1	Introduction and Definitions	1
2-3	Decision Making	2
4-6	Models and Model Management Components	4, 4S
7-8	Programming and Decision Support Systems	9
9-10	User Interface Components	5
11-12	Data Components Data Warehousing Data Mining	3
13-14	International Issues in Decision Making	7

* Approximate allocation of time to topics. See web page for more specific informatin.