ISM 50 - Business Information Systems

Introduction

Instructor: Prof. Ram Akella
UC Santa Cruz
1/5/2010

ISM 50 -

Course Parameters:
- Tuesdays and Thursdays 12:14:35 PM
- Simularium E2-180

WEB PAGE:
- (write this down, go home, and bookmark it!)
  http://www.see.ucsc.edu/classes/ism50/Winter10/

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ISM 50

TA
- Megha Mohabey
  - mmohabey@ucsc.edu
  - Office Hours:
    - TBA

What is this class about?

- Supply Chain Management (SCM)

More Examples

- Customer Relationship Management (CRM)
- Other examples?

Business Process Example
A Streamlined Business Process

A Reengineered Business Process

Some Examples
- Supply Chain Management
- Customer relationship management
- Inventory Control
- Transaction Processing
- Enterprise Resource Planning

What is an information system?
- First let us answer: what is a system?
  - Interrelated components
    - Input
    - Processing
    - Output

What is information technology?
- It's the technology you use to make an information system
  - Computer Hardware, Software, Networks, etc.
Why is IT changing so fast?

- ??

What’s happening lately?

- Net Neutrality. What is it?
  
  FCC chair Julius Genachowski
  
  Internet access providers “must be transparent about their network management practices.”

  “We could see the Internet’s doors shut to entrepreneurs, the spirit of innovation stifled... Or we could take steps to preserve Internet openness...”

  Senator Kay Bailey Hutchison (R) TX
  
  “The case has simply not been made for what amounts to a significant regulatory intervention into a vibrant marketplace.”

My Travel Schedule

- Away last week of Jan
  - Jan 26 Tue

- Possibly away 1 week in Feb

Courses Objectives

- The objectives of ISM 50 are to understand
  - needs of business
  - role of information systems in supporting those needs

- How information systems are designed
- How information technology is evolving
- How changes in technology can enable new ways of doing business
- How to conceptualize and analyze new technologies to solve business problems.

Information Systems Management 50

- What it is not:
  - A programming class
    - (Though some simple programming may be required for some assignments and/or projects)
  - A detailed focus in any particular technology.
    - (A survey of IS technology landscape and its relation to business problems)

ISM 50 Course Pre-requisites

- No specific programming language knowledge required, though useful

- We will assume you know word-processing and PowerPoint
  - PowerPoint is easy to learn
  - We will assume you are motivated and eager to learn!
  - Come to class having done the reading!
What comes first?

- Do business needs drive the design of technology?
- ...Or does the technology drive the design of a business?
- Both!

Course Organization

- Top Down (Roughly)
  - IT Terminology and IT History
  - Businesses and their needs
  - Technological Applications
  - Technology concepts
  - Important "building block" Information Technologies
    - Data Bases
    - Networks
  - Case Studies Throughout

Reader 1: Pages from

- Author:
  - David Meurerschmitt, Professor of EECS, UC Berkeley
- Focus on
  - Technological concepts in computing and communications.
  - Applications.
- Top-down organization, like our course
- Available now at Bay Tree Bookstore

Reader 2

- This reader contains
  - Case Studies
  - Other Readings
- Also available now at the Bay Tree Bookstore
- Reader 2 is same as reader from past quarters

Case Studies (in reader)

- Examples of Businesses using Information Technology
- Illustrates the concepts we learn in the class
- The case studies are mostly from the Harvard Business School
- Designed to stimulate classroom discussion in MBA classes
Class Webpage

http://www.soe.ucsc.edu/classes/ism050/Winter10/

Contains
- Syllabus
- Assignments
- Instructor contact information
- Requirements for business paper, database project
- Exam dates

