MIS 300
Management Information Systems: Concepts and Applications
Spring 2013

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Text: 1) H. Bidgoli, MIS3 (Management Information Systems), THIRD EDITION Course Technology/Cengage Learning, Mason, OH, 2013, STUDENT EDITION.
ISBN-10: 1133627307

2) Appendices A, B, and C of MIS3 book available online with your access code

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CATALOG DESCRIPTION:

This course will provide an overview of the computer-based information systems, their components, and the process of development and implementation. The role of information systems will be taught from an interdisciplinary perspective. A heavy emphasis will be given to information management, database design, collection and manipulation of data, sharing data among the functional areas and relational database concepts. New developments in MIS and how they affect the functional areas of business that improve the competitiveness of a business organization will be explored and developed. Issues such as decision support systems, geographic information systems and group support systems will be explored.

PREREQUISITE: Upper division standing and MIS 200A or equivalent

IMPORTANT NOTE: Go to http://login.cengagebrain.com to register for the textbook materials that we use. The online materials are an important part of this course.

Learning Objectives: After completion of this course you should be:
1. Demonstrate subject matter knowledge of information systems management. Specifically,
   a. To understand information concepts, technologies, trends
   b. To understand decision support systems for functional areas
   c. To understand privacy, security, ethical considerations
   d. To understand Internet, e-commerce, and client-server
   e. To understand information requirements in a global environment
   f. To understand the importance of data and converting it into information for effective decision making
   g. To understand issues involved in the development of information systems and database management systems in functional areas
   h. To understand information requirements of a global environment
   i. To understand the new trends in the information systems field for effective decision making
   j. To understand the social, legal, ethical and organizational impacts of information systems.
   k. To understand the role of the Internet, e-commerce and client/server computing in running a successful business operations.

2. Integratively apply knowledge and skills in the above MIS areas to decision making and to analyzing and formulating policies and strategies

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Week #1 (4, 1)

- Information Systems: An Overview
- Computers and Information Systems in Daily Life
- Computer Literacy and Information Literacy
- The Beginning: Transaction Processing Systems
- Management Information Systems
- Major Components of an Information System
- Using Information Systems and Information Technologies
- The Importance of Information Systems
- Using Information Technologies for a Competitive Advantage
- Porter’s Five Forces Model: Understanding the Business Environment
- Future Outlooks

Assignment: Read Chapter 1
Company Profile and Term Paper will be assigned

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Week #2 (4, 8)

- Computers: The Machines Behind Computing
- Defining a Computer
- The History of Computer Hardware and Software
- The Power of Computers
- Computer Operation
- Input Devices
- Output Devices
- Memory Devices
- Classes of Computers
- Ubiquitous Computing
- What Is Software?
- Operating System Software
• Application Software
• Computer Languages

Assignment: Read Chapter 2
Preliminary oral presentations of Company projects

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Week #3 (4, 15)

• Database Systems, Data Warehouses, and Data Marts
• What is a Database?
• Logical Database Design
• Components of a DBMS
• Recent Trends in Database Design and Use
• What are Data Warehouses and Data Marts?
• Personal, Legal, Ethical, and Organizational Issues of Information Systems
• Risks Associated with Information Technologies
• Privacy Issues
• Ethical Issues of Information Technologies
• The Impact of Information Technology in the Workplace

Assignment: Read Chapters 3-4
Preliminary oral presentations of Research projects

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Week #4 (4, 22)

• Protecting Information Resources
• Computer and Network Security: Basic Safeguards
• Security Threats: An Overview
• Intentional Threats
• Security Measures and Enforcement: An Overview
• Guidelines for a Comprehensive Security System
• Business Continuity Planning
• Data Communication: Delivering Information Anywhere and Anytime
• Basic Components of a Data Communication System
• Processing Configurations
• Types of Networks
• Network Topologies
• Major Networking Concepts
• Wireless and Mobile Networks
• Convergence of Voice, Video, and Data

Assignment: Read Chapters 5-6

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Week #5 (4, 29)

• The Internet, Intranets, and Extranets
• Navigational Tools, Search Engines, and Directories
• Internet Services
• Web Applications
• Intranets
• Extranets
• New Trends: The Web 2.0 and 3.0 Eras
• Social Networking Sites

FIRST TEST

Assignment: Read Chapter 7

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Week #6 (5, 6)

• E-Commerce
  • Defining E-Commerce
  • The Value Chain and E-Commerce
  • E-Commerce versus Traditional Commerce
  • E-Commerce Business Models
  • Major Categories of E-Commerce
  • A B2C E-Commerce Cycle
  • B2B E-Commerce: A Second Look
  • Mobile and Voice-Based E-Commerce
  • E-Commerce Supporting Technologies
  • Electronic Payment Systems
  • Web Marketing
  • Search Engine Optimization

Student Presentations
Assignment: Read Chapter 8

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Week #7 (5, 13)

• Global Information Systems
  • Why Go Global?
  • Global Information Systems: An Overview
  • Organizational Structures and Global Information Systems
  • Obstacles to Using Global Information Systems
  • Building Successful Information Systems
  • Systems Development Life Cycle: An Overview
  • Phase 1: Planning
  • Formation of the Task Force
  • Feasibility Study
  • Phase 2: Requirements Gathering and Analysis
  • Phase 3: Design
  • Computer-Aided Systems Engineering
  • Prototyping
  • Phase 4: Implementation
  • Request for Proposal
  • Implementation Alternatives
  • Phase 5: Maintenance
  • New Trends in Systems Analysis and Design
  • Rapid Application Development
  • Extreme Programming
  • Agile Methodology

