

Designing an Academic Project Management Program: A Collaboration between a University and a PMI Chapter

Robin S. Poston

Department of Management Information Systems
University of Memphis
Memphis, TN, USA
rposton@memphis.edu

Sandra M. Richardson

Department of Management Information Systems
University of Memphis
Memphis, TN, USA
sandra.richardson@memphis.edu

ABSTRACT

The demand for project management skills in industry is increasing resulting in a higher demand for project management educational programs. Universities are addressing industry demand by developing project management courses, degree offerings and certificate programs that focus on both technical and general project management skills. While teaching project management skills has been widely covered in the literature, little focus has been given to close collaboration with industry in developing university project management programs that reflect industry demands and provide opportunities to work with project management professionals and with “real world” projects. As a case study, we report a collaborative effort between one university and a local chapter of the Project Management Institute (PMI) that results in the development and implementation of an undergraduate project management minor program. We describe the evolution and process of developing a program in which project management professionals from the PMI are actively engaged in student learning by serving a variety of roles in the classroom. We describe the lessons learned over the evolution of the program, as well as refinements to the courses, conducted in order to enhance the grounding of formal education with practical industry experience resulting in an academically rigorous and practical education.

Keywords: Project Management, Collaboration, Project-Based Learning, Case Study

1. INTRODUCTION

Projects are taking a more prominent position in strategic planning and organizational success in today’s competitive environment. Industry has indicated a desire for universities to produce graduates with critical thinking, leadership, collaborative problem solving, and technical skills related to project management (Smith et al., 2008). Universities are responding to the increasing industry demand by developing project management courses, degree offerings, and certificate programs (Smith, et al., 2008).

Within the literature there is significant coverage related to teaching project management, much of it related to different approaches to developing the necessary skills required to successfully manage organizational projects. Problem-based learning has been proposed as an effective

way to utilize project work to engage students in a life-like environment (Guthrie, 2010). The importance of assigning interdisciplinary teams that mimic the diversity organizational functional units (Kruck and Teer, 2009) has been addressed. Programmatic approaches to teaching project management have been offered, including: the need for specific project management courses, integration of project management skills into a degree program, and the evolution of long-term projects that span the life of a degree program (Smith et al., 2008). Davis (2007) illustrates the effective use of mini-cases in order to broaden student thinking by raising difficult and focused questions without the overhead of working with a larger case. While the focus of each of these activities remain important to graduating students that obtain relevant project management skills in a “real world” experience, there is currently a void in the

literature related to innovative ways of incorporating industry professionals to both participate in and inform activities in the classroom.

We propose that collaborating with professional organizations within industry is an effective way to incorporate “real world” experience into the classroom itself. However, balancing the role of industry within the classroom can be a problematic. The goal of this article is to address the void in the literature by exploring the question, how can university information systems departments provide effective industry connected project management courses and programs for its students? We report a single case that describes and defines one approach to developing a project management program through the development of academic course offerings in a collaborative effort between a university and a local chapter of the Project Management Institute (PMI). The result of this collaboration is an undergraduate project management minor program created within information systems department in which members of the PMI are continually and actively engaged in the program and are an integral part of ongoing classroom activities and projects. This collaboration is designed to incorporate current industry demands into academic offerings in order to bring hands-on experience into the classroom while addressing the academic rigor of the university milieu.

This paper proceeds as follows. First, the evolution of project management in industry and the demand for project management programs in universities that graduate students that meet industry demand is presented. We then report a case that describes the evolution of a collaborative effort between a university information systems department and a local chapter of the PMI, resulting in a project management minor program designed to meet both industry and academic needs. Specific course activities, outcomes, and implementation experiences are described. Finally we present a lessons learned section that captures both successes and challenges throughout the evolution of the program.

2. BACKGROUND AND RELATED WORK

The motivation for this paper is derived from the intersection of increasing industry demand for competent and qualified project managers and the attempts of universities to develop project management classes and programs that graduate students with the skills to meet industry needs.

2.1 Project Management in Industry

“Any strategy formulation session worth its salt ultimately distills vision into critical business issues, and if the organizations is really serious, these issues get translated into projects” (Longman and Mullins, 2004, p.54). As organizations face new challenges related to changes in organizational structures, market environments, economic impacts, and evolving technologies, organizations require more flexible ways of implementing organizational strategy. Organizational projects are increasingly the answer to these flexibility demands (Turner, 1999; Ruuska and Matti Vartiainen, 2003).

