
TIM 50 - Business Information Systems

Introduction (Lecture 1)

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

Most slides - and the better part of most other slides - are by
Professor *John Musacchio*

TIM 50

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

Instructor

- Terry Allen (terry_allen@hotmail.com)
 - Office Hours:
 - Monday and Wednesday, 7:00 p.m. to 8:00 p.m. (if necessary),
 - And Tuesday, TBD
 - Office# is also TBD

TAs

- TBD
 - Office Hours:
- Huascar Sanchez (hsanchez@soe.ucsc.edu)
 - Office Hours:

3

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

4

About this class: in a nutshell

Business Processes

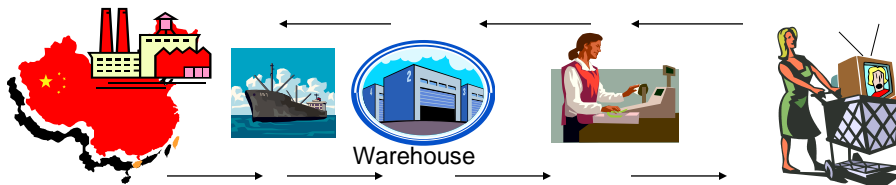
- are the tasks or activities that companies use to produce goods or/and services

Information Systems

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

5

What is this class about (example)?



- **Supply Chain Management (SCM)**
-

6

More Examples



- Customer Relationship Management (CRM)

7

Some Examples

- Supply Chain Management
 - Customer relationship Management
 - Inventory Control
 - Transaction Processing
 - ...
- Enterprise Resource Planning

8

What is an information system?

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



9

What is an information system?

- **Information system**
 - A combination of people, hardware, software, networks...
 - ...that collects, transforms, and disseminates information in an organization.

10

What is Information Technology?

- It's the technology you use to create an Information System
 - Computer Hardware, Software, Networks, etc...

11

Status quo of businesses today

Global competitive environment operations (globalization)

- global competition
- information revolution
- knowledge worker

12

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
-

13

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?
-

14

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

15

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

16

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.
-

17

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)
-

18

Who Should Take it?

Q: Are you considering a career in marketing, finance, accounting or start you 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.
-

19

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!
-

20

What comes first?

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

- Both!



