COLLEGE *of* BUSINESS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

B ADM 453: Decision Support Systems

Spring 2006

Administrative Overview

MW 11-1220, 370 Armory Hall **(A)** and 21 DKH **(D)** - see schedule for details

Instructor: Dr. Judith Gebauer (gebauer@uiuc.edu)
Office: 112 DKH - office hours by appointment
TA: Katherine Zhao (kzhao@uiuc.edu)

Course Overview and Prerequisites

This course introduces students to the technologies collectively called management support systems, and includes a brief overview of systems analysis and design. Through a mix of lectures, hands-on exercises, and case study discussions, we will address the most current topics affecting how managers use, as well as develop computerized support for management decisions. Specific topics include model-based decision support systems, business intelligence, data warehouses, and artificial intelligence systems (e.g. expert systems).

Classes are held in 370 Amory Hall (marked with **(A)** in the course schedule) and in 21 David Kinley Hall (computer lab, marked with **(D)** in the course schedule). Students are expected to participate actively by contributing to in-class discussions, by participating in in-class exercises, by preparing homework assignments, and by preparing a 40-minute presentation given at the end of the semester. Examinations include four quizzes, one midterm, and a final

Instructor

Judith Gebauer joined the University of Illinois at Urbana-Champaign as an Assistant Professor in the Fall of 2001. Her research interests include the management of emerging technologies and its impact on organizations, more specifically the economics of information system flexibility and task-technology fit of mobile information systems. At her previous appointment as a research fellow at the Haas School of Business at the University of California, Berkeley, Dr. Gebauer coordinated a research project on electronic procurement and inter-organizational electronic commerce. The project mapped the state of the art of Internet-based procurement systems and addressed their use and impacts on purchasing processes and supplier relations. Dr. Gebauer holds a Ph.D. (1996) and a master degree in Economics from the University at Freiburg, Germany (1991).

Grading

This course requires a considerable amount of work from the students, inside and outside of the classroom. Research shows that learning is most effectively done if students become actively involved with the learning material. In a field that is as dynamic and applied as information systems, lectures can only provide an overview and introduction to the issues. Activity from the students will include hands-on exercises, independent research, and interaction between the course participants. Students are encouraged to share their experiences and knowledge about decision situations and support systems obtained from prior jobs, internships or from simply using the Web.

Term Project (25%): Throughout the semester, students work in groups of 2 or three students to prepare a 40-minute presentation to be given at the end of the semester. For more information see the separate document on Term Projects.

Quizzes, Midterm, and Final Examination (50%): Four unannounced quizzes (4% each, 10% max), one midterm (15%) and a final exam (25%), for a total score of 35. The final exam is cumulative, which means that although the majority of the questions relates to the latter part of the course the exam may also include some questions about topics that were discussed early on in the course and that may have already been covered in the midterm or quizzes. Quiz and exam questions will include a mixture of multiple choice, true-false, short answer, and essay questions. Sample questions will be provided throughout the semester.

Class Participation (25%): Class participation is a significant part of the overall grade. To ensure the quality of in-class discussions, students are strongly encouraged to prepare by working through the assigned reading material before class. In general, contributions inside and outside of the classroom will be honored, including occasional homework assignments. I will be applying the following guidelines:

1. Students who are *present* without actively participating earn *half* of the total participation points. I will keep roll and deduct points for each class that is missed, regardless of the reason.
2. *Active participation* in class counts for the remaining *half* of the total participation points and includes such things as responding to questions asked during lecture, commenting on what is said in class, submitting two-minute papers at the end of class (if asked to do so), etc. *Meaningful* contributions include (1) applying conceptual material from the readings or the lecture, (2) applying other ("outside") material that has not been provided in the readings or lecture to the discussion, (3) integrating comments from previous students, (4) reaching back to something said previously in the discussion that is pertinent to the discussion at the moment, (5) taking issue with a classmate's analysis, (6) pulling together material from several places in the case and readings, (7) drawing parallels from previous cases and readings, (8) tying in briefly an experience you have had that is relevant to the discussion, or (9) by generally demonstrating that you have carefully read the case and readings and given them careful thought.
3. There are several possibilities for students who have to miss class for whatever reason or who are shy to speak in class to earn *make up participation points*. These possibilities include:
    1. Submission of *homework* assignments (given out frequently throughout the semester, homework has to be submitted by email or on paper before the beginning of class on the due date)
    2. *Participation outside the classroom*, such as posting comments, related articles and other material to the course site on Compass, as well as providing constructive comments on how to improve the course.
    3. Presentation of *current events and news* that relate to topics discussed in class (in addition to the short group presentations). Please submit a brief written summary of the news, including how they relate to the course before the session and be prepared to present both briefly in class.
    4. *Bonus presentations* (see below)

Bonus presentations (3%): Throughout the semester, students also have the opportunity to earn bonus points by giving a *short presentations* in class (10-20 min, 3% to be added on top of all other grades, one presentation per student, individual presentations only unless instructor has given explicit permission for a group presentation). For topics, scheduling, and further details, please coordinate with the instructor, preferably at the beginning of the semester.

To summarize, grades will be determined as follows:

1. Class participation, including homework assignments: 25%
2. Term project report and presentation: 25%
3. Four quizzes (4% each, 10% max); one midterm (15%) and one final exam (25%): 50%
4. Bonus presentation (optional): 3%

The grading scheme will include +/- grading for letter grades A through D. In the past, I have assigned the grades as follows:

1. 95% of total points or better = A
2. 90% or better = A-
3. 86.6% or better = B+
4. 83.3% or better = B
5. 80% or better = B-
6. 77.6% or better = C+
7. and so on...

Grades are NOT curved and will be posted on Compass.