Over the past couple of decades, as projects take a more prominent role in organizational strategy, the complexity and cost of projects has increased. One KPMG survey of 600

organizations across 22 countries reported that information system project complexity increased in 88% of organizations and project budgets increased in 79% of organizations (KPMG, 2005).

As projects grow more complex and budgets increase, attention has turned to defining standards to codify formal project management methods. Professional organizations around the world have participated in this effort, including; the PMI, the Association for Project Management, the Australian Institute of Project Management, and the International Projects Management Association (Papke-Shields et al., 2010). One widely accepted outcome of these efforts is the PMI’s Project Management Body of Knowledge (PMBOK). The PMBOK is a widely accepted set of tools. It serves as the foundation for the majority of professional project management training programs in the United States and is endorsed by the PMI as meeting standards for certification (Brill et al., 2006).

The emergence of wide spread professional organizations, such as the PMI, demonstrates evidence of the recognition, awareness, and acceptance of the profession. PMI is an international non-profit organization with regional chapters. Currently PMI has over half a million members in over 185 countries (www.pmi.org). As stated on their website, PMI is dedicated to the creation of a common project management language for organizations running projects with diverse groups of stakeholders. PMI is dedicated to the advancement of not only professional activities, but also delivering outreach services to enhance educational, cultural, and societal project management knowledge sharing.

As organizations mature in terms of project management it has become evident that the PMBOK alone does not adequately address the knowledge and skills required for project managers. In addition to the PMBOK’s technical tools a project manager should possess problem-solving experience, leadership skills, context knowledge, and analysis, people and communication expertise (Brill et al., 2006). Project managers frequently deal with unexpected events and must have an understanding of organizational structures, the embeddedness of the project within the organization, interpersonal relationships, competence and trust in their judgments (Geraldi et al., 2010) in order to successfully manage those events.

The recent emergence of project-based careers and the creation of temporary organizations for project work are on the rise as tasks are increasingly transferred from the traditional line organization into a more “projectized” project-based way of organizing work (Holzle, 2010). As a result industry has indicated the need for academic programs that produce graduates that are well versed in both the technical and “soft” skills required of a successful project manager. Projects are an instrument of organizational change and the project managers that guides this process of change requires capabilities and competencies that span the range of project-specific expertise, problem-solving competence, leadership, social and entrepreneurial competence (Holzle, 2010). Universities are responding by developing courses, degree offerings and certification programs that strive to meet the demand for project manager proficiency.

2.2 Teaching Project Management Skills

Project management related projects, classes, degree and certificate programs are emerging in universities around the world. Many of these new programs are being developed in information systems departments. This is a natural evolution as the success of any organization is heavily influenced by the value delivered by its information technology projects. The importance of information systems projects to overall organizational success is captured in a 2008 Gartner study that states "IT leaders indicated that more than half of their organizations are currently undertaking major initiatives for portfolio management, the introduction of program management, IT governance implementation or enhanced project management offices" (Hanford, 2008).

It has been reported that one of the biggest challenges that the information systems industry faces is the crisis of quality in software development and deployment where only 20% of large projects are implemented on time and, of those, over 60% experience cost overruns (Jones, 1996). Inadequate project management has been identified as a primary contributing factor for these project failures (Cusing, 2002; Reif and Mitri, 2005). In addition to developing educational programs, the information systems research community is calling for more research related to information systems project management. An Association for Information Systems special interest group on project management (SIGITProjMgmt) has been established which promotes research across a variety of issues concerning information systems related projects.

While project management is incorporated into business school curricula more frequently, often the focus is concentrated on the technical skills of project management. While these technical skills are undoubtedly a necessary part of project management education, alone they are not sufficient. Students must also be exposed to "soft" skills required in project management, and provided the opportunity to learn how to apply and evolve their project management skills (Pant and Baroudi, 2008). To effectively develop these skills, students should have the opportunity to learn, practice and develop project management skills in an environment that reflects the "real world" commercial environment as closely as possible with opportunities for reflection and interaction with life-like clients (Smith et al., 2008).