Syllabus Continued

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>Jan 5 Tue</td>
<td>Class Introduction</td>
<td>IT Management from 1960-2000 (reader pp 1-26)</td>
<td>Assignment 1</td>
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<tr>
<td>Jan 7 Thu</td>
<td>IT-History and Background</td>
<td>Chapter 1 - Section II of O'Brien (reader pp 47-50)</td>
<td>Project Prefer</td>
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<td>Jan 12 Tue</td>
<td>Competing with IT (contd.)</td>
<td>Chapter 2 - Section II of O'Brien (reader pp 76-89)</td>
<td>Assignment 1</td>
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<td>Jan 14 Thu</td>
<td>Competing with IT (contd.)</td>
<td>Chapter 2 - Section II of O'Brien (reader pp 76-89)</td>
<td>Assignment 1</td>
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<tr>
<td>Jan 19 Tue</td>
<td>Business Processes</td>
<td>Pinto-Lay Case (39-103 + figs)</td>
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<tr>
<td>Jan 21 Thu</td>
<td>Enterprise Applications, Information Security</td>
<td>Mearschmidt Ch. 2.3 (38-50)</td>
<td>Folio 1 if ass</td>
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<tr>
<td>Jan 21 Thu</td>
<td>Enterprise Applications (contd.)</td>
<td>Mearschmidt Ch. 3.1-3.3 (59-82)</td>
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<td>Jan 21 Thu</td>
<td>Enterprise Applications (contd.)</td>
<td>Cisco Case (114-124 + figs)</td>
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<td>Feb 15 Tue</td>
<td>Database Management</td>
<td>Mearschmidt Ch. 11.1 - 11.2 (25-335)</td>
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<td>Feb 25 Tue</td>
<td>MySQL, Database Management</td>
<td>Mearschmidt Ch. 15.1 - 15.2 (415-425)</td>
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<td>Mar 2 Tue</td>
<td>Networking (contd.)</td>
<td>Akamai Case (213-228 + figs)</td>
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<td>Mar 4 Thu</td>
<td>Applications and Organisation</td>
<td>Mearschmidt Ch. 9 (273-289)</td>
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<td>Mar 9 Tue</td>
<td>Applications Architecture</td>
<td>Mearschmidt Ch. 10 (203-341)</td>
<td>Folio 3 if ass</td>
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<td>Mar 11 Thu</td>
<td>Applications Architecture, Wrap-Up, Final Review</td>
<td>American Airlines Case (165-171 + figs)</td>
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<tr>
<td>Mar 17 Wed</td>
<td>Final Exam</td>
<td>Final Exam</td>
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Evaluation (posted on web page)

<table>
<thead>
<tr>
<th>Item</th>
<th>Due Date</th>
<th>Value</th>
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<tr>
<td>Participation</td>
<td>Each Class</td>
<td>10%</td>
</tr>
<tr>
<td>Pop Quizzes</td>
<td>3 pdtr</td>
<td>5%</td>
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<tr>
<td>Oral Presentation or Flip</td>
<td>To be Assigned</td>
<td>5%</td>
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<tr>
<td>Weekly Assignments</td>
<td>Each Week</td>
<td>10%</td>
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<tr>
<td>Business Paper Proposal</td>
<td>Jan 26 Tue</td>
<td>5%</td>
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<tr>
<td>Midterm</td>
<td>Feb 11 Thu</td>
<td>15%</td>
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<tr>
<td>Database Assignment</td>
<td>To be Assigned</td>
<td>10%</td>
</tr>
<tr>
<td>Business Papers Final</td>
<td>Mar 11 Thu</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>Mar 17 Wed, 8-11 AM in Room</td>
<td>20%</td>
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EXAMS and Quizzes
**Exams**

- Midterm
  - Probably 2/11
- Final
  - March 17
- Closed book
- A mix of short answers and 1 or 2 essays
- One or two analytical questions

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**Pop Quizzes**

- 3 quizzes, unannounced times
- Simple questions pertaining to the reading assigned for that day
- Only your top 2 quizzes will count
- 5% of your overall grade

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**Participation**

- We will have a lot of classroom discussion over the course of the quarter.
  - especially when we read case studies!
- This is an opportunity for you to
  - think through ideas.
  - give feedback.
  - learn from your classmates.
- We will evaluate your participation.

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**Classroom Participation**

- You earn 1 participation point in each class session in which you make an intelligent comment.
- Participating more than once in a class session is encouraged, but does not earn more points.
- For full participation credit, you need to earn 8 participation points over the quarter.

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**Online Forum Participation**

- Alternate way of earning participation points
- 1 point for each intelligent post to a discussion thread.
- Discussion forum should begin operating next week!
**Participation**

- **In Summary...**
  - You need 8 participation points to get full credit.
- Participation is 10% of your overall grade.

