

Brooklyn College
Department of Computer & Information Science

CISC 1590 [9.2] Management Information Systems

3 hours; 3 credits

Management information systems as a business resource for achieving competitive advantage. The major IT applications used in business and how they enable competitiveness. The central role that relational databases and data warehouses play in the business world. How IT has enabled and accelerated the growth of e-commerce. The role of decision support systems and artificial intelligence in business. Overview and impact of IT infrastructure design. System Development Lifecycle, project management, outsourcing, offshoring and its impact on the US economy. Information security, intellectual property rights, copyright and patent law on a national and international level. New trends in technology and their potential impact on industry. Case studies and team project are required. This course is the same as BUSN 3420 [formerly Bus 31.3]. (Not open to students who have completed Business 31.3.)

Objectives

CIS majors who look to the business world for a career need business savvy as well as good computer science knowledge and skills. Likewise, business majors need computer savvy to help them integrate computer technology with business knowledge and skills. This course will provide an understanding of the critical role information technology plays in the business world and how synthesizing computer science and business knowledge will enable them to play a successful role in their chosen fields.

- To apply information technology to common business needs
- To become aware of useful technologies in the business environment
- To solve business problems using technology
- The student will apply technology to a number of business cases.
- The student will demonstrate the ability to determine which technologies are appropriate for business problems and how they can be used.
- The student will apply principles of computing to build technology tools.

Syllabus

- Week 1:** Major Business Initiatives and Competitive Advantage – CRM (Customer Relationship Management), SCM (Supply Chain Management), BI (Business Intelligence), ICE (Integrated Collaborative Environments)
- Week 2 & 3:** Databases and Data Warehouses – relational databases, OLTP (Online Transaction Processing), OLAP (Online Analytic Processing), data mining, data marts
- Week 4:** Decision Support and Artificial Intelligence – Decision Support Systems, GIS (Geographic Information Systems), expert systems, neural nets, genetic algorithms, agents, swarm intelligence
- Week 5:** Electronic Commerce – Porter’s Five Forces Model, B2B (Business to Business), B2C (Business to Consumer), C2C (Consumer to Consumer), G2C (Government to Consumer), G2G (Government to Government), electronic marketplaces, moving money securely and easily
- Week 6:** Exam
Systems Development – SDLC (System Development LifeCycle), prototyping, extreme programming, agile systems, RFPs (Request for Proposals), insourcing, outsourcing, offshoring
- Week 7:** IT Infrastructures – centralized, decentralized, distributed, client/server architectures, n-tier, disaster planning
- Week 8:** Telecommunications, networks, internet and wireless communications
- Week 9:** Project Management
- Week 10:** Protecting people and information – ethical and legal issues in IT, patents, copyrights, intellectual property, employee-employer relationships, identity theft, cybercrime, encryption, computer forensics
- Week 11:** Emerging trends and technologies – VoIP (Voice over Internet Protocol), CAVEs (Cave Automatic Virtual Environment), biometrics, digital cash, wearable computers, nanotechnology
- Week 12:** Managing emerging technology – when new technologies cause great firms to fail, how to adapt to new technology

- Week 13:** Enterprise Resource Planning and Business Process Reengineering
- Week 14:** Team project presentations

Bibliography

E. Turban, D. Leidner, E. Mclean, J. Wetherbe, *Information Technology for Management* 5th edition, Wiley, 2006.

K. Laudon, J. Laudon, *Management Information Systems, Managing the Digital Firm*, 9th edition, Pearson Prentice Hall, 2006.

L. Miller, *MIS Cases Decision Making with Application Software*, 3rd edition, Pearson Prentice Hall, 2007.

N. Harrison, D. Samson, *Technology Management – Text and International Cases*, McGraw-Hill Irwin, 2003.

C. Christensen, *The Innovator's Dilemma*, HBS Press, 1997.

Teradata University Network – online resource for Data Warehousing, DSS/BI, and Database, <http://www.teradata.com/t/page/137453/index.html>