There are a number of pedagogical studies in the literature that address a variety of topics related to teaching project management. These topics range from identifying the core concepts that should be covered in project management courses to effective class activities for teaching project management. Kruck and Teer (2009) identify the importance of assigning projects across interdisciplinary teams. Smith et al. (2008) illustrate the effectiveness of projects that evolve over a number of courses throughout the course of a degree program (Smith et al., 2008). Frailey (2007) discuss teaching Dr. Boehm's techniques in software estimating, software risk management, and other aspects of software project management. Other studies propose that the stakeholders of project management classes (i.e., current and prior students and employers) have differing perceptions of the value gained from project management courses which should be considered when developing courses (Wearne,

2008). Others target teaching fundamental information systems concepts (e.g., systems analysis and design, and database) as a key component of a project management curriculum (Soe and Hwang, 2007). Many emphasize the importance of having specific PM classes in the curriculum in lieu of embedding project management topics in existing information systems courses (Reif and Mitri, 2005). "Hard" skills such as methodologies, processes, and tools are proposed as critical requirements for a project management curriculum, but alone they are not sufficient (Jewels and Ford, 2004). It is suggested that "soft" skills are equally critical to training future project managers (Petter and Randolph, 2009), as statistically "most projects fail because the 'soft science' portions of the project have not received enough attention – the human factor has not been adequately addressed" (Jewels and Bruce, 2003). Soft skills include communication skills, critical thinking, leadership, collaboration and teamwork, socio-political demands, and the ability to analyze a situation and develop an effective solution (Jewels and Bruce, 2003).

Project management curricula frequently implement creative assessment techniques for student's understanding of the tools and concepts learned and the ability of the student to apply those concepts in "action" (Jewels and Bruce, 2003; Murphy, 1999). Studies propose that enabling students to reflect on their learning and performance leads to improvements in their abilities within the project management context (Mengel, 2008). One study offered a problem-based learning approach to an MBA level project management course that encourages student teams to solve business problems (Kloppenborg and Baucus, 2004; Wilson, 1995). This study describes an assessment process where, a "panel of five Project Management Professional (PMP) certified judges and two alternate judges, each with at least 5 years project management experience" (Kloppenborg and Baucus, 2004, p. 626) evaluated completed projects and awards prizes to the winning team. The judges determined the criteria for each deliverable and were engaged for several semesters with new members rotating onto the panel as needed (Kloppenborg and Baucus, 2004).

At the heart of all project management curricula is teaching in a way that will both facilitate the learning and understanding project management concepts and enable students to apply those concepts to complex situations as required for project management in practice (Mitchell, 2006; Reif and Mitri, 2006). Jewels and Bruce (2003) describe this process as "deep-learning." Deep-learning describes the process of students understanding ideas and then seeking meaning, which results in a deep understanding of phenomena, the ability to integrate principles with facts, and the use of evidence to develop arguments (Jewels and Bruce, 2003). They offer the case- project management curriculum should include concepts that address (1) information systems fundamentals (e.g., systems analysis and design, and database); (2) PM tools and techniques (e.g. methodologies, processes, and tools), (3) soft skills (e.g. critical thinking, communication skills, and leadership skills), and (4) activities and assessments study approach as an effective way to achieve deep-learning when teaching project management proficiency for both hard and soft skills. They suggest the case-study approach is the next best "alternative

to apprenticeship” as good cases permit a “long look over the shoulder of a practitioner at work” (Jewel and Bruce, 2003, p. 654).

The take away from the current literature is that a project management curriculum should include concepts that address (1) information systems fundamentals (e.g., systems analysis and design, and database); (2) PM tools and techniques (e.g. methodologies, processes, and tools), (3) soft skills (e.g. critical thinking, communication skills, and leadership skills), and (4) activities and assessments that place a strong emphasis on deep-learning and application to real world examples.

In the following section we present the case of a collaborative effort, between one university and a PMI Chapter, to develop an effective project management minor that emphasizes these four concepts in an innovative and effective way.

3. A UNIVERSITY AND LOCAL PMI CHAPTER COLLABORATION

This case describes the collaborative effort between one university information systems department and a local chapter of the PMI. It begins with the information systems department’s advisory board encouraging the creation of effective project management courses. One faculty member, with 15 years experience teaching an undergraduate project course that utilized real organizational projects, volunteered to lead the initiative.

3.1 A Meeting of the Minds

When asked to create a series of project management courses, the faculty developed several alternatives for developing the courses. His goal was to develop a program to educate students in a manner that allowed him to answer: “what do I want them [students] to know in order to hire them?” He wanted the class projects to be connected to real world industry experience, but in his experience he had found it difficult to find organizational projects that were sustainable across multiple semesters. He decided to explore professional organizations and began to communicate with the local PMI chapter; a professional organization for project management that was sizable enough to support sustainable project management educational activities. He attended local PMI chapter meetings, introduced himself to its members, and was flooded with interested members who volunteered to help.

