

Master of Management and Professional Program
Joseph L. Rotman School of Management
University of Toronto at Mississauga
MGT 2273 Course Outline Summer 2002

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Office Hours: Tuesday and Thursday 8:00a.m. - 9:00a.m., and 4:00p.m. 6:00p.m. by appointment.
Questions and observations by E-mail are also encouraged!

REQUIRED READINGS: Readings will be distributed via e-mail at least one week prior to the lecture(s) requiring the material. Class notes will be provided for each lecture. Additional readings will be provided via e-mail or distributed in class, should appropriate new material become available.

REFERENCE READINGS: Decision Support Systems and Intelligent Systems, Turban, Efraim, and J. Aronson, 6th edition, Prentice-Hall, 2001, and special handouts distributed via e-mail or in class.

CLASS PREPARATION: Students are expected to come to class prepared. Each week, there will be assigned reading material that the students will be required to discuss knowledgeably in the following lecture. Participation in these discussions will be reflected in the final grade.

COURSE OBJECTIVES

At the end of the course the students should be able to:

1. Understand the role and use of Business Intelligence, Knowledge Acquisition and Management, Decision Support Systems (DSS), Group DSS, Executive Support Systems, Expert Systems, Neural Networks, and Intelligent Agents which are rapidly revolutionizing the way professional accountants and managers make decisions, perform daily work, and live;
2. Understand the other emerging technological and telecommunications issues facing management, so that as professional accountants and managers, they will understand what is required to effectively manage information systems and information technology in organizations;
3. Comprehend the significance of applying IT through the analysis, design, and implementation of multi-user systems that will meet the information needs of the organization;
4. Have an appreciation for the use of IT to transform the organization, create new relationships, structures, and sometimes entirely new organizations;
5. Understand the importance and significance of the use of IT and Intelligent Systems as part of a firm's strategy to gain a competitive advantage;
6. and
Begin thinking innovatively about the role of IT not only in their own work, but from the macro view of its strategic importance within the global enterprise of the year 2002 and beyond.

In addition to the academic objectives, students should improve their skills in the following areas:

1. **Critical Thinking:** Students should improve their ability to analyze computer user situations through
 - a) the major project that involves analyzing a company/organization,
 - b) the presentation that involves explaining their analysis of the company/organization to the class in a brief, yet comprehensive, precise, and interesting manner, and
 - c) their analysis of the practical and real problems distributed in class. The mid-term and final also have in-depth case analyses that encourage the students to think critically about real-world situations.
2. **Writing Skills:** Students should improve their writing skills through formal reporting on the major project, and on the mid-term and final.
3. **Oral Presentation Skills:** Students should improve their presentation skills through their oral presentation and class discussions.
4. **Team-Building Skills:** Students should improve their group work skills through the group project and presentation requirements.
5. **Computer Skills:** Students are expected to improve their understanding of DSS, information technology, and to improve their computer skills by using office software, and exploring the World Wide Web for relevant and current information for their project, presentation, and problems from the text and class meetings.

Student Evaluation:	
Research Project and Presentation	40%
Class Participation	15%
Final Examination	45%

On May 8th at 12 noon [lunch included ☺], I will be in Rm. 132 to discuss the project and presentation This discussion should answer all questions concerning the requirements of the research project and presentation. **The topic chosen , and a very brief outline of how you plan to proceed must be submitted on or before July 2nd at 8:30 a.m. for pre-approval.** The topics in MGT 2273 ARE CURRENT AND RELEVANT TO BUSINESS, hence there are many articles related to one or more topics in the course outline, in business papers and magazines. The articles included here form a recent sample of such articles. Students may choose a research topic based on the content of one or more of these articles. **I have copies of the original articles, which I will bring on May 8th and gladly share with any interested group of students.** You will be able to reach me by e-mail any day during May or June should you need to clarify any issues or to seek advice.