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**ORAL PRESENTATION**

**and NEWS FOLIOS**

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**Presentation/Folio**

You will be **assigned** either

- Presentation
- News Folio

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**Oral Presentations**

- 5 minutes in length
- **Assigned** to present one of the following:
  - Summary of the case study we will discuss in class that day.
  - Recent news story involving business and information systems.
  - Your group's business paper project
- PowerPoint Presentation,
  - E-mailed to me and TA by the night before

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**Presentation Evaluation**

- **Content**
  - Did the summary capture most important aspects of the case study?
  - Was the news story relevant to the class?
- **Delivery:**
  - Organization
  - Voice Articulation
  - Eye Contact
  - Enthusiasm

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**Presentation Tips**

- Ask the following question: Who is my audience and what is my major message?
- Don’t try to say too much for five minutes
- **Avoid jargon** - explain technical concepts with simple examples.
- Avoid reading
- Act interested!
• Folios
  There are too many of you to have everyone give a presentation.
  Those who are not assigned a presentation will do a news folio.
  Task:
  - Collect 3 news articles that are relevant to the class
  - Print/copy them
  - For each article, write a 200 word description of how the article relates to issues discussed in class.
  - Due dates:
    - Article 1 - Jan 21
    - Article 2 - Feb 16
    - Article 3 - Mar 9

Presentation /Folio Summary
  - You will be assigned either a news folio or an in-class presentation
  - In either case this will be worth 5% of your grade.

Need Presentation Volunteers!
  - Tu/hursday 1/7: Two News Stories.
  - Tuesday 1/12: Two News Stories.
  - The rest of this quarter's presentation assignments will be announced next week

BUSINESS PAPER

Business Analysis Paper
  - Write a paper about a company of your choice.
  - Pick a company for which information systems played a key role in making that company successful
    - How did information systems help make the company successful?
  - Paper Organization
    - Up to your group (Work in groups of 3 to 4)
    - Chronologically, by topics, or some combination of both.

Business Analysis Paper
  - The paper should answer questions like:
    - What industry does the company compete?
    - What is the competitive environment like?
      - "Porter model" (competitors, substitute products, buyers, suppliers, new entrants...)
    - How did your company use IT to gain a competitive advantage?
      - (Detailed guidelines are posted on the website)
**Business Analysis Paper**

- How did the company use IT to support or enable its business processes and competitive strategies?
  - What technologies in particular did it use?
  - How much of the company's success do you attribute to its use of IT and/or the company's early adoption of IT into their business processes?

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**Citing Sources**

- Plagiarism is illegal and cheating and will not be tolerated!!!
- More than thirty words verbatim must be cited.
- Any facts or figures that are not your own must be cited.
  - Ebay's revenues in US Revenues in 2002 were $1.39 billion [1].

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**Citing Sources**

You must cite your sources in the body of the text!!!

"Semiconductors have found a place in virtually every electronic device in existence. This helps explain why the industry was able to reach $200 billion in sales before a slump brought the figure back down in 2003" [1].

End Note:


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**Suggested sources of Information**

- Company website
- 10K report
- (This is the annual report public companies file with Security and Exchange Commission.)
- Business article database
  - A database of articles from magazines like "Business Week" and economics journals.
  - Find it at http://library.ucsc.edu
  - Click on "Article database" on left margin.
  - Click on "by subject".
  - Click on "EconLit"
  - Try this tonight! And let us know if you have problems.

- Industry specific publications
  - Example: Aramco Week
- Books
- Good Magazines (The Economist)
- Consulting groups: Forrester, Gartner, ...

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**Business Analysis Paper Preferences**

Due Thursday Jan 7th!

- You are encouraged to try to form your own groups.
  - However, we want a mix of
    - Engineers and non-engineers
    - Experience levels

So, we may modify the groups.

As a group, turn in 3 things:

- List of your proposed group members
- List of companies you would like to study
- Suggested person to do the 5 minute presentation on your group's project

- If you don't have someone in mind to work with, turn in the above 3 things as an individual.
Business Analysis Paper Preferences
Due Thursday Jan 7th!
At least two of your preferred companies must be from this list:
- Southwest Airlines
- Federal Express
- Home Depot
- Wal-Mart Stores
- Charles Schwab
- Amazon, COM
- Ebay, COM

With your preferences in mind, we will make the final company assignments to the groups.