He created a strong connection with the Vice President (VP) of Education at the local PMI chapter. Together they developed plans for a project management curriculum and negotiated the level of PMI involvement which ranged from complete PMI control to complete faculty control. The faculty member quickly recognized that it would be necessary to manage the PMI chapter’s involvement. An example of negotiated items was that the VP of Education wanted PMI certification as part of the course but the faculty member was not sure that would best serve the students. He wanted project management business world education but did not want to become a professional certification program. After a year of working together the faculty member and the VP of Education agreed upon a collaborative course delivery

plan.

The results of the plan established a series of two project management undergraduate courses covering basic and advanced concepts. The PMI representatives would receive continuing education credits for their participation, encouraging an ongoing commitment to the project management course offering. The PMI would provide organizational projects, mentorship, and a lecture series in the two classes. The result was a win-win situation in which buy-in, commitment, and ownership of the project management program was felt by both the information systems department at the university and by the local PMI chapter members. In its current form, the courses have been taught twice per year for five years. A project management undergraduate minor was created, with a graduate certificate in the approval process. Our information systems project management minor is comprised of two project management undergraduate courses coupled with information systems fundamental classes, and elective options for those needing greater flexibility. The outcome has been a strong program that is beneficial to both students and industry. Together with PMI input we have extended the approach to deep-learning from a “case study” approach to a collaborative partnership with industry mentors. The result has been a rigorous hands-on approach that incorporates “real world” industry projects, along with PMI professional’s as mentors, facilitating a “life-like” context in which students can learn and apply project management skills.

3.2 Urban Mid-South University PM Minor Program

In this section we describe the basic and advanced project management classes, including; course concepts, guest lecture series, and course projects that result from the collaboration between the information systems department and the local PMI chapter. The two project management classes incorporate concepts suggested in the academic literature and highlight the challenges of information systems project management. Both the basic and advanced classes incorporate lectures and activities related to technical and soft skills, and special emphasis is placed on activities and assessments for deep-learning with real world examples. The local PMI chapter members bring additional support to each of these areas. The project management minor program includes additional IS courses (i.e., systems analysis and design, database, networking, etc.) to incorporate information systems fundamentals into the program.

The basic project management course is now a core requirement for all undergraduate information systems majors. In addition, we offer a project management minor for any university undergraduate student. The project management minor comprises four courses shown in the Table 1 below.

3.3 Basic Class – Strategic IT Project Management

The basic class format includes faculty lectures, faculty-created exams, and faculty moderated PMI activities. A copy of the syllabus is provided in APPENDIX A. The faculty lectures include a daily quiz that encourages students to think critically about the material presented in class followed immediately by a discussion of their answers. The PMI activities include PMI PMP certified members who

volunteer and receive continuing education credits for participating in the guest lecture series, project team mentoring, and the project contest panel. At the end of each semester there is a PMI chapter meeting which is hosted at the university and where PMI members hold an awards ceremony giving all students from both the basic and advanced classes' certificates of accomplishment. The winning project team from the basic class receives a special award. The information systems department also provides the PMI volunteers, for both classes, an 'Information Systems Teaching Fellow' certificate.

3.3.1 Guest Lecture Series

The course topics cover the best practices included in the PMI's PMBOK. Four lectures are covered by PMI volunteers who select faculty-approved topics of their own choice usually based on their own personal experiences. These topics include: communication skills, managing risks and rewards, war stories in project management, and project management and the global marketplace. The guest lecturer series augments faculty textbook-based lectures by providing experience-based materials synchronized with the course lecture schedule. With this approach, students gain insight into project management challenges and best practices, and an appreciation of the diversity of roles and organizational settings in which project managers perform.

Table 1. Course Requirements for the Project Management Minor

Minor	Business majors
Non-IS major – minor in PM	12 hours – IS: Strategic IT Project Management, Project Mgmt Tools/Leadership and pick 6 hours from IS: Systems Analysis Methods, Application Program Development II, Global Information Technology, Web Site Design, Application Program Development III, MGMT: Organizational Behavior in Business, Teamwork and Group Dynamics in Organizations, MKTG: Strategic Sourcing and Purchasing, Marketing Research, DS: Supply Chain Management
Non Business Majors	18 hours – IS: Intro Business Microcomputers, Critical Thinking in Projects in Business, Systems Analysis Methods, Business Data Mgmt, Strategic IT Project Management, Project Mgmt Tools/Leadership
IS Major – minor in PM	12 hours – IS: Project Mgmt Tools/Leadership and pick 9 hours from IS: Application Program Development II, Global Information Technology, Web Site Design, Application Program Development III, MGMT: Organizational Behavior in Business, Teamwork and Group Dynamics in Organizations, MKTG: Strategic Sourcing and Purchasing, Marketing Research, DS: Supply Chain Management