MGT 2273 Possible Project Topics

1. Knowledge Management and Customer Relationship Management (CRM)

- a. **Firms capture staff knowledge**, *G&M*, February 22, 2002
[*Firms are using technology to prevent 'Institutional Alzheimer's'*]
- b. **Pivotal seen challenged by Microsoft CRM debut** *G&M*, March 5, 2002
[*Expects MS foray into Customer Relationship Management (CRM) to create consolidation*]
- c. **CAE's new direction – simulators**, *Toronto Star*, February 11, 2002
- d. **Supercomputer to forecast weather** *G&M*, February 2002
- e. **Marketing's new breed blends business, IT** *G&M*, March 22, 2002
[*Spike in demand for this mix of skills owes much to CRM systems*]
- f. **The Giants: Canada's historic ports are thriving, from Vancouver to Halifax. Record levels of cargo, greater efficiency, and more technology**, *ROB*, Magazine April 2002
[*Business of ports is transformed by technology*]

2. Outsourcing

- a. **P&G may outsource some units**, *G&M*, February 26, 2002
- b. [*P&G might spin off back office*]
- c. **More Law Firms Look to Land Lucrative Outsourcing Work**, *G&M*, March 25, 2002
[*Law firms offer lucrative IT services to companies*]

3. Wireless Technology

- a. **High-speed surfing**, *Herald Tribune*, January 4, 2002
[*Speedcom quietly sets up new service to bring wireless Internet to town*]
- b. **Latest tech marvel brought to you by a surfer dude idea guy**, *USA TODAY*, January 23, 2002
[*Surfer dude is launching Web access to keep users plugged in without plugs*]
- c. **Techs lift mobile stakes**, *G&M*, February 21, 2002
[*MS, Nokia, TI, Intel form separate deals to set smartphone chipset standard*]
- d. **RIM to introduce new Blackberry**, *G&M*, March 4, 2002
[*RIM introduces new Blackberry device & related software services to North America through two U.S. wireless network carriers*]
- e. **RIM co-markets Xerox, Cognos Software**, *G&M*, March 5, 2002
[*RIM co-marketing software from Cognos Inc. & Xerox Corp.*]
- f. **Making the right connections**, *Toronto Star*, March 14, 2002
[*Wireless neophyte finally parts with her old rotary phone*]
- g. **It's showtime for all-in-one mobile devices**, *G&M*, March 14, 2002
[*Gadget makers are tapping into newly upgraded wireless networks*]
- h. **Antenna booster fills in dead zones**, *Toronto Star*, March 14, 2002
- i. **World domination at your fingertips**, *Toronto Star*, March 14, 2002
- j. **Tiny, light notebook has bragging rights**, *Toronto Star*, March 14, 2002
- k. **Generating juice for dead batteries**, *Toronto Star*, March 14, 2002
- l. **Business goes portable, even in the office**, *Toronto Star*, March 14, 2002
- m. **Wireless in front line of German trade show**, *Toronto Star*, March 14, 2002
- n. **Service lets you connect with PC back home**, *Toronto Star*, March 14, 2002
- o. **Keyboard-equipped phones to the rescue**, *Toronto Star*, March 14, 2002
- p. **Think small: Radios are the size of earplugs**, *Toronto Star*, March 14, 2002
- q. **New cellphone allows text, voice mail and Vivaldi** *Toronto Star*, March 14, 2002
- r. **You've got to hand it to VoiceNet**, *Toronto Star*, March 14, 2002
- s. **Smart phones strut stuff at tech expo**, *G&M*, March 14, 2002
[*A new generation of faster wireless devices and technologies*]
- t. **Wireless ISP links prairies to speedy Net**, *G&M*, March 21, 2002
[*Service from startup - Platinum doesn't require line of sight*]

3. Wireless (Continued)

- u. **The Bluetooth wireless communications standard will jolt flagging PC makers back to life** *ROB Magazine*, April, 2002 [*Bluetooth bite will be felt in some unexpected places*]
- v. **Homing Systems thwart theft**, *G&M*, April 11, 2002
[*Products use wireless networks, satellites & software to track down cars, laptops*]
- w. **The magic of telematics**, *G&M*, April 4, 2002
[*New 'wired' cars keep you connected*]
- x. **RIM licensing plan to allow others to clone Blackberry**, *G&M*, April 5, 2002
[*RIM reveals new licensing strategy allowing others to clone Blackberry devices*]

4. Data Warehousing, Data Mining, Just-In-Time

- a. **Just-in-time system leaves analysts in dark**, *G&M*, March 25, 2002
[*Still old inventory cycles, just different*]
- b. **The world produces more than a billion gigabytes of data a year. How are hard drives holding this stuff?** *ROB Magazine*, April 2002
[*The (1.4 meg) disk pile would stretch from the earth to the sun*]