Business Paper Proposal

- As a group write a 2-3 page description of what you plan to investigate in your business paper!
- Show that you've done some research!
- Cite some facts, and some technologies and or strategies that you've heard about the company that you would like to investigate further.
- Remember to cite your sources properly!!!
- PROPOSAL DUE January 26th

Assignments

Database Assignment

- Learn and Use database software
- An opportunity for "hands-on" experience without having to use advanced programming
- Assignment will be done individually
- We will give you the details of the assignment sometime after the midterm.
- Database Tutorial later in the quarter
- 10% of your grade

Weekly Assignments

- Approximately once every week or two.
- They will be posted on the class webpage in the assignments column of the syllabus.
- Usually,
  - Questions from the textbook
  - Questions pertaining to Case Study Readings.
- However, Assignment 1 is to make a resume and cover letter!

Assignment 1

- Turn in BOTH:
  - A Resume
  - And Cover Letter
Due January 12 (1 week from today)

Resume should be:
- One page
- Focus:
  - Education, Experience, Skills and Abilities
  - What can YOU do for an employer?
  - You may choose to use a header with the purpose of the resume highlighted.
Personal Resume Criteria

- Looks appealing (fonts, format, margins)
- No Spelling mistakes
- Avoid irrelevant information from too far in the past
- One Page

It takes time to build a good resume.

Building Your Resume

Some things employers look for:

- Academically Qualified
- Well Rounded (includes extra curricular activities)
- Summer Internships, or Part-time work During School
- Professional Presence (Society Memberships)
- Interested and Understanding of Employer’s Area

Educational Content

- Degrees held or degrees you are currently working on.
  - Name of the university
  - Degree Type and Program
  - (Expected) Completion date
  - GPA

- Include High School degree?
  - Maybe if you are a freshman or sophomore.

Work Experience Content

- Reverse Chronological Order
- Provide Complete Information
  - Company Name
  - Location (city and state)
  - Employment dates (from - to)
  - 1999 to Present if still employed
  - Job Title
  - Major responsibilities
  - Major accomplishments

How do these pertain to the job you are seeking?

Sample

BIAN A. KANG

Local address: 123 Springfield Rd, College Park, MD 20740 x 314
Permanent address: 567 broccoli street, College Park, MD 20740 x 307
E-mail address: banie@engmail.com

Objective

To obtain a entry, summer, or part-time position in biomedical engineering or biotechnology

EDUCATION

University of Maryland
B.S., Biomedical Engineering
GPA: 3.5

George Washington University
Chemical Engineering department

EXPERIENCE

Engineering Group & Career Services Office
Department of Biomedical Engineering
College Park, MD
June 2004 - present

- Assisted engineering student mentors
- Conducted research in a laboratory environment
- Developed software for data analysis
- Prepared laboratory manuals and orientation sessions
- Administered the Biomedical Engineering Program

University of Maryland
Graduate of Biomedical Engineering

Professional experience in engineering design

- Experienced in the design and implementation of biomedical devices
- Proficient in the use of engineering software and equipment
- Committed to maintaining high standards of professionalism

Comprehensive Skills

- Engineering Applications: AutoCAD, Revit, SOLIDWORKS
- Computer literacy
- Experience in the design and development of medical devices
- Proficient in the use of engineering software and equipment

Activities

- Society of Biomedical Engineers, Student Member 2002 - 2003 academic year
- Virginia Tech Honors Program, Student 2002 - 2003 academic year

Sample
Cover Letter

- A letter of introduction, to accompany resume.
- Include brief description of background
- Write it as if you were applying to take the class, or pretend like you are applying to a job.
- Format it as a business letter.

TO DO:

By Thursday (1/7):
- Read "IT Management from 1960-2000" in Reader
- Read Chapter 1, Section II, of O'Brien book (this material is also in your reader)
- Business Paper Preference:
  - Group member
  - Turn in as a group

By Tuesday (1/12):
- Resume & Cover Letter
  - Turn in as an individual