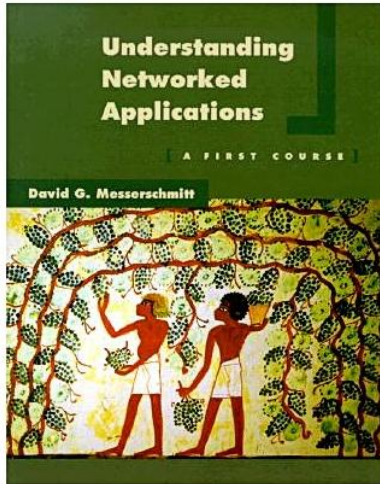
21

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**

22

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

23

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**

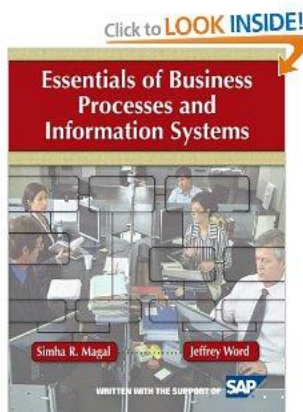
24

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
-

25

Supplementary Book



Essentials of Business
Processes and
Information Systems

Simha R. Magal ,
Jeffrey Word

Use case studies

26

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

27

Syllabus (Tentative) ON Web Page

Class #	Topics	Reading
1	Class Introduction	
2	IT History and Background	IT Management from 1960-2000 (reader pp 1-26) Chapter 1 - Section II of O'Brien (reader pp 47-60)
3	Competing with IT Cash Flows	Chapter 2 - Section I of O'Brien (reader pp 69-77) Cash Flow Handout
4	Competing with IT (Cont'd)	Chapter 2 - Section II of O'Brien (reader pp 78-90)
5	Business Processes,	Frito-Lay Case (93-103 + figs)
6	Enterprise Applications, Information Access Terms	Messerschmitt Ch 2.3 (38-50) Messerschmitt Ch 3.1-3.3 (59-82)
7	Enterprise Applications (cont'd)	Cisco Case (114-124 + figs)
8	E-commerce	Messerschmitt Ch 3.4-3.6 (83-98) Alibris Case (133-143 + figs)
9	IT Concepts	Messerschmitt Ch 4 (107-132)
10	Client Server Computing	Messerschmitt Ch 5 (139-154) Sun-N Tier Case (145-164 + figs)
11	MIDTERM	

28

Syllabus (cont'd)

Class #	Topics	Reading
12	Modularity and Layering	Messerschmitt Ch 6 (157-190)
13	Computer and Comm. Industry	Messerschmitt Ch 7 (198-226)
14	Database Management	Messerschmitt Ch 11.1 - 11.2 (325-335) Messerschmitt Ch 15.1 - 15.2 (415-425)
15	Database Management Cont'd	MySQL Database Case (179-199 + figs)
16	Networking	Messerschmitt Ch 18 (493-512)
17	Networking (Cont'd)	Akamai Case (213-228 + figs)
18	Applications and the Organization	Messerschmitt Ch 9 (273-289)
19	Application Architecture	Messerschmitt Ch 10 (293-321)
20	Application Architecture (Cont'd) Wrap Up, Final Review	American Airlines Case (165-171 + figs)
	FINAL EXAM	

29

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%)

30

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-

31

• 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
-

32

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-

33

•Pop Quizzes



- **3 quizzes, unannounced times**
 - **Simple questions pertaining to the reading assigned for that day**
 - **Only your top 2 quizzes will count**
-

34

Evaluation

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-

35

•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
-

36

•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.**

37

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**



38

Evaluation

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- Weekly Homework (10%)

39

•Presentation/Folio

You will be assigned
either



Presentation



News Folio

40

•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**
-

41

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
-

42

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!



43

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



Hardcopies - drop in class

44

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.

45

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

46

Evaluation

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 - **Business Paper (25%)**
 - **Proposal**
 - **Final Paper**
 - Database Assignment (10%)
 - Weekly Homework (10%)
-

47

Evaluation

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 - Pop Quizzes (5%)
 - Participation in class & online forum (10%)
 - Oral Presentation / News Folios (5%)
 - **Business Paper - only one in a group**
 - **Proposal (5%)**
 - **Final Paper (20%)**
 - Database Assignment (10%)
 - Weekly Workhome (10%)
-

48

•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.

49

•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?

50

•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
-

51

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].
- [1] eBay 2005 Annual Report.
-

52

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:

[1] "Semiconductor Trends", *Silicon Valley Tech Week*, August 9, 1999, page 81.

53

Citing Sources

- The easiest way to lose points on your paper is to not cite sources!
 - Guide on class website to help you cite your sources correctly.
 - Talk to the TA or Instructor if you have questions.
-

54

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, ...

55

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.

56

Business Analysis Paper Preferences

*** Due Monday October 3rd ***

- At least **two** of your preferred companies must be from this list (yes, your list of preferred companies must contain at least that many names):
 - Southwest Airlines
 - Federal Express
 - Home Depot
 - Wal-Mart Stores
 - Charles Schwab
 - Amazon
 - eBay
- At least **one** of your preferred companies must be **absent** from the list above (yes, your list of preferred comp-...oh, you get the idea)

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

57

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**
-

58

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-

59

• 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



60

Evaluation

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 - Proposal
 - Final Paper
 - Database Assignment (10%)
 - **Weekly Homework (10%)**
-

61

• 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!!!**
-

62

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?
-

63

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...
-

64

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.
-

65

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.
-

66

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?