5. IT Transforming the Workplace and Our Lives

- a. **Driving Along in My Automobile**, *Time*, April, 2001
[*Voice-activated cell-phone, traffic reports while driving*]
- b. **Wired for the future**, *Toronto Star*, February 11, 2002
- c. **Virtual Reality may replace cadavers**, *G&M*, March 1, 2002
[*A new facility at U Calgary allows scientists to get inside 3-D models of cells & organisms*]
- d. **Electrifying E-Class**, *G&M*, March 14, 2002
- e. **Connecting with Technology**, *G&M*, March 21, 2002
[*The microchip has made the unimagined thinkable and the unthinkable possible, Today's technological innovators are using tools to transform the way we live, work, & play*]
- f. **Technology for Tomorrow**, *G&M*, March 21, 2002
[*Programmable robots & computer-aided design & manufacturing systems have changed the production process dramatically, but much of today's technology is pointing us in new & radically different directions*]
- g. **The magic of telematics**, *G&M*, April 4, 2002
[*New 'wired' cars keep you connected*]
- h. **BCE shreds 2001 annual report**, *G&M*, April 12, 2002
[*700,000 reports riddled with errors!*]

6. Artificial Neural Networks

- a. **Canadarm's maker building surgical robot**, *G&M*, March 5, 2002
- b. **Primate brainpower**, *G&M*, March 14, 2002

7. **Current Issues of Security & Privacy Related to Use of IT**

- a. **Hole filled @Rogers - E-mail was open to**, *Toronto Sun*, December 9, 2001
- b. [*E-mail was open to hackers*]
- c. **Alliance forms against Passport**, *USA TODAY*, December 20, 2001
[*34 firms wary of MS back own online identity keeper*]
- c. **Eavesdropping plan opens door to government abuses**, *USA TODAY* December 26, 2001
- d. **Privacy is not the issue**, *USA TODAY*, December 26, 2001
- e. **Hackers target home PCs**, *Herald Tribune*, January 4, 2002
- f. **Sylint Group helps companies fight cyber vandals**, *Herald Tribune*, January 20, 2002
- g. [*"The cost of having your system down or losing data is really more than the cost of being prepared"*]
- h. **Microsoft's focus shift to safety won't be quick, easy or cheap**, *USA TODAY*, Jan 18, 2002
- i. **Microsoft shifts its focus to security**, *USA TODAY*, January 17, 2002
[*Gates memo outlines major strategy change*]
- j. **Security concerns growing along with Web use**, *Toronto Star* February 11, 2002
[*UCLA Center for Communications Policy survey to assess how people use the Internet*]
- k. **Our security IQ needs Testing**, *G&M*, February 28, 2002
- l. [*The U.S. is conducting a post mortem on the intelligence failures of Sept. 11. It's time Canada took a hard look too*]
- m. **Out of Sites**, *G&M*, March 2002
- n. **We're a nation of software pirates. Is it possible that's a good thing?** *ROB Magazine*, March 2002 [*Business software piracy remains at 38% across Canada*]
- o. **Ottawa warns consumers on generic automated tellers** *G&M* March 6, 2002
[*Explosion of no-name ATMs should give pause to consumers*]
- p. **OSC moves to shut down two Web sites**, *G&M*, March 7, 2002
[*Advice to unwary investors*]
- q. **Allied Irish shares climb as takeover rumors gather momentum**, *FP*, March 2002
- r. **Text-message scams – The latest scams**, *G&M*, March 11, 2002
[*Cell-phone scams*]
- s. **SEDI system to remain off-line for several weeks**, *G&M*, March 11, 2002
[*Insider trading Internet-based reporting system crashes*]
- t. **Allied Irish gets its fraud report** *FP*, March 13, 2002
- u. **Currency trader exploited lack of supervision: Report**, *Toronto Star*, March 15, 2002
[*Former currency trader managed to lose \$691 million (US)*]
- v. **Security climbs to top of firms' agendas** *G&M*,
- w. **There's room for improvement on the privacy issue**, *G&M*, March 25, 2002
[*Trading of personal information*]
- x. **ARE YOUR PLANTS SAFE FROM CYBER ATTACK**, *CEP*, February 2002
[*An Understanding of security principles & terminology can help chemical & control engineers relate to the emerging threats of conventional cyber terrorism*]
- y. **Fiorina voice mail gets scrutiny**, *G&M* April 11, 2002
[*CEO of HP, Fiorina feelings on voice mail, prior to 'disputed' purchase of Compaq*]
- z. **Minister offers to resign over e-mail**, *G&M*, April 13, 2002
[*Yukon politician resigns Portfolio due to e-mail leak to media*]
- aa. **Was security for G8 summit breached by Web site?** *G&M*, April 12, 2002
[*Floor plans publicly available over the Net*]
- bb. **'Ethical ' hackers:: High-tech consultants who are hot to hire**, *G&M* April 1, 2002
[*Experts commissioned to break into clients' networks to fix security holes*]
- cc. **Expedia Takes Fraudulent Web Transactions Charge**, *Reuters*, March 1, 2002
[*Records a fiscal 3rd qtr. charge of \$4million to cover cost of fraudulent Web transactions*]
- dd. **Canadian firms on Global Crossing list**, *G&M*, April 11, 2002
[*E-mail links companies to sale of Global Crossing*]

