TIM 50 - Business Information Systems

Introduction (Lecture 1)

Instructor: Terry Allen
UC Santa Cruz
9/26/2011

Course Parameters:
- Monday and Wednesday 5:00-6:45 PM
- Stevenson Acad 150

WEB PAGE:
- (write this down, go home, and bookmark it!)
  http://courses.soe.ucsc.edu/courses/tim50/Fall11/01

TIM 50

What is this class about?

Get the "big picture" of the business environment that you will enter in the future.

1) what are business processes
2) information systems used by companies to run their businesses
3) how they are connected

About this class: in a nutshell

Business Processes
- are the tasks or activities that companies use to produce goods or/and services

Information Systems
- computers, web, software
- support/enhance business processes.

What is this class about (example)?

Supply Chain Management (SCM)
More Examples
- Customer Relationship Management (CRM)

Some Examples
- Supply Chain Management
- Customer relationship Management
- Inventory Control
- Transaction Processing
- ...

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 create an Information System
  - Computer Hardware, Software, Networks, etc...

Status quo of businesses today
- Global competitive environment operations (globalization)
  - global competition
  - information revolution
  - knowledge worker
Global competition
- Design, manufacturing, materials, assembly, service, etc.
  - Examples: Nike, Apple
  - In different parts of the world
  - Why?
- Increased competition
  - Global markets vs. local
  - Pressures to be more efficient and effective

Information revolution
- Increased use of IS to create, deliver and use information
  - Data, documents, voice, video
  - Global enterprise needs to share information quickly
    - Design, forecasts, material availability, etc.
    - Monitoring, Manage, Communicate
- Is IS the cause or result of globalization?

Knowledge worker
- Increasing dependence on information to do their work
- Create, acquire, process, synthesize, disseminate, analyze and use information
- Who are knowledge workers
  - Sales executive, production managers, product manager, financial analyst
- Use structured and unstructured information

Knowledge worker II
Knowledge work is non-routine, non-repetitive
- Understand data and impact of work on others and impact of others' work; big picture
Task workers: routine, structured tasks
- Customer service representatives, accounting clerks, insurance claims processor
Key skills
- Strategic thinking: big picture, process view
- Information literacy: find and use needed information
- Communication and collaboration: project team

Courses Objectives
- The objectives of ISM 50 are to understand
  - The needs of businesses
  - 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.

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)
Who Should Take it?

Q: Are you considering a career in marketing, finance, accounting or start your own business? Have no idea what you want to do?

- 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
    - Databases
    - Networks
- Case Studies Throughout

Reader 1 (pages from):

- Author:
  - David Messerschmitt, Professor of EECS, UC Berkeley
- Focus on
  - Technological concepts in computing and communications.
  - Applications.
  - Top-down organization, like our course.

Reader 2:

- The reader contains
  - Chapters 1&2 from "Management Information Systems" by James O'Brien
  - Case Studies

- Both readers are available at the Bay Tree Bookstore
Case Studies (in Reader 2)

- Examples of Businesses using Information Technology
- Illustrate 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://courses.soe.ucsc.edu/courses/tim50/Fall11/01

Contains
- General Class information
- Announcements
- Link to online forum
- Link to detailed description of class:
  http://courses.soe.ucsc.edu/courses/tim50/Fall11/ism50_outline.html
  - Syllabus
  - Homework
  - Requirements/Guidelines for business paper, database project
  - Important dates

Syllabus (Tentative) ON Web Page

<table>
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<td>Class Introduction</td>
<td>CT Management from 1950-2000 (reader pp 1-26)</td>
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<td>2</td>
<td>IT History and Background</td>
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<td>Business Processes</td>
<td>Pricely Case (113-114 + fig)</td>
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<td>Enterprise Applications, Information Access Terms</td>
<td>Messerschmitt Ch 2.3 (13-15)</td>
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Syllabus (cont’d)

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<td>Final Review</td>
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<td>American Airline Case (265-274 + fig)</td>
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Evaluation

- Exams (35%)
  - Midterm
  - Final
- Pop Quizzes (5%)
- Participation in class & online forum (10%)
- Oral Presentation / News Folios (5%)
- Business Paper (25%)
  - Proposal
  - Final Paper
- Database Assignment (10%)
- Weekly Homework (10%)

Supplementary Book

Essentials of Business Processes and Information Systems
Simha R. Magal, Jeffrey Word

Use case studies
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- Exams

  - Midterm (15%)
    - Wednesday, November 8, 8:00-9:45
  - Final (20%)
    - Friday, December 8, 8:00-11:00

EXAM DATES ARE (very close to)FINAL

- Closed book
- A mix of multiple questions, short answers and 1 or 2 essays
- Computation
- 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

- 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.
- You also earn 1 participation point when posting *intelligent* comments in online discussions (forum).
  - Discussion forum should begin operating next week!
- For full participation credit (10%), you need to earn 8 participation points over the quarter.

**ID please...**

- Please say your name every time you speak. Your fellow students (also) will thank you when they have to interact with you.
  - Also, email us a picture of yourself, a file named after you as follows FirstLast.jpg

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**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 9pm 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 from the slides
- 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 - October 10
  - Article 2 - November 1
  - Article 3 - November 15

**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!**

- Wednesday 9/28: 2 News Stories
- Monday 10/3: 2 News Stories
- Wednesday 10/8: 2 News Stories
- The rest of this quarter’s presentation assignments will be announced next week

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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 II

- 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?

