Common Sense Approaches for IT Excellence
X403.8
(2 semester units in EECS)
Classroom Format

Purpose of the Course/Course Description

This course introduces IT best practices and pitfalls that run the gamut of IT activities; from strategy and project implementation to IT operations. Students will explore these practices from an atypical viewpoint - a top-down, conceptual *business-results*-oriented perspective. This course is intended for IT and corporate professionals who would like to understand how business drivers and IT solutions intertwine to achieve results. Students will learn the fundamental drivers of IT effectiveness ("do the right things") and efficiency ("do the things right"), all without wavering from a business perspective.

IT is typically thought of as a technical field. However, technology has become integral to business operations and is needed to enable and improve *business results*. We rely on systems to support everything from manufacturing and finance to collaboration and knowledge-sharing. When IT initiatives lose focus on business drivers, the result is "scope creep" that dilutes emphasis on highest-impact needs – and projects that under-perform to goals and potentials. Both technical and business professionals can improve their effectiveness with a deep understanding of how the two fit together. This class will provide this understanding, and will use a structural analysis of a small set of industries to demonstrate the relationship between business drivers and IT implications.

Learning Objectives

When students have completed this course, they will be able to:

- Demonstrate conceptual understanding across the spectrum of IT activities
- Speak intelligently about IT topics at a high level to a variety of audiences, including executives, business staff, and IT staff
- Identify possible IT implications from the business context of a situation
- Describe at least five critical best practices and five pitfalls across the range of IT activities, from strategic to implementation-focused to operational
- Identify issues and improvement opportunities within current IT-related activities and processes in which they participate

Intended Audience

This course is intended for IT and business professionals who would like to better understand how business drivers and IT solutions fit together to drive business results, and would like to better understand best practices and pitfalls in management of IT activities.

Prerequisites

This course is suitable for students with at least a few years of industry experience and some background or experience with IT initiatives or IT projects. This background can be from either a technical or non-technical perspective. No specific technical skills or knowledge are required.

Session by Session Summary

Meeting	Topics	Time
1	**IT Management: Context and Course Approach** • Discuss the context of the course and common pitfalls in the ways that IT is typically perceived and approached • Review the syllabus topics and grading criteria	1h
	Conceptual Overview • Introduce the industry-independent business information framework, and discuss the information flows within it • Begin the discussion of the ways that business information requirements drive IT enablement needs, as well as factors that may drive relative priorities • Conduct high-level discussion regarding variations in information needs across a small set of specific industries: manufacturing; pharmaceuticals, software, software services • Formalize the framework for looking at business information needs within an industry • Examine public sources of information to be able to quickly understand an industry with which one has little experience • Introduce **Homework 1:** Using public information to understand a company's business – and the information it relies on	2h
2	**Industry Survey** • Discuss any open questions on Homework #1 (due 9/17) • Continue industry-specific discussion: Basic business model (structure of revenues and costs) for each of our small set of industries; the ways that the business model may drive IT enablement prioritization; key IT implications for each industry • Short discussion of other industries' unique information needs	1h30m
	Overview of End-to-end IT Management Framework • Introduce the end-to-end framework that describes the range of IT activities a company must think about, from developing IT strategy to maintaining and decommissioning implemented systems • Discuss each of the key areas in the framework in light of our "favorite" industries – what might the work look like in each of those areas	1h30m

Meeting	Topics	Time
3	**Homework #1 Review** • Look at specific examples from the homework – what did we learn? **IT Strategy and Governance** • Define strategy; discuss importance and key drivers of IT strategy • Discuss how strategic IT needs play in to project identification, funding, portfolio management, and governance • Discuss IT portfolio management, funding, and governance approaches • Discuss IT project valuation approaches to improve project accept/reject decision-making • Introduce **Homework 2:** Strategic IT implications for a young company in a particular industry expecting to experience steep growth in revenue/customers at a particular point in time	3h
4	**Implementing Business Systems** • Group discussion of Homework 2: What might be the most critical IT needs for our example companies? How might they be prioritized? What might be our first "project" for each? • Introduce system implementation framework – from system selection to the transition to post-deployment support and maintenance • Review key aspects of the system selection process, best practices, and pitfalls	3h
5	**Implementing Business Systems, continued** • Discuss common pitfalls in business system implementation projects and critical success factors • Review key aspects for setting up project teams and execution processes, including managing, measuring, and reporting progress	3h
6	**Implementing Business Systems, continued** • Review pitfalls and best practices in translating requirements to solutions, including user-centeredness approaches • Review pitfalls and best practices in managing vendors and third-parties involved in implementation efforts • Introduce **Homework 3:** Define an IT project to meet an identified strategic need from Homework 2	3h
7	**Implementing Business Systems, continued** • Review and discuss Homework 3: What did we find? What questions arose?	45m

