### ISM 50 - Business Information Systems

**Introduction**

Instructor: John Musacchio  
UC Santa Cruz  
9/21/2006

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**ISM 50 - Course Parameters:**
- Tuesdays and Thursdays 2-345
- Thimann Lecture Hall Room 001
- Course Control Number: 16874
- WEB PAGE:
  - (write this down, go home, and bookmark it!)
  - [http://www.soe.ucsc.edu/classes/ism050/Fall06](http://www.soe.ucsc.edu/classes/ism050/Fall06)
- TA:
  - Suresh Iyer
  - suresh@soe.ucsc.edu
  - Office Hours:
    - Wednesday 2.30pm-4.30 pm
    - Friday 9.30-11.30am
    - Baskin Engineering 314

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**What is this class about?**

- Supply Chain Management (SCM)

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**More Examples**

- Customer Relationship Management (CRM)
  - Other examples?

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**Business Process Example**

Customer  
Sales  
Finance  
Inventory Control  
Warehousing  

Order  
Take Order  
Enter Order  
Credit Check  
Check Stock  
Print Packing List  
Find Goods  
Ship  

Tell Mfg. to make order
A Streamlined Business Process

Customer
Sales
Finance
Inventory Control
Warehousing

Order
Take Order
Enter Order
Automatic Credit Check

Print
Invoice
Stock
Print Packing list
Find Goods
Ship

Tell Mfg. to make order

A Reengineered Business Process

Customer
Sales
Finance
Inventory Control
Warehousing

Order
On web
Automatic Credit Check
Automatic Checking of Stock

Print
Invoice
Find Goods
Ship

Inform Mfg. to replenish stock

Some Examples

- Supply Chain Management
- Customer relationship management
- Inventory Control
- Transaction Processing
- ...
**Who am I?**

- John Musacchio
- New Assistant Professor in ISM
  - Joined January 2005
- PhD from Berkeley in Electrical Engineering
  - Minor in Management of Technology

**Experience**
- 2 ½ years at a high tech Start-Up
  - Helped design a chip-set for computer-networking switches
- Other experience at large companies: GE, Bell Labs etc.

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**Why does IT change so fast?**

- Moore’s Law is 40 years old [1]
- In 1965, Gordon Moore (Intel Co-founder) said
  - The number of components on a silicon chip would be doubling every year or so.
- Later it has been quoted as “every 18 months,” which has proven to be correct for 40 years!

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**Moore’s Law**

- What does this have to do with Business Information Systems?
- The cost of computation is being driven to zero.
- Businesses that learn to use computation and communications to
  - Add value to their products and services
  - Improve efficiency
- Will gain a competitive advantage over those who don’t.

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**Can we always predict IT future?**

I think there is a world market for maybe five computers.
Thomas J. Watson, Sr., Chairman and CEO
IBM Corporation, 1943

Computers in the future may weigh no more than 1.5 tons.
Ken Olsen, CEO and Founder,
Digital Equipment 1977

There is no reason anyone would want a computer in their home.
Popular Mechanics – 1949

640K ought to be enough for anybody.
Bill Gates, 1981

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**What is happening Lately?**

- Cities like San Francisco are proposing to deploy wireless access points throughout the city [2]?
  - Is this a good idea?
  - What are some of the advantages and disadvantages?

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**What is happening Lately?**

- Companies are eavesdropping on online discussion forums to see what people think of their products.
  - IBM and Accenture have software to automatically trawl through discussion forums.
  - Specialist firms use human researchers to read through posts and identify the most influential posters.

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Courses Objectives

- The objectives of ISM 50 are to understand
  - The needs of business
  - The 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
  - A detailed focus in any particular technology.
  - (A survey of IS technology landscape and its relation to business problems)

Who Should Take it?

- ISM Majors, and those thinking of an ISM major
  - A survey of the ISM major.
- BME Majors
  - Seeking a basic understanding of technology and its role in solving business problems.
- CS, CE, and other engineering majors
  - Those seeking a higher level overview of what technologies are used for.