9. Telecommunications

- a. **Cable, DSL firms step up war**, *G&M*, March 6, 2002
[Hope to tempt customers with perks such as video-on-demand]
- b. **Nav Canada to launch text messaging for Atlantic pilots**, *G&M*, March 14, 2002
[Transatlantic pilots to converse with controllers by instant text messaging]
- c. **Cyber City site empowers residents**, *G&M*, March 14, 2002
[Web site must reflect how a city thinks about its residents]
- d. **E-books a new chapter in publishing**, *G&M*, April 5, 2002
[Store in Cambridge agreed to have store become an INSTABook guinea pig]
- e. **Videoconferencing** *G&M*, *In Conferencing*, Spring 2002
[Who uses videoconferencing and how technology has changed it]

9. Multi-Media

- a. **Music Fans face raw copyright deal**, *G&M*, March 21, 2002
[Recent copyright developments may affect music lovers]
- b. **Cretien befuddles computer**, *G&M*, February 22, 2002
- c. *[New-generation lap-top telephone system & voice-generated security]*
- d. **Microsoft takes Xbox to Japan**, *G&M*, February 22, 2002
[Xbox console will be battling Nintendo & Sony]
- e. **Consumers beware: Canada is a haven for media oligopolies**, *G&M*, February 28, 2002
[BCE is an example of the fusion of content and carriage on a grand scale]
- f. **Court dumps Kazaa ruling**, *G&M*, April, 2002

10. Internet, Intranets, Extranets, and On-Line Communication

- a. **You've Got Face! Freebie software lets you send your e-mail as a talking head**, *Time*, April 2, 2001
- b. **E-Grocers Check Out**, *Time*, July 23, 2001
[How could a business that seemed a perfect fit for cyber shopping fail to attract enough customers?]
- c. **Amazon.com makes first-ever profit: 1 cent a share**, *USA TODAY*, January 23, 2002
[Amazon's Forecasted Pro forma profit surpassed]
- d. **Merchants learn to cope with new world of cyber-returns**, *G&M*, February 8, 2002
[Apparel bought on-line is especially challenging firms as consumers use the Net as a virtual change room]
- e. **Cash is in the e-mail**, *Toronto Star*, February 11, 2002
[Canada looks to lead in person-to-person payment system of e-banking]
- f. **E-evidence virtually impossible to wipe out**, *Toronto Star*, February 11, 2002
- g. **Quebec firm's language law challenge tests e-jurisdiction**, *G&M & FP* February 2002
[A case of cease and desist from Quebec's Office de la langue Francaise]
- h. **Rebel.com technology gets new life**, *FP*, February 26, 2002
[Investor group buys Netwinder unit's assets]
- i. **Cisco aims to dominate burgeoning market**, *G&M*, February 28, 2002
[Merging voice, data networks using IP technology offers cost savings, flexibility]
- j. **Internet access spending expected to rise**, *G&M*, March 4, 2002
- k. **Intranets become 'intranets'**, *G&M*, March 7, 2002
[Companies' internal Web sites haven't been embraced by employees]
- l. **Domain dispute bias goes from bad to worse**, *G&M*, March 7, 2002
- m. **Welcome to a Brave New Internet, where all information has a price**, *G&M*, March 13
[Look to Norway to see the future of the Internet]
- n. **On-line exchanges yield healthy hospital savings**, *G&M*, March 25, 2002
[New purchasing systems cut costs, streamline orders, & reduce errors]

10. **Internet, Intranets, Extranets, and On-Line communications** (Continued)

- o. **Industrial design of the times**, *G&M*, February 28, 2002
[On-line collaboration cuts costs, speeds engineering process]
- p. **Canada Revenue deserves kudos for Netfile service**, *G&M*, March 12, 2002
[Netfile puts your tax refund in your hands within 2 weeks]
- q. **Technology to lead growth**, *Toronto Star*, March 15, 2002
– *[Economist bullish on data services and Internet]*
- r. **On-line business climate has improved, report says**, *G&M*, March 25, 2002
[But investors still leery of Canada]

