TIM 50 - Business Information Systems

Introduction

Instructor: Ram Akella
UC Santa Cruz
9/24/2015
WEB PAGE:

(write this down, go home, and bookmark it!)
http://classes.soe.ucsc.edu/tim050/Fall15/

Be sure to capitalize Fall15.

Instructor:
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TIM 50

TAs

- Yueming Sun  :  yueming@soe.ucsc.edu
- Duan Zhang   :  dzhang33@ucsc.edu
What is this class about?
Acquiring a Song in 1980

Drive to record store

Search for hours for desired music

Buy
Acquiring a music/car in 2015

Push iTunes Button

Type name of song

Press “Buy”
1980: Who's got the power?
2015: Who’s got the power?
UPS

- DIAD (Delivery Information Access Device)
Business Process Example

Business Functions

Customer
- Sales
- Finance
- Inventory Control
- Warehousing

Order
- Take Order
- Enter Order
- Credit Check
- Check Stock
  - Print Packing list
  - Find Goods
  - Ship

Print Invoice

Tell Mfg. to make order
A Streamlined Business Process

Business Functions:
- Customer
- Sales
- Finance
- Inventory Control
- Warehousing

1. Customer
   - Order
     - Take Order
     - Credit Check
       - Automatic Credit Check
     - Enter Order
     - Check Stock
       - Print Packing list
         - Print Invoice
     - Ship

2. Tell Mfg. to make order
A Reengineered Business Process

Customer

Order
On web

Sales

Finance

Inventory Control

Warehousing

Inform Mfg. to replenish stock

Automatic Credit Check
Automatic Checking of Stock

Print
Packing list
And invoice

Find Goods

Ship
Some Examples

- Supply Chain Management
- Customer relationship Management
- 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 an information system?

**Information system**

- A combination of **people**, hardware, software, networks...
- that collects, transforms, and disseminates information in an organization.
What is information technology?

- It’s the technology you use to make an information systems
  - Computer Hardware, Software, Networks, etc…
The objectives of TIM 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.
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)
TIM 50 Course Pre-requisites

- No specific programming language knowledge required, though useful
What comes first?

- Do business needs drive the design of technology?
- ....Or does the technology drive the design of a business?
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
Reading Material 1

Selected Chapters from:
D. Messerschmitt, *Understanding Networked Applications*

Case Studies

= Reading Material 1
Reading Material 2

Selected Chapters from:
Laudon & Laudon, Essentials of MIS, 11th edition
Case Studies

- Otis Elevator
- Cisco Systems
- Alibaba
- Zhejiang Corporation
- Amazon Web Services
Class Webpage

http://classes.soe.ucsc.edu/tim050/Fall15/

Contains

- Syllabus
- Assignments
- Instructor contact information
- Requirements for assignments and projects
- Exam dates
<table>
<thead>
<tr>
<th>Class #</th>
<th>Date</th>
<th>Topics</th>
<th>Reading</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>9/24</td>
<td>Class Introduction</td>
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<tr>
<td>2</td>
<td>9/29</td>
<td>Business Background and Terminology, Types of Enterprise Information Systems</td>
<td>Laudon &amp; Laudon Ch 2 (1-35, can skip cases on 16 and 26) Online material</td>
<td>Bus Paper Preferences Out  Assignment 1 out (see ecommons site)</td>
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<tr>
<td>3</td>
<td>10/1</td>
<td>Competing with IT, Transforming Business Processes</td>
<td>Laudon &amp; Laudon Ch 3 (45-74, can skip cases on 52 and 62) Online material</td>
<td>Bus Paper Prefs Due</td>
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</table>
| 4      | 10/6   | Business Process Transformation Cont’d, Enterprise Applications        | Otis Case  
Begin Laudon & Laudon Ch 8 (83-97 until end of section 2, can skip case on 93) |                                                  |
| 5      | 10/8   | Enterprise Applications (cont’d)                                       | Finish Laudon & Laudon Ch 8 (97-108, can skip case on 100)              |                                                  |
| 6      | 10/13  | Conclude Enterprise Applications, Begin E-commerce                     | Cisco Case  
Begin Laudon & Laudon Ch 9 (117-127)                                       |                                                  |
| 7      | 10/15  | E-commerce (cont’d)                                                    | Laudon & Laudon Ch 9  
(128-148, can skip case on 132)  
Alibaba Case |                                                  |
<p>| 8      | 10/20  | IT Concepts                                                            | Messerschmitt Ch 4 (107-132)                                            |                                                  |
| 9      | 10/22  | MIDTERM EXAM                                                           |                                                                        |                                                  |
| 10     | 10/27  | Client Server Computing                                                | Messerschmitt Ch 5 (139-154)                                            |                                                  |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading Material</th>
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<tbody>
<tr>
<td>11</td>
<td>10/29</td>
<td>Modularity and Layering</td>
<td>Messerschmitt Ch 6 (157-190)</td>
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<td>12</td>
<td>11/3</td>
<td>Computer and Comm. Industry</td>
<td>Messerschmitt Ch 7 (197-226)</td>
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<td>13</td>
<td>11/5</td>
<td>Applications and the Organization</td>
<td>Messerschmitt Ch 9 (273-289)</td>
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<td>14</td>
<td>11/10</td>
<td>Databases and Data Management</td>
<td>Begin Laudon &amp; Laudon Ch 5 (157-178, can skip case on 171)</td>
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<td>15</td>
<td>11/12</td>
<td>Databases and Data Management (cont'd)</td>
<td>Finish Laudon &amp; Laudon Ch 5 (178-183, can skip case on 180) Zhejiang Cooperation of China Case</td>
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<td>16</td>
<td>11/17</td>
<td>Networking</td>
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<td>17</td>
<td>11/19</td>
<td>Networking (cont'd)</td>
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<td>Cloud Computing (cont'd)</td>
<td>Amazon Web Services Case</td>
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<td>20</td>
<td>12/3</td>
<td>Review</td>
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<td><strong>FINAL EXAM</strong></td>
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## Evaluation (posted on web page)

