

CIS (21-774)
Computer Information Systems
in
Industrial Engineering
 Department of Industrial Engineering
 Sharif University of Technology

Session # 1

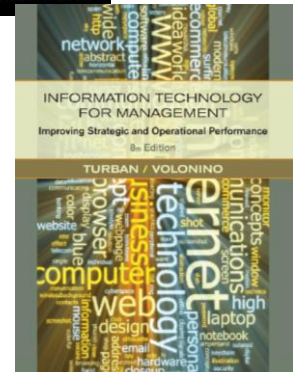
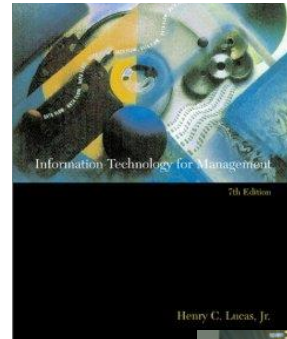


Course Description

- *Instructor*
 - *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
 - *Email: Omidf@ie.sharif.edu, Tel: 6616-5706*
- *Recommended prerequisite*
 - *Computer Programming (21-811)*
- *Class time*
 - *Sunday- Tuesday 15:00-16:30*
- *Course evaluation*
 - *Mid-term (25%)*
 - *Final exam (30%)*
 - *Quiz (7.5%)*
 - *Homework (25%)*
 - *Projects (12.5%)*
 - *TA (+2.5%)*

Course Description (Continued ...)

- **Mid-term session:**
 - Sunday: 15th Azar 1394
- **Final Exam:**
 - Monday: 4th Bahman 1394, 09:00 ~ 10:30
- **Reference:**
 - Lucas, Henry J; “Information Technology for Management”, 9th edition, 2013, Irwin Mc Graw-Hill
 - Turban, Efraim; Volonino, Linda; “Information Technology for management, improving strategic and operational performance”, 2011, John Wiley & Sons



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Course Description (Continued..)

- **Contents:**
 - The role of managers in Information Technology (IT) (3 sessions)
 - Organizational Issues (3 sessions)
 - Information Technology (9 sessions)
 - Operational and enterprises systems (4 sessions)
 - Exciting directions in systems (3 sessions)
 - E-Business and E-Commerce (3 sessions)
 - Issues for senior management (2 sessions)

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Course Description (Continued..)

- **Contents:**
 - *The role of managers in Information Technology (IT)* (3 sessions)
 - *Using technology to transform the organization*
 - *Interpreting and understanding Information*
 - *Information Technology (IT) in perspective*
 - *Frameworks for Information Technology*
 - *The Basics of Information Systems*

Course Description (Continued..)

- **Contents:**
 - *Organizational Issues* (3 sessions)
 - *The impact of Information Technology on the organization*
 - *Modern organization*
 - *Building a T-form organization*
 - *Strategic issues of Information Technology*
 - *Information Technology and Corporate Strategy*
 - *Integrating technology with business technology*
 - *Managing Information Technology*
 - *International business and Information Technology*
 - *The impact of globalization on business*
 - *Key issues in international environment*
 - *Managing Information Technology internationally*

Course Description (Continued..)

- **Contents:**
 - *Information Technology* (9 sessions)
 - *Fundamentals*
 - *The components of a personal computer*
 - *Software*
 - *Managerial concerns*
 - *The Contribution of Higher-Level languages*
 - *The Web Browser and Internet standards*
 - *The operating system*
 - *Database management*
 - *File elements*
 - *Enter database management software*
 - *Database in systems design*
 - *Data Warehouses, Data Marts, and Data Centers*
 - *Enterprise Content Management*

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Course Description (Continued..)

- **Contents:**
 - *Information Technology (Continued ...)* (9 sessions)
 - *Communications*
 - *Communications between computers*
 - *Networks*
 - *Information Technology architecture*
 - *Hardware & software architecture*
 - *System alternatives and acquisition*
 - *To buy or not: major applications*
 - *The services industry*
 - *The pros and cons of outsourcing*
 - *Enterprise software packages*
 - *Building information systems*
 - *The design task*
 - *Systems design life cycle*
 - *Data collection for analysis and design*

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Course Description (Continued..)

- **Contents:**
 - *Information Technology (Continued ...)* (9 sessions)
 - *Building information systems (advanced topics)*
 - *System analysis*
 - *Survey and feasibility study*
 - *Determining feasibility*
 - *Computer Aided Software Engineering (CASE)*
 - *IT project management*
 - *Reengineering: changing business and business processes (case studies)*
 - *Reengineering a Process at Merrill Lynch System analysis and design*
 - *Reengineering the Entire Firm at Lithonia Lighting*

Course Description (Continued..)

- **Contents:**
 - *Operational and enterprises systems* (4 sessions)
 - *Operational Planning and Control Systems*
 - *Manufacturing and Production Systems*
 - *Sales and Marketing Systems*
 - *Accounting and Finance Systems*
 - *Human Resource Systems*
 - *Enterprise Information Systems*
 - *Enterprise Systems*
 - *Enterprise Resource Planning (ERP) Systems*
 - *Supply Chain Management (SCM) Systems*
 - *Customer Relationship Management (CRM) Systems*
 - *Knowledge Management (KM) Systems*

Course Description (Continued..)

▪ Contents:

- *Exciting directions in systems* (3 sessions)
 - *Supporting knowledge workers*
 - *The Range of User Activities*
 - *Policy Issues for Management*
 - *Organizational support systems: DSSs, GDSSs, EISs, MIS*
 - *Decision-Support Systems*
 - *Group Decision-Support Systems*
 - *Groupware and Organizational Knowledge*
 - *Intelligent systems*
 - *Artificial intelligence*
 - *Expert Systems: Applied AI*
 - *Knowledge Discovery*

Course Description (Continued..)

▪ Contents:

- *E-Business and E-Commerce* (3 sessions)
 - *E-Business Challenges and Strategies*
 - *Business-to-Consumer (B2C) E-Commerce*
 - *Business-to-Business (B2) E-Commerce and E-Procurement*
 - *E-Government*

Course Description (Continued..)

▪ *Contents:*

- *Issues for senior management* (3 sessions)
 - *Management control of Information Technology*
 - *Management Control*
 - *Control of Systems Development*
 - *Auditing Information Systems*
 - *Management Issues*
 - *Security Issues: Viruses, Worms, and Other Creatures*
 - *Information Technology issues for management*
 - *Management in a Technological Environment*
 - *The Changing World of Information*
 - *Societal implications and the future with technology*
 - *Social responsibilities*
 - *Ethics and Information technology*
 - *The future Information Technology*

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