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
Our Textbook

- Author:
  - David Messerschmitt, 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

- We also have a reader
- The reader is available now at the Bay Tree Bookstore
- The reader contains
  - Case Studies
  - Other Readings

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/Fall06/

Contains

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

Syllabus (Tentative) ON WebPage

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Class Introduction

- Bavarianische Philharmonic (1-16)
Evaluation

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<td>Participation</td>
<td>Each Class</td>
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<td>Pop Quizzes</td>
<td>3 per qtr.</td>
<td>5%</td>
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<tr>
<td>Oral Presentation or Folio</td>
<td>assigned</td>
<td>5%</td>
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<tr>
<td>Weekly Assignments</td>
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<tr>
<td>Business Paper Proposal</td>
<td>October 17</td>
<td>5%</td>
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<tr>
<td>Midterm</td>
<td>October 26</td>
<td>15%</td>
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<td>Database Assignment</td>
<td>TBA</td>
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<tr>
<td>Business Papers Final</td>
<td>November 30</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>December 7</td>
<td>20%</td>
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EXAMS and Quizes

- Midterm
  - Probably October 26

- Final
  - December 7

- Closed book

- A mix of short answers and 1 or 2 essays

- One or two analytical questions

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

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.
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.

Participation

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

ORAL PRESENTATION and NEWS FOLIOS

Presentation/Folio

You will be assigned either

- Presentation
- News Folio

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 by the night before

Presentation Evaluation

- Content of presentation
  - Did the case summary outline the most important aspects of the case study?
  - Was the news story relevant, and furthermore where the points most relevant to the class discussed?
- Delivery:
  - Organization
  - Voice Articulation
  - Professionalism
  - Timing
  - Eye Contact
  - Enthusiasm
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 - 10/10
  - Article 2 - 11/2
  - Article 3 - 11/21

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!

- Tuesday 9/26: Two News Stories.
- Tuesday 10/3: Two News Stories
- The rest of this quarter's presentation assignments will be announced next week

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 Business Paper Guidelines are posted on the website)

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].

Suggested sources of Information

- Company website
- 10K report
  - (This is the annual report public companies file with Security and Exchange Commission.)
- ABI/Inform 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 "ABI/Inform"
  - Try this tonight! And let us know if you have problems

- Industry specific publications
  - Example: Aviation Week
- Books
- Good Magazines (The Economist)
- Consulting groups: Forrester, Gartner, ...
Business Analysis Paper Preferences
Due Thursday Sept 28!
- 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:**
  1. List of your proposed group members.
  2. List of companies you would like to study.
  3. 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.

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Business Analysis Paper Preferences
Due Tuesday April 11th!
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.

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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 October 17th.**

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Assignments

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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

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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 September 28 (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

Sample

BRAD A. KAHN
Local address: 1234 Main Street, Anytown, USA 12345
Phone: (555) 123-4567
Email: bka@anytown.com

OBJECTIVE
To obtain a summer internship in petroleum engineering or geology.

EDUCATION
- Bachelor of Science in Chemical Engineering
  - Virginia Tech, Blacksburg, VA
  - GPA: 3.5

EXPERIENCE
- Chevron Engineering, Inc., Oilfield Services Division
  - Project Engineer, 2006-2008
  - Responsible for design and implementation of oilfield service projects.
- ExxonMobil, Chemical Engineering Department, 2004
  - Process Engineer, 2004-2006
  - Participated in the design and development of new chemical processes.

Sample Resume

How do these pertain to the job you are seeking?
**Sample**

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.

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**Cover Letter**

Bob Brown  
12345 Ocean St  
Santa Cruz, CA 95060  
September 21, 2005

Jane Smith  
Chief Information Officer  
ABC Corporation  
Santa Cruz, CA 95060

Dear Ms. Smith:

I am writing to apply for the position of Web Architect at ABC Corporation. I feel especially well qualified for this position because of my extensive coursework in both programming and in information systems I have had as an Information Systems Management (ISM) student at UC Santa Cruz. I have also had experience designing the website of XYZ Corporation. I have enclosed a copy of my resume. Please contact me if you have any questions about my background. Thank you.

Sincerely,

Bob Brown

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**TO DO:**

By Tuesday (9/26):
- Read "IT Management from 1960-2000" in Reader
- Read Chapter 1, Section II, of O'Brien Book (this material is also in your reader.)

By Thursday (9/28):
- Business Paper Preferences  
  - Group members, Companies, and suggested person to give presentation
  - Turn in as a group
- Resume & Cover Letter  
  - Turn in as an individual

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**Instructor Travel plans**

- You will have a substitute instructor  
  - Tuesday September 26 (Yi Zhang)
  - Thursday September 28 (Subhas Desa)
- Be sure to attend and participate!
- My office hours next week are cancelled  
  - Email me, or ask TA(Suresh Iyer) any questions

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**Some Terminology from Messerschmitt**
Definitions

- An application
  - a software program that provides direct and specific value to a user or organization

- A networked application
  - distributes programs across 2 or more computers which collaborate in realizing an application.