Business Analysis Paper III

- How does the company use IT to support or enable its business processes and competitive strategies?
  - What technologies in particular does 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?
- Detailed Business Paper Guidelines will be 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.
  - e.g. eBay's revenues in US Revenues in 2002 were $1.39 billion [1].

Citing Sources

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

E.g.:
"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 2001" [1].

End Note:
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/newspapers.
  - Find it at: http://library.ucsc.edu
  - Click on "article database" on left margin.
  - Click on "Proquest Newspapers"
  - 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 Monday October 3rd ***

- 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.

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 28
- FINAL PAPER DUE: December 8

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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
Evaluation

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Weekly Homework

- Approximately once every week or two.
- They will be announced and posted on the class webpage.
- Usually,
  - Questions from the textbook
  - Questions pertaining to Case Study Readings
- However, Homework 1 is to make a resume and cover letter!
- Individual hardcopies!!

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Homework 1

Turn in Both:
- A Resume
- And Cover Letter
- Due 10/2 (1 week from today)

Resume should be:
- One page (unless you have an incredibly rich and diverse background)
- Focus:
  - Education, Experience, Skills and Abilities
  - What can YOU do for an employer?

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Building Your Resume

Some things employers might look for:
- Academically Qualified.
- Well Rounded (include extra curricular activities)
- Summer Internships, or Part-time work During School
- Professional Presence (Society Memberships)
- Interested and Understanding of Employer’s Area.

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Personal Resume Criteria

- Appealing look (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...

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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)
    - e.g., 1999 to Present if still employed
  - Job Title
    - Major responsibilities
    - Major accomplishments

How do these pertain to the job you are seeking?

Sample

The D. Insurance Company (DICO)
Chemical Technology

- Formulated and improved existing enzyme process used for protecting, coating, or decorating glass surfaces.
- Conducted feasibility assessments on DICO products for resistance to industrial degasification, stability, cost, and recycling points.
- Developed foreign language skills necessary to acquire international accounts.
- Continued work during academic semester breaks.

Computer Skills

- Engineering Applications: AutoCAD, 3D, Pro Engineer, 10/2006
- LexisNexis
- Microsoft Office, WebTop 1, 10/2006
- Platforms: Windows, Macintosh, Unix, Linux

Activities

- Students of Physics Engineering, Student Semester 2002 – 2003 academic year
- Virginia Tech Varsity Rowing Team, Spring 2002 & 2003

Cover Letter

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

Jane Smith
Chief Information Officer
ABC Corporation
Scotts Valley, 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 practical experience in both programming and in information creation. I have had the opportunity to implement and manage the construction of the website of XYZ Corporation. I believe that my background in designing the website of XYZ Corporation helped me understand the importance of user experience.

I have enclosed a copy of my resume. Please contact me if you have any questions about my background. I look forward to hearing from you.

Sincerely,

Bob Brown

Sample

DIANA R. RAMIREZ

Local address: 4123 Hampton AVE, College Park, M.D.
20742

General address: 9134 Franklin Ave., College Park, M.D.
20732

To: Director of Admissions

Objective: To obtain a co-op, summer, or part-time position in biomedical engineering or biotechnology

Education:

University of Maryland
B. Sc. Biomedical Engineering
April 2000 - December 2004

Virginia Polytechnic Institute & State University
Biomedical Engineering major
September 1996 - August 2000

Experience:

Engineering Supervising Senior, Services Office
Computer Science

- Developed and implemented computerized database.
- Provided information to engineering participants.
- Assisted in developing and maintaining an information system.
- Assisted in developing and maintaining an information system.
- Assisted in developing and maintaining an information system.

University of Maryland
B. Sc. Biomedical Engineering

- Minors: Math and Information Technology.
- Minor in Communication Studies.
- Participated in student government activities.
- Participated in student government activities.
- Participated in student government activities.

Activities:

- Students of Physics Engineering, Student Semester 2002 – 2003 academic year
- Virginia Tech Varsity Rowing Team, Spring 2002 & 2003

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 (9/28):
- Read “IT Management from 1960-2000” in reader
- Read:
  - Chapter 1, Section II, of O’Brien book (this material is also in your Reader 2)
  - Chapter 1, Introduction, of Massachennitt book (or Reader 1)

By Tuesday (10/03):
- Send me (cc: TA) your photo
- Business Paper Preferences
  - Group members, Companies, and suggested person to give presentation
- Turn in as a group
- Resume & Cover Letter
- Turn in individually
Some Terminology from Messerschmitt

Definitions

- **An application**
  - a software program that provides direct and specific value to a user or organization
  - Ex. Microsoft Word

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

Definitions

- **Information Technology**
  - the suite of technologies that manage the storage, communication, and manipulation of information.

- **Infrastructure**
  - part of the information technology shared by many applications
    - Hardware - computers and the network
    - Software - operating system, middleware

Definitions

- **Middleware**
  - software falling between the operating system and the application.
  - Ex. connects software components or applications based XML, Web services

History of Computing

- **Centralized**
  - A few big mainframes to automate business functions such as payroll and accounting

- **Time-Shared**
  - Terminals added so many could access mainframe

- **Decentralized**
  - PCs on every desk

- **Networked**
  - Applications could be geographically distributed

Definitions

- **Legacy Applications**
  - Applications implemented in the technology of yesterday.
Next time

- Read "IT history from 1960-2000" (found in Reader 2)
  - Read Chapter 1 --section II of O'Brien (found in reader)
- Read Chapter 1 - Messerchmitt
  - (also found in Reader 1)