11. **IT & HR**

- a. **HR Focusing on how it can add value**, *G&M*, March 25, 2002
[Human Resources see their new role as harnessing employees' minds]
- b. **Pivotal seen challenged by MS CRM debut**, *G&M*, March 5, 2002
[Expects MS foray into Customer Relationship Management (CRM) to create consolidation]
- c. **Networked HR tools empower RBC staff**, *G&M*, April 11, 2002
[HR strategies aligned with RBC's vision, values, and business objectives]

12. **Role of IT in Development and Expansion of Countries such as China and Afghanistan**

- a. **Wire Afghanistan for a high-tech economy**, *USA TODAY*, December 26, 2001
[Harry Sarwari, an Afgan-American, wants to help the U.S. end terrorism by bringing a technology economy to Afganistan]
- b. **The Middle Kingdom is reaching out**, *G&M*, February 21, 2002
[Momentous events are on the march in Asia. And the country most on the move is China]
- c. **Forest Sector looking to Asia Industry wants to wean itself off U.S.**, *G&M*, March 25, 2002

13. **Enron, the Accounting Profession, and the New Perception of IT's Role in Governance**

- a. **Enron official sounded alarms - VP warned CEO of 'accounting scandals',** *USA TODAY*, January 15, 2002
- b. **IRS Targets 50,000 for special data-gathering audits,** *USA TODAY*, January 17, 2002
- c. **Congress could've seen it coming,** *USA TODAY*, January 17, 2002
[Two years ago SEC tried to change system that Enron abused]
- d. **Trump firm settles pro forma charges,** *USA TODAY*, January 17, 2002
[SEC makes first case for abuse]
- e. **SEC plans accounting oversight organization,** *USA TODAY* January 17, 2002
[Enron troubles prompt proposal for regulatory board]
- f. **SEC prescribes weak cures for accounting industry's ills,** *USA TODAY*, January 18, 2002
[USA TODAY's view that reform is no match for the problem!]
- g. **New board to oversee accounting industry,** *USA TODAY*, January 18, 2002
- h. **3 saw Enron flap coming,** *USA TODAY*, January 23, 2002
[A pattern of things that were odd tipped off experts]
- i. **Bring the audit industry into line,** *G&M*, February 14, 2002
[There is nothing in Canada's regulatory structure that would better protect us from a colossal failure]
- j. **Accounting delays report from PG&E,** *G&M*, February 22, 2002
[Accounting problems discovered relating to leases signed on projects]
- k. **'Material' data getting redefined,** *G&M*, February 22, 2002
- l. **A critical eye on aggressive accounting,** *G&M*, February 25, 2002
[Lawyer teaches MBA students to look for warning signals in a company's books]
- m. **The auditors must be audited - It's time investors demanded an end to self-regulation,** *FP*, February 26, 2002
- n. **Enron saga shows IT's key role in governance,** *G&M*, February 28, 2002
- o. **CIBC restricts its auditors,** *G&M*, March 1, 2002
[Firms looking at books won't get consulting contracts]
- p. **Insider trading rules assailed,** *G&M*, March 4, 2002
[Head regulator says whole system needs overhaul & suggests tougher legislation]
- q. **Accounting industry fights calls for 'audit only' rules,** *G&M*, March 7, 2002
[Legislators and executives already forcing companies to limit a wide range of work]
- r. **Accounting firms must return to roots and tell the story,** *G&M*, March 11, 2002
[Brown, Chairman of OSC, says auditors must move back to commenting on a company's true financial position in accordance with accounting principles]
- s. **ABB solves payout dispute,** *G&M*, March 11, 2002
[Demand for more transparency and accountability]
- t. **Andersen lost sight of obligation, critics say,** *G&M*, March 12, 2002
[Auditing business said to have taken a back seat to more 'glitzy' consulting work]
- u. **Insiders and the trouble with audits,** *G&M*, March 12, 2002
[A look at how firms are changing their watchdog panels]
- v. **The link to corporate scandals - A look at audit committees of failed firms,** *G&M*, March 12, 2002
- w. **Audit committee under scrutiny - Board taking close look at who's on it,** *G&M*, March 12, 2002
- x. **IASB BOARD SEEKS TO END PRACTICE - CANADA AWAITS DECISION,** *National Post*, March 13, 2002
[IASB head hopes to table a proposal aimed at forcing companies to declare stock options as expenses]

