

Information Systems Development and Management (Fall 2006)

Basic Course Information

Instructor

Ramanath Subramanyam
Office: 343P Wohlers Hall
Phone: Work: 217-244-7087
E-mail: rsubrama@uiuc.edu
Office Hours: Tue and Thu 3:30 to 4:30 p.m., plus by Appointment
Website: <http://compass.uiuc.edu>

Course Materials

1. *Required Course Packet:* Available as a Custom eBook/Online Viewing Book (Look under University of Illinois-Urbana, this course title and my name) from <http://ebooks.primisonline.com/eBookstore/index.jsp>

2. *Required:* The Borland *Free* Online UML Tutorial will be used for instruction on UML (Available at):

<http://bdn.borland.com/article/0,1410,31863,00.html>

3. *Required:* Microsoft Visio 2003 Software available for FREE for students registered in this class through MSDN Academic Alliance.

Objectives

This course covers technology and business issues in managing the various pieces of the enterprise information systems (IS) infrastructure, which enable firms to create value for customers and shareholders of the firm. We will address the perspectives of both the users and developers of this infrastructure. This will help students in understanding the technological as well as business implications of the IS decisions in firms.

There are two INTERLEAVED Elements in this course – (a) Business and Infrastructure Issues related to IT and Software, and (b) Understanding how to model an Information Systems Solution (You do not need to know Programming – In fact, you do “Almost everything but programming”) that caters to business needs of a fictional firm.

Methods: The first element will be taught using case, lecture and article discussions. The Second Element will be covered using an online tutorial for UML, in-class demonstrations, lectures, and a Modeling Language (Actually a set of symbols and representations) *widely* used and popular in the IT industry. Students will work on a term project that ties the two elements together and draw modeling diagrams in Microsoft Visio for the term project.

Topics: The first element is the evolution of the IS infrastructure. Class lectures and Case discussions address topics such as Enterprise Resource Planning Systems, Customer Relationship Management, Systems Supply Chain Management applications and IT outsourcing. These topics will be handled primarily through real-world business cases and selected articles. We will try to understand challenges and benefits posed in successful implementation of these pieces in the enterprise information systems infrastructure. We will raise questions and attempt answers to fundamental questions such as: What are the benefits of an Enterprise Resource Planning (ERP) solution? What are some benefits of integrating a

supply chain through IT Applications? What are the implications of Customer Relationship Management (CRM) and Supply Chain Management (SCM) software solutions to organizations? These discussions will aid students in understanding the managerial implications of these technologies and enable them to make intelligent business decisions.

The second element, closely interleaved with the first element, covers the area of Software Development. Almost every professional who works in a field related to Information Technology requires an understanding of how IT/software projects are developed or managed. This element of the course attempts to provide fundamental managerial skills for students who will work on IT projects or be associated with an IT project closely. Students will also learn how to use a popular modeling language, Unified Modeling Language (or UML) to model a solution to a business problem. We will also cover basic elements of IT Project Mgmt such as Cost and Schedule management in the process. We will also discuss various kinds of development process models that can be applied to different kinds of software projects.

Course Grades/Project

The course grading policy will be discussed on the first day of class. It has the following breakup

- 25% for the term project report [peer-review weighted scores]
- 5% for the final presentation slides and delivery
- 15% for Quiz 1 [Multiple choice]
- 15% for Quiz 2 [Multiple choice]
- 10% for class participation [Quality is more important than quantity]
- 10% for the topic presentation and discussion facilitated by the student group [50% of the credit will be given for innovative ideas for presentations/discussions and the level of interactivity in the class]
- 20% for the case and article write-ups. [Unless otherwise specified, the article write-ups will require submission of a ONE-page (maximum of 1 ½ pages) typed document (with 12 point font) due during the class on which the write-up is due. The questions will be provided to you in advance.]

Let us make sure that it will be a rewarding experience for all of us by coming prepared to each class.