Student Presentations
Assignment: Read Chapters 9-10

Week #8 (5, 20)

- **Enterprise Systems**
- Supply Chain Management
- SCM Technologies
- Customer Relationship Management
- CRM Applications
- Personalization Technology
- Knowledge Management
- Enterprise Resource Planning

**Management Support Systems**

- Types of Decisions in an Organization
- Phases of the Decision-Making Process
- Decision Support Systems
- Components of a Decision Support System
- DSS Capabilities
- Roles in the DSS Environment
- Costs and Benefits of Decision Support Systems
- Executive Information Systems
- Reasons for Using EISs
- Avoiding Failure in Design and Use of EISs
- EIS Packages and Tools
- Group Support Systems
- Groupware
- Electronic Meeting Systems
- Advantages and Disadvantages of GSSs
- Geographic Information Systems
- GIS Applications
- Guidelines for Designing a Management Support System

Student Presentations

Assignment: Read Chapters 11-12

Week #9 (5, 27)

- **Intelligent Information Systems**
- What is Artificial Intelligence?
- AI Technologies Supporting Decision Making
- Robotics
- Expert Systems
- Components of an Expert System
- Uses of Expert Systems
- Criteria for Using Expert Systems
- Criteria for Not Using Expert Systems
- Advantages of Expert Systems
- Case-Based Reasoning
- Intelligent Agents
- Shopping and Agents
- Personal Agents
- Data-Mining Agents
- Monitoring and Surveillance Agents
- Fuzzy Logic
Uses of Fuzzy Logic
Artificial Neural Networks
Genetic Algorithms
Natural Language Processing
Integrating AI Technologies into Decision Support Systems

Student Presentations
Assignment: Read Chapter 13

Week #10 (6, 3)

Emerging Trends, Technologies, and Applications
Trends in Software and Service Distribution
Pull and Push Technologies
Application Service Providers
Virtual Reality
Types of Virtual Environments
Components of a Virtual Reality System
CAVE
Virtual Reality Applications
Obstacles in Using VR Systems
Virtual Worlds
Radio Frequency Identification: An Overview
RFID Applications
Biometrics: A Second Look
Trends in Networking
Wi-Fi
WiMAX
Bluetooth
Grid Computing
Utility (On-Demand) Computing
Cloud Computing
Nanotechnology
A review of the course
Where do you go from here?

Student Presentations
Assignment: Read Chapter 14

Week #11 (6, 10)
Catching up!!!

GRADING POLICIES
Total of 490 Points

Exam #1 105 points
Exam #2 (Text materials and Hands-on) [June 10, in class] 155 points
Company Profile Written Report (Due Week 9, Second Session) 80 points
Term Paper Written Report (Due Week 10, Second Session) 80 points
Oral 50 points
Class Presence and Participation 20 points
Important Notes

Note 1: Overdue assignments are not accepted without the instructor’s consent!
They are all due the first session of each week.
Note 2: Try not to miss any class. It will be very difficult to catch up!
Note 3: All projects will be explained by the instructor in class.
Note 4: This course assumes a general familiarity with the Internet and Microsoft
Office (MIS 200A). Basic Excel knowledge is particularly very important.

Guidelines for Assignments (these two assignments are not related to one another.
They must be researched independently)

Companies

1) Length (10 pages+) including everything
2) Point size 11 Arial, double-spaced
3) Six sources, 2 must be from outside of the company website
4) Cover page that includes the name of your company, the name of the course (MIS 300),
and your name as appears in the class roster.
5) Table of contents page. The table of contents must include all the headings (subtitles)
that are covered in your paper. These subtitles must also appear in the paper itself. Make
sure that the subtitles match with what you have in the table of contents.
6) Page number bottom center
7) Bibliography page (at the end of the paper)
8) Date of access for website sources
9) If your company is a technology company such as Microsoft, then you should cover a
brief history, 4-6 products and or services, and specific competitions for each product or
service. If your company is not a technology company such as Wal-Mart, then you should
cover a brief history, the roles and applications of information systems in that company (80
% of the paper should be on this). You also should identify 2-4 competitors for your
given company.
10) APA format
11) Include at least one case study for technology companies. This means for example
how a particular business (private or public) has utilized the products and or services of a
particular technology company in order to gain a competitive advantage.

Research

1) Length (10 pages+)
2) Point size 11 Arial, double-spaced
3) Six sources, 3 must be from traditional sources such as books and articles. The other 3
could come from web sources. Traditional publications such as Business week can be
counted in either group.
4) Cover page that includes the name of your research topic, the name of the course (MIS
300), and your name as appears in the class roster.
5) Table of contents page. The table of contents must include all the headings (subtitles)
that are covered in your paper. These subtitles must also appear in the paper itself. Make
sure that the subtitles match with what you have in the table of contents.
6) Page number bottom center
7) Bibliography page (at the end of the paper)
8) Date of access for website sources
9) APA format
10) Include at least one case study. For example a real life case of security breach or
identity theft.

Have a Pleasant Quarter!!!