COURSE SYLLABUS

Course Number: MIS 131

Title: Information Systems Administration

Department/Program: Information Systems and Computer Science

School: Science and Engineering

Semester & School Year: 1st Semester, SY 2013 - 2014

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A.   Course Description

Information Systems Administration (ISA) is the most technical of MIS functions. This deals mainly with the operation and administration of data and computer centers, security administration, capacity planning, network & telecommunications administration, and database administration. This course provides an in-depth look into these important operational IS functions.

B.   Course Objectives

- To understand how a data center operates
- To familiarize the student with the basic functions of data center operations, security administration, capacity planning, network & telecommunications administration, and database administration
- To provide industry understanding through a real life project

C.   Course Outline and Timeframe

1. Introduction (Week 1)
    - 1.1. I.T. management vs. I.T. administration
    - 1.2. The new competitive landscape and organizational responses
    - 1.3. Strategic management
    - 1.4. External forces
    - 1.5. Internal forces using Value Chain analysis

2. The Information Systems Department (Week 1 – 2)
    - 2.1. What is a system?
    - 2.2. What is an information system?
    - 2.3. Types of information systems
    - 2.4. The changing role of ISD
    - 2.5. Organizational locations of ISD
    - 2.6. Different sub-sections of the ISD
    - 2.7. Key people in ISD and their roles

3. Computer Operations (Week 3 - 4)
   3.1. Systems development vs. systems operations
   3.2. Operational measures
       3.2.1. External vs. internal measures
       3.2.2. Examples of operational measures
   3.3. Key functions
       3.3.1. Services levels
       3.3.2. Escalation procedures
       3.3.3. Helpdesk
       3.3.4. Performance management
       3.3.5. Capacity planning
   3.4. An overview of the outsourcing option

4. Data Center Management (Week 5 – 7)
   4.1. What is a data center?
   4.2. Data center personnel and their functions
   4.3. Data center efficiency
       4.3.1. Factors that determine efficiency
       4.3.2. Improving efficiency through unattended operations
   4.4. Setting up a data center
       4.4.1. Key considerations
       4.4.2. Construction considerations
       4.4.3. Facilities and utilities
       4.4.4. Computing hardware and software compatibility
       4.4.5. Physical security
       4.4.6. Connectivity
       4.4.7. Business Continuity

5. Security (Week 8 – 11)
   5.1. Security threats
   5.2. Controls
   5.3. The importance of physical security
   5.4. Back-up and recovery
       5.4.1. Types of backup
       5.4.2. Backup methods
   5.5. Contingency planning
   5.6. Disaster recovery planning
   5.7. The basics of hacking
   5.8. Countermeasures
   5.9. I.S. audit

6. Network Administration (Week 12 – 13)
   6.1. Server configuration
   6.2. Client configuration
   6.3. User management
       6.3.1. Login security and authentication methods
       6.3.2. User profiles and user groups
       6.3.3. File and resource security
       6.3.4. Resource and storage management
   6.4. Shared resources

7. Distributed Systems and Databases (Week 14 – 15)
    7.1. System architecture
        7.1.1. Host-based systems
        7.1.2. Client-server systems
        7.1.3. Tiered architecture
        7.1.4. Distributed systems
    7.2. Middleware
        7.2.1. What is middleware
        7.2.2. Types of middleware

D.   Required Readings

None

E.   Suggested Readings

Turban, Volonino, McLean, Wetherbe, <u>Information Technology for Management: Transforming Organizations in the Digital Economy 7th edition.</u> Wiley, 2010

Turban, Volonino, <u>Information Technology for Management: Improving Strategic and Operational Performance 8th Ed.</u>, Wiley, 2011

McNurlin, Sprague, Bui, <u>Information Systems Management in Practice,</u> Prentice Hall, 2009

Hoffer, Venkataraman, Topi, <u>Modem Database Management,</u> 10th edition, Prentice Hall, 2010

F. Course Requirements

Methods of Instruction

A number of instructional techniques will be used for this class. This will include lectures, discussions, and a project. Slides that will be used in this course may be downloaded from the website to be specified by the teacher on the first day.

Project

For the final project, the groups should choose a medium- or large-scale organization with an institutionalized Information Systems (or Services) Department or are planning to institutionalize one. The group must concentrate on one of the topics in the course outline, study the IS functions as performed by the IS department, and analyze those functions using the concepts discussed in class as benchmark. The project will have to be defended.

Activities

- Data center tour
- Hack challenge

G. Grading System

Breakdown of marks

Quizzes	15%
Long tests	35%
Project	25%
Finals	25%
Total	100%

Grading Scale (Graduate student grades are in parenthesis)

93% - 100%	A (A)	69% - 74%	C (B-)
87% - 92%	B+ (A-)	60% - 68%	D (C)
81% - 86%	B (B+)	< 60%	F (C)
75% - 80%	C+ (B)		

H. Classroom Policies

- Cellular phones must be set to silent/vibrate or turned off.
- All regular quizzes are announced. Bonus quizzes are unannounced.
- Final grades are rounded off to the nearest two (2) decimal places.
- Students with a pre-final grade of 90% and above may choose not to take the final examination

I. Consultation Hours

To be announced on the first meeting.