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<tr>
<td>Database Assignments</td>
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<td>10%</td>
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<tr>
<td>In-class exercises / Quizes</td>
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<td>Business Paper Proposal</td>
<td>10/20</td>
<td>5%</td>
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<tr>
<td>Business Paper First Draft</td>
<td>11/12</td>
<td>5%</td>
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<tr>
<td>Business Paper Final Draft</td>
<td>12/3</td>
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<tr>
<td>Midterm Exam</td>
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<tr>
<td>Final Exam</td>
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<td><strong>Total</strong></td>
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<td>100%</td>
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<td><strong>Extra optional instructor discretionary bonus points</strong></td>
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<td>+10%</td>
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Regular Exercises (10%)

- Exercises pertaining to the reading and class discussion

- About 6 or so of these in the quarter

- First one assigned this week.
  - See class web site for link to ecommons.
  - On ecommons, there is an assignment 1,
  - due Thursday 10/1 (Thursday next week)
  - On the reading...
Database Exercises (10%)

- Early in the quarter, TAs will hold tutorial sessions on MS Access
  - Choose from 3 times in each of week 3 and week 4.

- Times to be announced this week.
In Class Exercises/ Quizzes (10%)

- Some classes, we will break into groups to discuss readings and case studies
  - Groups will turn in answers after class

- Pop quizzes (In-Class)
  - ~3 per quarter. Easy questions pertaining to reading
Exams

- **Midterm**
  - October 22

- **Final**
  - December

- **Closed book**

- **A mix of short answers and multiple choice**
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

- You’ll work in groups of about 4-5
Business Analysis Paper

Paper Should address the following areas:

- Industry Profile
- Company Profile
- Information Technology
- Leadership
- Market and Financial Performance
- Trajectory
Business Analysis Paper

Industry Profile

- What is the industry?
- What value does the industry provide to its customers?
- Describe the competitive environment (Porter Model)
Business Analysis Paper

- **Company Profile**
  - What business is your company in?
  - What value does it provide its customers?
  - In what ways is it different than its competitors?
  - How has it's history shaped what it can offer its customers?
Information Technology

- How does the company use IT to support or enable its business processes and competitive strategies?
- What technologies does it use?
- Does the company use existing technologies, develop its own technology, or some combination of both?
- 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?
- Is it used to enhance or differentiate their product, reduce costs, or both?
Leadership

- Who are/were the key leaders of the company?

- What decisions did these leaders make, in particular decisions relating to the deployment of IT?

- What opportunities did they identify that helped make their company what it is today?
Market and Financial Performance

- What is the company’s revenue and profit, and how has it evolved over the years?
- How does the company’s performance compare to its competitors?
- Industry specific measures:
  - Cost per Available Seat Mile (Airlines)
  - Sales per square foot (retail)
Trajectory

- If the company successfully used information systems in its past, has it continued to innovate and improve up until today?
- Is the company effectively postured for the future?
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 US Revenues in 2002 were $1.39 billion [1].
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... industry was able to reach $200 billion in sales ...” [1].

End Note:

Citing Sources

- The easiest way to lose points on your paper is to not cite sources!

- Guides on class website will be posted soon to help you cite your sources correctly.

- Talk to the TA or instructor if you have questions.
Suggested sources of Information

- Company website
- 10K report
  - (This is the annual report public companies file with Security and Exchange Commission.)

- Business article database
  - See UCSC Library website!

- Industry specific publications
  - Example: Aviation Week

- Books

- Good Magazines (The Economist)

- Consulting groups: Forrester, Gartner, ...
Citing Sources

- To receive Full Credit, you must cite at least 5 print sources.
  - If your source is available both online and in print, cite the print version.
Business Analysis Paper Preferences
Due NEXT WEEK -- Tuesday 10/1!

- We want you to try to form your own groups.
  - However, we may modify the groups to balance skills and experience

- As a group, turn in (paper):
  - Names of proposed group members with emails
  - List of companies you would like to study

- Use the form we provide on the class webpage!
Business Analysis Paper Preferences
Due Tuesday 4/7!

At least two of your preferred companies must be from this list:

- Emirates (airline),
- CVS Caremark,
- eBay,
- Carrefour (Supermarket Chain),
- Charles Schwab,
- Inditex (Clothing retailer),
- Netflix,
- Toyota,
- Amazon

With your preferences in mind, we will make the final company assignments to the groups.
To help us create balanced groups...
...you will self identify your best skills from:

W: Writing
A: Accounting and finance
C: Computers and technology
S: Business strategy
L: Literature Search
Business Paper Preferences

- Example:
  - Bob Smith  smith@yahoo.com  A, L
  - Jane Do    do@hotmail.com   C, W
  - Chris Tomas chris@gmail.com S, W

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!!!!

- DUE: October 20
Business Paper

First Draft
- draft of your final paper
- The closer to “done” the better

- Due November 12
Business Paper

- Final Draft
- Due December 3 (Last Day of Class).