13. **Enron, the Accounting Profession, and the New Perception of IT's Role in Governance** (Continued)

- y. **Accounting students get dose of unreality - GAAP is outmoded and fails to reflect modern**
[GAAP is outmoded and fails to reflect modern practices]
 - z. **Accountants fight back - Chairman of IASB leading push for global standards, G&M,**
March 13, 2002
[Chairman of IASB leading push for global standards]
 - aa. **Enron provides real-life lesson in ethics, G&M, March 22, 2002**
 - bb. **SEC files fraud complaint over Waste Management, G&M, March 24, 2002**
[Six former executives accused in lawsuit that provides details of accounting scheme]
 - cc. **Greenspan urges caution, G&M, March 24, 2002**
[Criticizes executives, accountants, analysts]
 - dd. **OSC official sees Enron's silver lining, G&M, March 25, 2002**
[Chief account at OSC, sees the collapse of Enron as an opportunity to speed up reform of accounting & auditing]
 - ee. **No item too small as firms cave to Enron disclosure craze, G&M, April 1, 2002**
 - ff. **New York targets Merrill, G&M, April 9, 2002**
["This was a shocking betrayal"]
 - gg. **The fixer, ROB Magazine, April 2002**
[OSC's reputation has begun to change]
 - hh. **U.S. lawsuit includes CIBC in Enron case, G&M, April 9, 2002**
[Nine major banks, securities firms named in expanded California class action]
 - ii. **Andersen makes an offer to help reach settlement, G&M, April 11, 2002**
[Firm running out of options after plea by former partner]
 - jj. **SEC's crackdown focuses increasingly on executives, G&M, April 12, 2002**
[Scale of corporate quarry also changing, with agency investigating large companies]
 - kk. **Merrill Lynch given time to comply with order, G&M, April 12, 2002**
[Court order forcing detailed disclosure of investment banking business]
 - ll. **Frail public faith threatens auditors, G&M, April 13, 2002**
["If the audit profession is here ultimately to serve society, I hope society is going to understand the implications if the auditors don't do their job"]
 - mm. **Another superstar analyst faces lawsuit, G&M, April 13, 2002**
[Analyst at Salomon Smith Barney INC., is being sued for allegedly biased reports]
 - nn. **IBM said to use gain from sale to offset operating costs, G&M, April 12, 2002**
[Gerstner touted IBM's exceptional management of cost & expense structure. when it sold Global Networks in 1999, which prompted SEC to question why IBM used gain to offset overhead]
 - oo. **TD to separate consulting work from auditing, G&M, April 12, 2002**
[Result of post Enron concerns]
 - pp. **Our regulators should take up SEC's activism, G&M, April 12, 2002**
[OSC faced criticism from Bay St. when it attempted to target major corporations]
 - qq. **Tapes portray Andersen as virtual arm of Enron, G&M, April 15, 2002**
[Developed system that combined external role with internal audit]
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Additional Topics for Project Research:

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1. Select, evaluate and demonstrate one current Decision Support System (DSS) software package such as *Expert Choice*, *Financial Cad*, *DS for Windows*, or *Slicer Dicer*
 2. Select a series of DSS software packages currently available on the market, and evaluate their function, requirements, cost, ease of use, and necessary sophistication of the user from a management point of view.
 3. Analyze the Role of Data Warehouses and Data Mining in the Retail Industry
 4. Analyze the Role of Data Warehouses and Data Mining in Banking, sometimes referred to as Customer Profitability Management.
 5. Evaluate the Role of Artificial Neural Networks in the Investment Industry.
 6. Evaluate the Role of Artificial Neural Networks in Medicine.
 7. Assess the Relevance of Expert Systems in Management (must include some **specific** examples)
 8. Appraise the Value of Intelligent Agents and their role in Executive or Management Information Systems
 9. Write a Paper on Modeling and Analysis and its Role in DSS (must include some **specific** examples and applications)
 10. Investigate Natural Language Processing (NLP) and its role in Managing Information Technology
 11. Examine the Process of Constructing a Decision Support System, the Role of the Participants, Software, and Management. (must include some **specific** examples)
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MGT 2273 Detailed Course Outline

