

**NEW JERSEY INSTITUTE OF TECHNOLOGY**  
*School of Management*  
Decision Support Systems MIS-648  
Fall 2004

August 30, 2004 to December 6, 2004 6:00Pm to 9:00PM

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Textbook: Decision Support Systems and Intelligent Systems, Turban, E. and Aronson, J., and Liang, T.P., Prentice Hall, Upper Saddle River, NJ, 2005, Seventh edition, ISBN-0-13-0046106-7.

**Description:** Decision Support Systems (DSS) represents a point of view on the role of the computer in the decision-making process. Decision support implies the use of computers to do: assist managers in their decision processes; support rather, than replace managerial judgment; and improve effectiveness of decision making rather than just its efficiency. The course covers the tools, techniques, and theory of DSS and how they can be used to improve the quality of management decisions.

**Objectives:**

- To develop skills to critically analyze business problems
- To develop analytical skills to solve business problems
- To develop ability to make effective presentations
- To develop the ability to effectively and convincingly communicate your position in a rational manner
- To develop management and leadership skills
- To develop a sense of ethical and professional behavior
- To develop familiarity and competence with business software packages
- To understand the varied use of technology within the business context
- To understand how the organization's structure, strategy, and practices change with technology

**Methods:** Lectures, discussions, written assignments (review articles), case studies and projects, and demonstrations.

**Evaluation:** Grades will be primarily based on:

- Team article review and presentation (1)-20% **Due 10/4/04.**
- Team case study (1)- 20% **Due Date: 11/1/04**
- Team DSS Technology report presentation (1) - 20% **Due 11/15/04.**
- Team Project (1) - 20% Report and Presentation Project due: **12/6/04.**
- **Exam Individual (1) - 20%** Multiple choice and short answer based on text, readings and lectures. **Exam 11/29/04**
- Complete Team evaluations: After team assignments (Forms are in the conference)
- Evaluations after each presentation (Forms are in the conference)

## **Grading Policy**

- A 93 and up
- B+ 87 to 92
- B 80 to 86
- C+ 75 to 79
- C 65 to 74
- F less than 65

## ***Chapter /Topic***

### **Decision Making and Computer Support**

Chapter 1	Management Support Systems
Chapter 2	Decision Making Systems, Modeling and Support

### **Decision Support Systems**

Chapter 3	Decision Support Systems: An overview Sprague, R. H. "A Framework for the Development of Decision Support Systems" <i>MIS Quarterly</i> (4:4) 1980, pp. 1-26.
Chapter 4	Modeling and Analysis
Chapter 5	BI, Data Warehousing, Data Acquisition, Analysis, etc.
Chapter 6	Decision Support Systems Development

### **Collaboration, Communication, Enterprise Decision Support Systems, and Knowledge Management**

Chapter 7	Collaborative Computing Technologies
Chapter 8	Enterprise Information Systems
Chapter 9	Knowledge Management

### **Implementation, Integration and Impacts**

Chapter 14	Electronic Commerce
Chapter 15	Integration, Impacts and the Future

Extras: Group Decision Support Tools; Usability.ppt

## **Team Article Review (To be assigned by the instructor)**

A 3 to 5 page review and PowerPoint presentation (15 to 20 slides; maximum of 15 minutes) is required covering the important points of the paper. Include the following:

- Summary of the paper
- Reason the paper was written
- Contribution of the paper
- Integrate course concepts into your presentation
- Recommendations and conclusions
- Lessons learned.

### **Team Articles:**

Davenport, T.H., Harris, J.G., DeLong, D.W., and Jacobson, A.L. "Data to knowledge to results: building an analytical capability," *California Management Review*, (43:2), 2001, pp 117-138.

Martinsons, M., Davison, R., and Tse, D. "The balanced scored: a foundation for the strategic management of information systems," *Decision Support Systems*, (25), 1999, pp. 71-88.

Nemati, H.R., Steiger, D.M., Iyer, L., and Herschel, R.T., Knowledge warehouse: an architectural integration of knowledge management, decision support, artificial intelligence and data warehousing, *Decision Support Systems*, 33, (2002), 143-161.

Bolloju, N., Khalifa, M., and Turban, E. "Integrating knowledge management into enterprise environments for the next generation decision support," *Decision Support Systems*, in-press.

Shim, J.P., Warkentin, M., Courtney, J.F., Power, D.J., Sharda, R., and Carlsson, C. "Past, present, and future of decision support technology," *Decision Support Systems*, in-press.

## **Team DSS Technology Presentation (report: 6- 10 pages, presentation: 15--20 slides)**

- Pick a DSS technology that is interesting and relevant to your team
- Present why it is important and relevance to DSS
- Present the benefits
- Present the problems that it might solve
- Present a justification for the purchase and installation of the technology within a company (include an example)
- Recommendations and conclusions
- Integrate the concepts from the course and articles into your presentation (I do not want copies of my notes)

## **Decision Support Systems MIS-648 Project Guidelines (Team or Individual)**

Pick or find a problem that can be solved by the development and implementation of Decision Support Systems (DSS). This can be an internal or external or both type of problem.

1. Define the problem.
2. Develop the user requirements. Who are the users?
3. Develop an implementation strategy for the system.
4. Determine the functionality and usability of the system. Include the usability requirements.
5. Determine the systems benefits and the measurement scheme.
6. Implement the system using software of your choice (i.e. Data Base- Access, Spreadsheet- Excel)
7. Present the system- Demonstration of systems and presentation of steps 1-6, use overheads and Presentation software (i.e. PowerPoint).

Graphs, charts, diagrams, tables, flow charts, pictures and drawings are welcome. This can be a real system or a potential system. You should "interview" potential "users" (role playing is permitted). Make sure that you integrate the concepts presented in the lectures, text, and review articles. Length: No more than 20 pages. A one-page proposal is due on 10/18/04.

## **Team Case Sets** (to be assigned by the instructor)

Chapter 1- Case 1.1 pages 34-35.  
Chapter 2- Case 2.1 pages 91-92.  
Chapter 2- Case 2.3 pages 94-98.  
Chapter 3- Case 3.1 pages 140-142.  
Chapter 3- Case 3.2 pages 142-143.  
Chapter 4- Case 4.1 pages 208-210.  
Chapter 5- Case 5.1 page 300.  
Chapter 5- Case 5.2 page 301.  
Chapter 7- Case 7.1 pages 404-405.  
Chapter 7- Case 7.2 pages 406-407.  
Chapter 8- Case 8.1 pages 483-484.  
Chapter 8- Case 8.2 pages 484-485.  
Chapter 8- Case 8.3 page 486.  
Chapter 9- Case 9.1 pages 532-533.  
Chapter 9- Case 9.2 pages 534-535.  
Chapter 14-Case 14.1 pages 798-799.  
Chapter 15-Case 15.1 pages 847-848.

Prepare a report (3-5 pages, max) and power point presentation 10-12 slides.

1. Summary of the case
2. Identify the problem
3. Develop and alternative solution (Think current)
4. Answer the questions at the end of the case (not to be included in the presentation)
5. Integrate the relevant course materials (articles etc.)
6. Recommendations and conclusions
- 7. Lessons learned**