~~Course Schedule: The course schedule is provided in a separate document.~~

Term project : The details of the project are also available in a separate document.

Term project reports are due on the last day of class. The project report should be within 3000-5000 words. A large report is not required for this assignment but diligent effort is expected. **The project report will be worth 25%** of the total grade for the course and the **project slides and presentation (held during the last week of classes) will be worth 5%**. Approximately 85% of the project report grade will be based on content and 15% on form. Poor writing, lack of proof reading, and excessive stylistic errors may result in a lower grade in the project. The project presentation should be of a professional quality. The goal of the presentation is to provide practice in presenting the material to an audience.

Class participation (10% of grade): Your class participation grade depends on your ability to add to class discussions through quality contributions. You are expected to be prepared with the reading assignments for the class and should actively engage in the classroom learning experience. A contribution in the class that enhances the group learning is considered good.

Honor Code and Academic Integrity: We will adhere to the code 33 of the university policy manual. Please visit this link: http://www.uiuc.edu/admin_manual/code/rule_33.html for more information.

Information Systems Development and Management
SCHEDULE: BADM 555 - Fall 2006

Module	Class/ Date	Topics covered	Reading	Assignment
<p style="text-align: center;"><u>MODULE 1:</u></p> <p>INSTRUCTOR facilitated: - Strategic IT and IT Project Management Basics - Strategic Elements of IT/Software - Software Lifecycle Approaches - Current Trends in software such as Outsourcing</p>	<p>Class 1: Aug 24</p>	- Introduction - Course objectives - Grading Policy, etc...		
	<p>Class 2: Aug 31</p>	IT Project Management Basics	From e-Book coursepack: "They Bought In and Now They Want to Bail Out," by Eric McNulty, HBR	One and a half page (maximum) answer to the question: "What should Barry do to save the project?"
<p style="text-align: center;"><u>MODULE 2:</u></p> <p>INSTRUCTOR facilitated: Enterprise Software Applications</p>	<p>Class 3: Sep 7</p>	"Introduction to Enterprise Applications"	<p>Suggested: CIO.com article on ABCs of ERP available at: http://www.cio.com/research/erp/edit/erpbasics.html</p> <p>Assigned: "Harley Davidson: Enterprise Software Selection" Assigned Reading: From e-Book Coursepack: "Harley Davidson - Enterprise Software Selection" HBS Case</p>	One and a half page (maximum - 12 point - Single spaced) answer to the questions on the Harley Davidson Case provided to you
	<p>Class 4: Sep 14</p>	- Customer Relationship Management - Supply Chain Management applications - IT firm capability.	<p>Suggested: CIO.com article on ABCs of CRM available at: http://www.cio.com/research/crm/edit/crmabc.html</p> <p>CIO.com article on ABCs of SCM http://www.cio.com/research/scm/edit/012202_scm.html</p>	One page (maximum) answer to the question: How do CRM and SCM applications differ in terms of purpose and fetching returns on Investments?
<p style="text-align: center;"><u>MODULE 3:</u></p> <p>INSTRUCTOR facilitated: - Demand Chain Applications - Supply Chain Applications.</p>				

NOTE: If the student group that is going to facilitate the discussion the following week decides to provide a reading for the following week to others, they should do so by this date