General Course Policies

1. **On-time delivery:** All papers and assignments are to be submitted no later than at the beginning of the class on the due date indicated in the schedule. Assignments should preferably be submitted by email to gebauer@uiuc.edu prior to class, but can also be handed in on paper at the beginning of class. Managers contend that the greatest disservice professors do to students is to accept late assignments. Lateness is unfair to other students who complete all assignments and course-related behaviors on time, is unfair to the instructor who must rearrange work schedules, and most importantly represents a pattern of behavior that is not rewarded in the real world. Therefore, except in extraordinary circumstances, late papers will not be accepted and make-up assignments are not available. When preparing your papers and assignments, please, allow time for unexpected delays and avoid last-minute scheduling.
2. **Backup copies:** It is recommended that you make copies (electronic or on paper) of all assignments before submitting them. It protects you and allows you to continue working while the assignment is being graded.
3. **Format of assignments:** All assignments should be typed, double-spaced, with one-inch margins all around and a 12-point print font. All assignments submitted must be neat and organized. This includes information about the assignment (title, name of student, course information, date) as well as a list of the references used. Incomplete, sloppy, disorganized, or otherwise "unprofessional" work can be returned ungraded with a score of zero.
4. **Academic misconduct:** Academic misconduct of any form will not be tolerated. Actions including, but not limited to, plagiarism, copying another student's work, copying and/or submitting work done by students in prior semesters, and cheating on exams will be punished to the full extent permitted by university policies and procedures. Regarding plagiarism, please note that any time you put your name on

a piece of work for this course, you are asserting that it is your own work, except when otherwise indicated and permitted. To avoid plagiarism, the source of any information that you use must be reported using an appropriate citation format. Direct quotations must be indicated with quotation marks and page references.

5. **Proper conduct** is expected in class. This includes being on time and being alert during the class session (even if not participating verbally). It also includes showing respect to the instructor as well as to fellow class members. I reserve the right to deduct points if these criteria of good conduct are not met. Mutual respect and honesty are values that will make this course rewarding as well as fun.

6. **Use of computers and the Internet in the classroom and the lab**: the use of a computer in the classroom and in the lab is considered to be a privilege, not a given right. While students are certainly encouraged to bring their computers to the classroom to take notes, the use of non-class related applications, such as games, email, chat, usenet-news or web-browsing is not allowed in the classroom or in the lab during lecture, unless explicitly permitted by the instructor. Failure to comply with this policy will result in a reduced grade of class participation and may result in a loss of the privilege to use a computer in class at all.

Text Book, Readings, and Online Resources

- Significant parts of the **lectures and exercises** in this course are based on the following two textbooks (access to the books is strongly recommended, but it is not strictly required to purchase the books):

  1. Efraim Turban, Jay E. Aronson, Ting-Peng Liang: **Decision Support Systems and Intelligent Systems**, 7th edition, Prentice Hall, 2004. The book is available from all three campus bookstores and from Amazon. We will also use the companion website of this textbook.

    There are several alternatives to purchasing the (expensive) hardcopy version of this book. First, copies of this books are requested for reserve in the Undergraduate Library. Second, you can get a copy of the 6th edition which has most material included in the 7th edition. A companion website is available. Third, you can get a subscription to an online version of this book through SafariX.

    2. *Systems Analysis and Design*, by Dennis, Wixom and Roth, Third Edition, John Wiley & Sons, Inc., 2005. [ISBN: 0-471-72257-X]

    This textbook is a rather popular textbook and is available both on campus and online.

- For **hands-on exercises**, we will use the following two books:
  - Wayne L. Winston: **Microsoft Excel - Data Analysis and Business Modeling**, Microsoft Press, 2004 (consider purchasing this book, you might want to keep it...)
  - Michelle M. Hanna, Ravindra K. Ahuja, Wayne L. Winston: **Developing Spreadsheet-Based Decision Support Systems Using Excel and VBA for Excel**, forthcoming (available electronically from the Course Documents section)
- For up-to-date information on what is happening in the DSS-world and for real-life cases, we will use **Dan Power's DSSResources**-Website at www.dssresources.com - part of the website can be accessed by subscription only, details are forthcoming.
- Throughout the semester, **handouts and additional readings** will be handed out in class and made available in electronic form on Compass.

- **Additional recommended books on Decision Support Systems:**

- Jill Dyche: The CRM Handbook, Addison-Wesley, 2002
- Jill Dyche: e-Data, Addison-Wesley, 2000
- Efrem G. Mallach: Decision support and Data Warehouse Systems, Mc Graw-Hill 2000
- George M. Marakas: Decision Support Systems - In the 21st Century, Prentice Hall, 2003
- George M. Marakas: Modern Data Warehousing, Mining, and Visualization - Core Concepts, Prentice Hall, 2003
- Barbara C. McNurlin, Ralph H. Sprague, Jr.: Information Systems Management in Practice, 5th ed., Prentice Hall, 2001
- Manuel Mora, Guiseppi Forgionne, Jatinder N.D. Gupta: Decision Making Support Systems - Achievements and Challenges for the New Decade, Idea Group Publishing, 2003
- Daniel J. Power: Decision Support Systems - Concepts and Resources for Managers, Quorum Books, 2002
- Vicky Sauter: Decision Support Systems - An Applied Managerial Approach, Wiley, 1997
- Mark Silver: Systems That Support Decision Makers, Wiley, 1991
- Ralph H. Sprague, Jr., Hugh J. Watson: Decision Support for Management, Prentice Hall, 1995
- Hugh J. Watson, George Houdeshel, Rex Kelly Rainer, Jr.: Building Executive Information Systems and other Decision Support Applications, Wiley, 1997

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