Lecture 1 July 2 a.m. COURSE Overview

- **Student Introductions and Interests**
- **Role of Knowledge Acquisition & Management in the Organization**
- **Capturing and Coding Information and Knowledge**
- **Management Challenges**
- **Major Concepts, Characteristics, and Benefits of DSS.**
- **Major Benefits of Expert Systems.**
- **Group Collaboration Systems**
- **Neural Computing as it Relates to Knowledge and Decision Support.**
- **Evaluate the Role of Artificial Intelligence (AI) in Knowledge Acquisition & Management**
- **Explanation of Course Requirements (see Presentation and Project Requirements)**
- **Discussion of Submitted Projects/Presentation Topics.**

Required Reading: Lecture 1 Notes, Readings #1, #2, & Case #1

Assignment: Final Modification of Project/Presentation

Lecture 2 July 2 p.m. Decision Support Systems (DSS) & Group DSS (GDSS)

- **Class Discussion Case #1**
- **Definition of DSS & Management Challenges**
- **DSS Configurations**
- **Characteristics & Capabilities of DSS**
- **Decision-Making under Certainty, Risk, and Uncertainty.**
- **Human Cognition, Cognitive style, and Decision Styles.**
- **Classification of DSS according to Different Dimensions.**
- **Ready-made DSS and their Benefits and Limitations.**
- **GDSS Systems**
- **GDSS Enhancing Decision-making**
- **Executives, their Roles and their Information Needs**
- **Enterprise GDSS, Intelligent Systems and the Web**
- **Supply Chain and Value Chain DSS Issues**
- **CRM, MRP, ERP, and SCM**

Lecture 2 Notes, Readings #3 & #4, #5 & Case #2

Assignment: Prepare questions for class discussion of Readings #3, #4, #5, & Case #2 for next lecture.

Lectures 3 & 4 July 4 a.m. & p.m. Data Warehousing, Access, Analysis, Data Mining, and Data Visualization

- Class Discussion of Assignment.
- Traditional File Organization.
- Data Base Management Systems (DBMS).
- Role of Database Management in DSS.
- Relational Databases and the Role of SQL in Data Management.
- Distributed DSS and their Relationship with C/S Architecture.
- Commercial Database Services.
- OLAP and its Use and Importance in DSS.
- Data Warehousing, its Structure, Components, and Use in DSS.
- Describe the Role of Data Warehousing and its Role in MSS.
- Data Warehousing & the Banking Industry.
- Understanding Profit Drivers
- Customer Information Files
- Input Data Base
- Cost Management Workstation
- Customer Profitability Management Systems.
- Data Warehousing and Data Mining in other Industries
- Role of Data Warehousing & Data Mining in Business Strategy.
- Goals of Data Mining.
- Impact of Data Mining.
- Data Visualization - a Data Mining Tool

Required Reading: Lecture 3 & 4 Notes, and Reading #6, & #7, Case #3.

Assignment: Prepare questions on Readings #6, #7, & Case #3 for lecture 5 discussion.

Lecture 5 July 9 a.m. Knowledge-Based Decision Support: Artificial Intelligence and Expert Systems

- Class Discussion of Assignment
 - Managerial Decision Makers are *Knowledge Workers*
 - Use Knowledge in Decision Making
 - Accessibility to Knowledge Issue
 - Knowledge-Based Decision Support: Applied Artificial Intelligence
 - Concepts, Definitions, Objectives
 - Representing Thought Processes on Machines
 - Make machines *smarter* (primary goal)
 - Understand what *intelligence* is (Nobel Laureate purpose)
 - Make machines more *useful* (entrepreneurial purpose)
 - Signs of Intelligence
 - AI Programs
 - Symbols and Symbol Structures Form Knowledge Representation
 - Artificial Intelligence Dealings Primarily with *Symbolic, Non-algorithmic* ProblemSolving
- Methods
- AI versus Natural Intelligence
 - Expert Systems
 - Attempt to Imitate Expert Reasoning Processes and Knowledge in Solving Specific Problems
 - Most Popular Applied AI Technology
 - Enhance Productivity
 - Expertise
 - Theories about the problem area
 - Global strategies
 - Meta-knowledge (knowledge about knowledge)
 - Human Expert Behaviors

Lecture 5 July 9 a.m. Knowledge-Based Decision Support (Continued)

- Transferring Expertise
- Objective of an expert system
- Knowledge Base
- Inferencing
- Reasoning (Thinking)
- Rules
- ES versus Conventional Systems
- Problem Areas Addressed by ES
- Benefits of ES
- Problems and Limitations of ES
- Most Critical Factors for Success of ES

Required Reading: Lecture 5 Notes, Readings # 8, # 9, & Case #4

Lecture 6 July 9 p.m. DSS and GDSS System Development

- Class Discussion of Case #4
- DSS Development and Traditional System Development
- Alternate Methodologies
- Prototyping
- Technology and Tools
- Platforms
- Prototyping and Expert Systems
- Software Classification Levels
- Tools for Building Expert Systems
- Rapid Prototyping, Development, and Implementation
- Major Issues of MSS Implementation
- Strategies
- Models of MSS Integration
- Integrating EIS, DSS, Expert Systems, and Global Systems

Required Reading: Lecture 6 Notes, Reading #10, #11, & Case #5.

