



MGS 625 – Management of IT Projects – Spring 2008
Course Syllabus

This proposal provides a general plan for the course.
Deviations may be necessary.

Instructor: Professor Sanjukta Das Smith
Office: 325E Jacobs Management Center
E-Mail: sdsmith4@buffalo.edu
Credit Hours: 3 hours
Prerequisite: MGS 405 (co-requisite); or Permission of Instructor

Course Description

This is the capstone course of the MIS concentration in which advanced MIS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project management, management of the IS function, and systems integration will be components of the project experience.

Course Scope

This course covers the factors necessary for successful management of information systems development or enhancement projects. Both technical and behavioral aspects of project management are applied within the context of an information systems development project.

Various topics will be covered and will include: Managing the system life cycle, system and database integration issues, network management, project tracking, metrics, system performance evaluation, managing expectations of managers, clients, team members, and others, determining skill requirements and staffing, cost-effectiveness analysis, reporting and presentation techniques, risk management, management of behavioral and technical aspects of the project, change management, software tools for project tracking and monitoring and team collaboration techniques and tools.

Rationale for this Course

IT projects are now large, often multi-million dollar projects. However, unlike other fields of human endeavor, such as engineering and construction projects, the rates of failure in IT projects are comparatively much higher -- only 34% success rate! Oft-cited examples of large IT project failures include: the CONFIRM project of INTRICO consortium (Hilton Hotels, Marriott, Budget Rent-A-Car, and American Airlines Information Services) that was scrapped after 5 years and \$125 million investment in 1992; IRS's tax modernization system (TSM) project that went from an estimated \$2.5 billion to a projected \$8 billion project and flagged as a high risk project by GAO in 1995; FBI's \$170 million Carnivore project that was "sent back to the drawing board" in 2005; and FoxMeyer Drug company's ERP implementation which declared bankruptcy after this project failed.

There are some very unique aspects about IT projects that make them prone to failure. Fred Brooks, a renowned academic in the software engineering and IT project management area, pointed out that the chief distinctions between IT projects and other projects lie in the invisibility and infinite malleability of the software product and the highly socio-technical nature of the IT project development process. There are multiple stakeholders with multiple sets of requirements that are ill-defined and vaguely understood in the context of an invisible and infinitely malleable product and this makes IT projects especially prone to failure.

Connected to these issues is the notion of risk management. Project risk management tries to foresee and deal with uncertainties that jeopardize the objectives and schedules of a project. In the IT context, these uncertainties may comprise of problems with data and software quality; miscommunication and/or delay in supplying the information needed to meet project requirements; budgetary and project member changes; and, deficiency in expertise or research. These risks are a big factor in postponement of delivery dates and budget overshooting that can seriously weaken belief in the project's eventual success and in the project manager as well. Given that project risk management is process oriented, one can very well have a successful project and an unsuccessful outcome (for instance, a data center is successfully deployed and the project meets or outdoes all deadline, budget, and quality requirements however a disaster shuts down that data center and prevents it from rapidly returning the business that depends on the data in that center back up and running.) Although any project allows for a certain level of risk, thorough risk analysis on a periodic basis and good risk management techniques can resolve problems prior to occurrence. With that in mind, we will cover topics such as different types of IT risk, qualitative and quantitative risk analysis, risk monitoring and control, etc.

Given the peculiarities of IT projects and the challenges involved therein, IT project management has developed as a discipline that takes into account the unique nature of IT products and the project development processes. The Capability Maturity Model developed by the Software Engineering Institute at Carnegie Mellon University is a case in point. This model was developed for controlling the software projects of the US Defense Department and has now become a de facto industry standard for software and IT services companies. The CMM model encompasses the various project management issues with the goal of developing and delivering innovative, high-quality IT systems in a reliable and repeatable manner. Further, IT systems as knowledge artifacts also require different methods and tools for traditional PM tasks such as scope, time, cost, quality, and risk management. For example, software size is determined using function point analysis, a tool that is unique to IT Project Management.

Required Course Materials

- Information Technology Project Management: Providing Measurable Organizational Value; by Jack T. Marchewka; ISBN-13 978-0-471-71539-9; John Wiley, 2006.

Grading

Homework Assignments	300 Points
----------------------	------------

Final Project	250 Points
Final Exam	250 Points
Class Assignments and Participation	200 Points
Total	1000 points

Tentative Course Outline

This course schedule provides a general plan for the class. Deviations may be necessary.

Week	Topics	Readings
1	The Nature of IT Projects	Chapter 1
2	IT Project Conceptualization	Chapter 2
3	Project Charter and Baseline Project Plan	Chapter 3
4	Social Aspects in IT Project Management	Chapter 4
5	Project Scope and Configuration Management	Chapter 5
6	Software Size Estimation and Project Breakdown	Chapter 6
7	Project Scheduling and Budgeting	Chapter 7
8	IT Project Risk Management	Chapter 8
9	Project Communication and Control	Chapter 9
10	IT Project Quality Management; Software Verification and Validation; Capability Maturity Model	Chapter 10
11	Management of Organizational Change	Chapter 11
12	System Components Procurement and Integration	Chapter 12
13	Project Leadership and Ethical Issues	Chapter 13
14	IT Project Implementation and Evaluation	Chapter 14
TBA	Final Exam	