<u>MODULE 4:</u>			
<p>Part 1: STUDENT facilitated</p> <p>IT Investments and Generating Returns</p>	<p>Class 5: Sep 21</p>	<p>PART 1: Topics should include:</p> <p>NPV approach: Challenges to approaches such as NPV for IT Projects; Alternative approaches?</p> <hr/> <p>PART 2: Lecture and discussions</p>	<p>Borland UML Tutorial: Use Case Diagrams</p>
<p>Part 2: INSTRUCTOR facilitated:</p> <p>Software Development</p>			
<u>MODULE 5:</u>			
<p>Part 1: INSTRUCTOR facilitated:</p> <p>IT/Software Services</p>	<p>Class 6: Sep 28</p>	<p>PART 1:</p> <ul style="list-style-type: none"> - Alternative forms of sourcing software - Web Services and ASPs <p>PART 2: Topics should include:</p> <p>IT Outsourcing and challenges it entails for firms – primary discussion from a client’s perspective while students are also encouraged to bring in vendor perspectives as well to the discussion</p>	<p>Assigned: Article from eBook coursepack: “Your Next IT Strategy” by H. Brown</p> <p>Suggested: CIO.com article on ABCs of ASP/Outsourcing available at: http://www.cio.com/su/mmaries/outsourcing/asp/</p> <p>One page (maximum) answer to the questions about the article</p>
<p>Part 2: STUDENT facilitated:</p> <p>IT Outsourcing</p>			
<u>MODULE 6:</u>			
<p>INSTRUCTOR facilitated:</p> <ul style="list-style-type: none"> - Modularity - Basics of Object Orientation - Understanding UML Class Diagrams and Object Diagrams 	<p>Class 7: Oct 5</p>	<p>PART 1:</p> <p>Business Solutions Development (Essentials)</p> <p>PART 2:</p> <ul style="list-style-type: none"> - Project Discussion - Review of Quiz material 	<p>Borland UML Tutorial on Class Diagrams and Object Diagrams</p>

OCT 12:
QUIZ 1

MODULE 7:

INSTRUCTOR facilitated:
Fundamentals of IT Project
Management

Class 9:
Oct 19:

PART 1: Cost
Management:

Discussion of
techniques (e.g.
Earned Value
Management)

PART 2: Schedule
and Resource
Management:

Lecture on
techniques

One page (maximum) answer to the question:

Pick five important steps you would take during the Feasibility and Analysis stages (Early stages) of a LARGE scale software project.

For each step, give a hypothetical situation that would arise if the step you mention is not undertaken.

Maximum credit will go to the response with MAXIMALLY differentiated steps (implying that the five steps should not have similar repercussions if not undertaken)

MODULE 8:

INSTRUCTOR facilitated:
Unified Modeling Language

Class 10
Oct 26:

PART 1:

- Unified Modeling
Language
- Sequence diagrams
- Collaboration
Diagrams,

PART 2:
-Unified Modeling
Language
- Statechart Diagrams
- Activity Diagrams
- Component
Diagrams
- Deployment
Diagrams

Read "Borland UML
Tutorial" for the
parts covered during
the week;

Bring project
questions to the
instructor

One page (maximum)
answer to the
question:

**How can managers
benefit from
learning UML?**

MODULE 9:

Emerging Technologies and Trends (Part A)

Class 11
Nov 2:

Component-Based Development and Service-Oriented Enterprise Architectures

Part 1: STUDENT facilitated

Part 2: INSTRUCTOR facilitated

MODULE 10:

Emerging Technologies and Trends (Part B):

Class 12:
Nov 9

PART 1: Open Source Software:

Student group should discuss the evolution of open source as a viable alternative for firms interested in

Part 1: STUDENT facilitated

Part 2: INSTRUCTOR facilitated

PART 2: Summary of Open Source Concepts by the Instructor

MODULE 10 (continued...):

Part 1: STUDENT facilitated

Class 13:
Nov 16

PART 1:

- Knowledge Management
- Data Warehousing
- Data Mining
- Business Intelligence Software

Part 2: INSTRUCTOR facilitated

PART 2:

Discussion and summary

THANKSGIVING BREAK

MODULE 10 (continued...):

INSTRUCTOR facilitated:
Outsourcing and its Implications

Class 14:
Nov 30

- Lecture and discussion
- Review of Quiz 2 Material

From eBook course-pack – HBS case “Cathay Pacific: Doing More with Less”

Prepare and write a **one and a half page (max) response to the questions about the case.**

LAST DAY OF CLASS

Class 15:
Dec 7th:

PART 1:

- Student Presentations
- Final Project report submission

PART 2:

QUIZ 2