Meeting	Topics	Time
	Managing IT Operations • Introduce a framework that describes the range of activities involved in post-deployment operations for an implemented business system • Discuss balance of proactive and reactive activities • Review best practices and common pitfalls across IT support, monitoring, maintenance, change management, and related processes	2h15m
8	**Managing IT Operations, continued** • Discuss the relationships between support structure definition, service level agreements, and monitoring and maintenance responsibilities • Discuss approaches for measuring IT service delivery, and monitoring results and trends to anticipate problems before they cause major business disruptions • Look back at funding and governance to talk about the ways that funding structure relates to release and change management processes and IT support team responsibilities • Discuss system replacement and de-commissioning • Introduce **Homework 4:** Develop an executive summary analysis of needs for post-deployment support structure and definition of key roles and expectations (including service level and monitoring)	1h15m
	Survey of Technical Trends, Issues, and Systems • Survey technologies and technology solutions currently creating "buzz", as well as possible trends over the next few years • Survey common IT issues of (somewhat) more technical nature, such as data quality, ownership, and reliability issues; application integration architectures and challenges; ad-hoc architectural build-out and system proliferation	1h45m
9	**Survey of Technical Trends, Issues, and Systems** • Review some of the most critical system categories at a very high level (e.g., ERP, PDM, …)	1h

Meeting	Topics	Time
	Course Recap • End-to-end IT management framework • Translating industry- and company-specific business drivers to information management needs and IT priorities • Selecting and funding projects • Critical success factors for IT projects • IT Operations framework and best practices • Identifying and resolving data issues • Evaluating and responding to trends • Sources for more information • Introduce **Project Presentation:** Template and instructions for teams to summarize information from Homework 1-4 into an Executive Summary presentation for the last day • Address questions and open items before the "Final Quiz"	2h
10	**Final Exam**	45m
	Presentation of Projects	2h15m

Course Grading

- Homework – 40%
- Final Project Presentation – 40%
- Participation – 5%
- Final Exam – 15%

Because the assignments build upon each other, late homework assignments will be accepted. This policy is intended to allow students who miss a class due to illness or fall behind for some other reason to catch up. However, students submitting late assignments will receive penalized scores for the assignments: one letter grade per week. The team projects at the end of the class will have individualized scores assigned through team member assessments of each member's relative contribution.

In order to earn credit for this course, students must complete assigned projects with passing results, must take the final exam, and must participate in their team project.

Class Discussion Forum

A class discussion forum has been established for the purpose of sharing information and discussing challenges and issues. Students may exchange information at any time. The instructor will check in a few times a week to see whether there are some common questions or challenges. This periodic instructor moderation can be used as a means for "virtual office hours" by any student with questions or seeking further information.

Recommended Reading

The following materials may be helpful as supplementary material for the course or for future IT-related endeavors. None of these books are required reading for the course; all required information will be provided in class materials.

- Business Strategies for Information Technology Management, Kalle Kangas, 2003, IRM Press, ISBN 1-931777-45-4
- CIO Wisdom: Best Practices from Silicon Valley's Leading IT Experts, Dean Lane, 2004, ISBN 0-13-141115-2, Prentice Hall PTR
- Enterprise Architecture as Strategy: Creating a Foundation for Business Execution, Jeanne W. Ross, Peter Weill, David C. Robertson, 2006, Harvard Business School Press, ISBN 978-1-59139-839-4
- From Business Strategy to IT Action: Right Decisions for a Better Bottom Line, Robert J. Benson, Thomas L. Bugnitz, William B. Walton, 2004, John Wiley & Sons, ISBN 0-471-49191-8
- Managing IT as a Business: A Survival Guide for CEOs, Mark D. Lutchen, 2004, John Wiley & Sons, ISBN 0-471-47104-6
- Managing and Using Information Systems: A Strategic Approach, Keri E. Pearlson & Carol S. Saunders, 2006, John Wiley & Sons, ISBN 978-0-471-71538-2
- The Executive's Guide to Information Technology, John Baschab and Jon Piot, 2007, John Wiley & Sons, ISBN 978-0-470-09521-8