Note: IS = Information Systems, MGMT = Management, MKTG = Marketing, DS = Decision Sciences

3.3.2 Student Team Mentoring

A semester long project is required for student teams of 5-7 people to address the requirements outlined in a fictional request for proposals (RFP). The topic of the

RFP remains static to encourage knowledge sharing among prior and current students and requires the teams to propose a new application for a personal digital assistant (PDA) on the platform of their choice (i.e., iPhone, Blackberry, Windows, etc.). Teams are selected based on the results of a Myers-Briggs personality assessment which is due the second week of class. Myers-Briggs assessments provide personality types which Dr. David Keirse (keirse.com) organizes in four temperaments of Artisan, Guardian, Rational, and Idealist. We match each student's Myers-Briggs assessments to one of the four temperaments. We assign students to groups and ensure a variety of temperaments are assigned to each group. Typically, we find that the Artisan temperament is rare. Next we use the Myers-Briggs profiles to determine the suitability of certain students to be assigned as a project manager (Wideman, 2003). People who have a certain Myers-Briggs profiles (i.e., INTJ, ENTJ, ISTJ, and ESTJ) have been found to be well suited for the project manager role. We initially required the assessments to be completed the first week of class, but too many students dropping and adding the class during the first week required too many changes to the team memberships. The 'team lead' is designated based on a couple additional questions we ask about PM related experiences. The now ex-VP of Education oversees the assignment of teams. Team mentors are called instructional support team (IST) members in the class setting as the PMI leadership team discouraged the use of the term 'mentor' due to its special meaning within their organization.

3.3.3 Project Management Contest

A group of qualified 'judges' or PMI volunteers sit through final presentations of the teams RFP response and review their completed template materials. The materials are forwarded to the contest panel or 'judges' a week before the presentation. A series of presentations are held in front of the contest panel with a 10 minute question and answer period at the end of each one. The purpose of this question and answer period is to ask students to answer questions that involve critically assessing the project tasks they have performed. The contest panel submits these questions to the professor in advance of the presentations and after the professor evaluates the questions, he/she provides them to the students to prepare their answers. The contest panel members ask questions to better understand the groups work and push students to understand project management better, think critically about their experience, and pursue new ideas for project management success. This increases the professionalism of the environment for student presentations, exposes students to an industry level critical thinking exercise by answering questions, and offers another level of networking between the PMI industry folks and the students. To better prepare students for the final presentations, the



contest panel holds a mid-semester ‘bidder’s conference’ where they explain their expectations and provide a series of typical questions they might ask at the final presentations.

The idea is to recognize the student team that best manages its course project in compliance with course guidelines and the PMI best practice processes and knowledge areas. It is the contest panel that decides which team did the best job managing their project which is heavily influenced by the use of the project management templates provided to the students.

3.4 Project Management Tools and Leadership (Advanced Class)

The advanced project management class builds on the concepts of the basic class. Consistency between courses was a primary goal of the faculty. The advanced class includes faculty lectures, faculty created exams, and faculty moderation of PMI activities. The class exams are essay format and require that the students analyze a project management scenario, think critically about how to apply the concepts from class in order to identify problems in the project and develop a solution plan. The PMI activities remain consistent as PMP certified professionals volunteer and receive continuing education credits for serving as project team mentors, participating in the guest lecture series, and serving on an executive level project evaluation and feedback panel.

Table 2. Table of Contents of Templates Provided

Table of Contents	
Course Project RFP.....	1
Online Resources.....	3
Project Requirements Checklist.....	4
Project Charter.....	5
Scope Statement.....	7
Work Breakdown Structure.....	9
Responsibility Assignment Matrix.....	10
Project Schedule.....	11
Project Budget.....	13
Change Management Plan.....	15
Change Request Entry Form.....	16
Change Request Table.....	17
Risk / Issue Management Plan.....	18
Risk / Issue Assessment Form.....	20
Risk / Issue Table.....	22
Communication Management Plan.....	24
Meeting Agenda / Minutes.....	25
Project Status Report.....	26
Final Project Report.....	27
Product Acceptance / Project Closeout.....	29
Lessons Learned.....	30
Marketing Plan.....	32

3.4.1 Guest Lecture Series

Topics for the advanced course include: projects and implementation of organizational strategy, conflict management, risk management, leadership skills, and project management tools (MS Project 2007). The guest lecture series format is consistent with the basic class. Lectures are delivered by PMI volunteers who select from a list of faculty approved topics, these include; leadership skills, risk

management, change management, managing distributed project teams, team dynamics and conflict, adapting to project changes, and common project management mistakes and pitfalls.