Assignment: Prepare Questions for Readings #10, #11, & Case #5 for Lecture 7.

Lectures 7 & 8 July 11 a.m. & p.m. Artificial Neural Networks

- Class Discussion of Assignment
- AI Systems Overview
- Artificial Neural Networks (ANNs)
- Convergence of Disciplines
- AI - The Basics
- Some Typical Uses of ANNs
- Neural Networks versus Traditional Methods
- Biological Origins of ANNs
- Technical Description of ANNs
- Hinton Diagrams
- Neurons and Hidden Connections
- Types of ANNs
- Supervised Learning & Training
- Business Applications of ANNs
- Financial Decision Making using ANNs
- Investment Industry and ANNs
- Operations Management, Marketing, and Statistics
- ANNs in Medicine

Required Reading: Lecture 7-8 Notes, Reading #12, #13, & Case #6

Assignment: Prepare Questions for Readings #12, #13, & Case #6 for Lecture 9

Lectures 9 & 10 July 16 a.m. & p.m. Telecommunications & Networking

- **Class Discussion of Assignment**
- **Basics of Telecommunications**
- **Components of Telecommunications System**
- **Protocol**
- **Communication Channels**
- **Basic Components in a Telecommunications Network**
- **Wireless Transmission Technologies**
- **Communications Channels**
- **Speeds & Cost Of Media**
- **Communications Processors**
- **Network Topologies**
- **Value-added Network (VAN)**
- **Network Services**

Packet Switching

Frame Relay

Asynchronous Transfer Mode (ATM)

Integrated Services Digital Network (ISDN)

Digital Subscriber Line (DSL)

Cable Modem

T1 Line

Packet Switching (X.25)

Transfer Mode (ATM)

- **Enterprise Networking**
- **Connectivity**
- **Transmission Control Protocol / Internet Protocol (TCP /IP)**
- **Facilitating Applications**
- **Electronic Data Interchange**
- **Costs Of Client/Server Systems**
- **Operations & Support**

Telecommunications Plan

- **Implementation Factors**

Virtual Private Networks

- **E-VPN Strategy**
- **Remote Access-Based Security**
- **Issues of Data Confidentiality and Authenticity**

Required Reading: Lecture 9-10 Notes, Reading #14, #15, & Case #7

Assignment: Prepare Questions for Readings #12, #13, & Case #6 for Lecture 11

Lecture 11 July 18 a.m. Intranets, Extranets, and Portals

- **Class Discussion of Assignment**
- **Corporate Intranets and Web Sites**
- **Extranets and Servers**
- **Applications of Telecommunications**
- **Business Telecommunications and Networking**
- **Enterprise Collaboration Systems**
- **E-Commerce & B2B Commerce**
- **Strategic Capabilities**
- **Elimination of Geographic Barriers**
- **Reduced Inventory & Improved Turnover**
- **Expanded Market Potential & Linkages for Competitive Advantage**
- **Trends in Communication**
- **Industry & Technology Trends**
- **Enterprise Content Management Functionality (Portals)**
- **Internetworked Enterprise - Intranets - Extranets - Portals - Internet**

Lecture 12 July 18 p.m. Intelligent Agents & Presentations

- **Intelligent Agent Overview**
- **Characteristics of Intelligent Agents**
- **Intelligent Agent Tasks**
- **Classification and Types of Intelligent Agents**
- **Intelligent Agents and the Internet**
- **e-Commerce Agents**
- **Data Mining Agents**
- **DSS Agents**

Required Reading: Lecture 9 Notes, Text Chapters 17, and Reading #

Assignments: Prepare cases for Review Lecture 14, July 25 Class Discussion.

Note: Review Cases were distributed at the end of Lecture 10

Lecture 13 July 23 Review

- **Cases distributed after Lecture 10 will be reviewed and discussed**