67

Sample

BRAD A. KANG

Local address: 4123 Hagerstown Hall • College Park, MD 20742 • (301) 314-5464
 Permanent address: 3629 Belvoir Court • Newtown, PA 18940 • (215) 537-4177
 E-mail address: sstudent@umd.edu

OBJECTIVE

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

EDUCATION

University of Maryland <i>B.S., Biological Resources Engineering</i> GPA 3.6	College Park, MD December 2005
Virginia Polytechnic Institute & State University <i>Chemical Engineering coursework</i>	Blacksburg, VA August 2001 - May 2003

EXPERIENCE

Engineering Co-op & Career Services Office <i>Peer Assistant</i> <ul style="list-style-type: none"> • Critique engineering student resumes. • Provide information to engineering employers. • Present introductory job skill workshops and orientation sessions. • Maintain office databases and employer information files. 	College Park, MD June 2004 - present
University of Maryland <i>Design Team Leader - Engineering Design</i> <ul style="list-style-type: none"> • Managed a team of 5 students to work within project constraints and deadlines. • Designed, fabricated, and evaluated a digital postal scale according to design specifications. • Submitted prototype chosen to compete in the final design competition. • Prepared and formally presented a preliminary and final design package using Pro Engineer, Adobe Photoshop, Microsoft Excel, and Microsoft Powerpoint. 	College Park, MD Spring 2004

68

Sample

The O. Hommel Company (OHCO)
Chemist/Lab Technician

Carnegie, PA
May 2003 - January 2004

- Formulated new and improved existing epoxy printing inks used for protecting, coating, or decorating glass surfaces.
- Conducted tolerance experiments on OHCO products for resistance to ultraviolet degradation, solubility, melting and freezing points.
- Independently filled product orders of up to 50 pounds and coordinated shipping itinerary.
- Continued work during academic calendar breaks.

COMPUTER SKILLS

- Engineering Applications: AutoCAD-R13, Pro Engineer, TKSolver
- Language: C++
- Applications: Mathematica 5, Microsoft Office, MiniTab 11, Web Browsers
- Platforms: Windows 98/NT/2000/XP, Linux

ACTIVITIES

- Society of Plastics Engineers: Student Member 2002 - 2003 academic year
 - Virginia Tech Varsity Rowing Team: Spring 2002 & 2003
-

69

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.
-

70


Cover Letter

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

Jane Smith
Chief Information Officer
ABC Corporation
Scotts Valley, CA 95000

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 a 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. I look forward to hearing from you.

Sincerely,

Bob Brown

71

TO DO:

By Thursday (9/28):

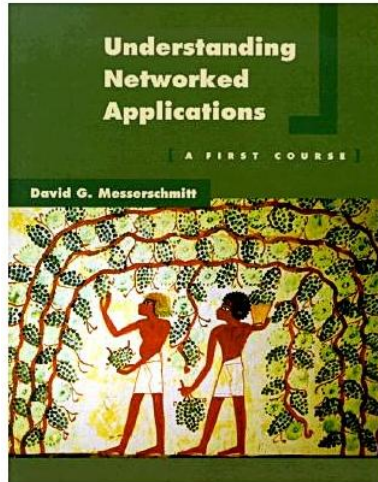
- Read "IT Management from 1960-2000" in reader
- Read:
 - Chapter 1, Section II, of O'Brien book (this material is also in your Reader 2)
 - Chapter 1, Introduction, of Messerschmitt book (or Reader 1)

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

72

Some Terminology from Messerschmitt



73

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*

74

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
-

75

Definitions

- *Middleware*

software falling between the operating system and the application.

 - For example, software components, applications based XML, or Web services
-

76

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 main frame
 - **Decentralized**
 - PCs on every desk
 - **Networked**
 - Applications could be geographically distributed
-

77

Definitions

Legacy Applications

- Applications implemented in the technology of yesterday.

78

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 - Messerschmitt
 - (also found in Reader 1)