3.4.2 Student Team Mentoring

A semester long project is required for student teams of 5-7 members. Team assignments are selected based on the results of the Myers-Briggs personality assessment and feedback from mentors from the basic class. The teams are constructed in order to ensure that a variety of temperaments are assigned to each group. Then the feedback from the mentors in the basic class is used to make any modifications to the group. For example, we try to ensure that the teams in the advance class are not duplicates of the teams from the basic class. That decision takes precedence over the Myers-Briggs outcomes. The student teams are assigned a project manager (team lead).

The advanced project departs from the basic class as students are working with a PMI mentor to evaluate an actual organizational project for which the mentor served as the project manager within the organization where he/she works. The goal is to incorporate organizational projects with large scale strategic impact as the foundation for the class projects.

Using the skills gained from the basic and advanced classes, the students conduct a post-mortem analysis of the organizational project. The goal of the analysis, and the primary deliverable of the class project, is to compile a “lessons learned” report that describes recommendations for improvement as well as insights into project management practices that were effective. This is a critical thinking exercise in which the students must (1) utilize their knowledge about project management to define an approach for the analysis of the organization’s project, (2) identify relevant information needed for the analysis, and where and how they can obtain it from the organization (i.e., interviews, documents, etc.), (3) analyze the information gathered and identify effective and non-effective project management practices within the organization’s project, (4) analyze the organizational and project team structures and culture and the impact on team dynamics, efficiency, effectiveness, and conflict management, (5) identify and define the role of the project in implementing organizational strategy, and (6) decide how best to present their “lessons learned” about the organizational project in a professional manner in both a written report, and a presentation to an Executive Panel. The students also manage their own class project using the concepts that they learned in the basic class, and create the relevant documents (i.e. work breakdown structures, schedules, etc.) in MS Project 2007.

Students are provided access to organizational project information (i.e., goals, work breakdown structures, schedules, budgets, etc.) as well as access to individuals within the organization for interviews. The student teams make several site visits to the organization to “walk through” the completed organizational project. They are often provided the opportunity to sit in on weekly project meetings at the organization. During the site visits the students gather relevant information and interview individuals within the organization. Student teams work closely with the PMI

mentor throughout the project, typically meeting once a week, and in between communicating frequently through email and online discussion venues. The level of interaction between the team members and their PMI project mentor often results in close bonds between the students and their mentor; a relationship that frequently lasts well beyond the course. For many students it is their first experience at building a professional network.

3.4.3 Executive Panel Presentation

In the advanced project management class there are 2-3 project teams per semester. It was decided early on that the students would benefit from individual feedback from a panel of experts in lieu of repeating the contest from the basic class. At the end of the semester the project teams present their work to a panel of 5-8 executives from a variety of organizations. Executives from the mentoring organizations are not included on the panel in order to facilitate objective student-based feedback. The panel members are at the Director, VP, or CIO level and may not be PMP certified. One week before the panel presentation the project team's post-mortem analysis report are submitted to the panel members. The panel members evaluate the projects, from both the perspective of the post-mortem analysis and the management of the class project, and prepare specific individual and team recommendations. The teams and individual students receive personalized evaluations and recommendations from the executives.

4. LESSONS LEARNED

A number of lessons learned emerged during the execution of the classes.

4.1 PMI Take Over

Faculty must be wary of losing control of the content of the class to the PMI volunteers. PMI project managers are used to leading projects and frequently want to "take charge" of class activities. While PMI members have the best intentions, they do not live in the classroom world, and for example, may opt for installing major changes in projects or mixing team members mid-semester. This may be a good idea for increasing the realism of the project management experience, but students are being exposed to project management concepts for the first time and struggle to comprehend basic ideas. These changes may be too much for the students and ultimately it is university faculty who need to make those decisions. In addition, PMI members would frequently request to extend class times to "get things done", or schedule meetings that could not be met given the realities of a university setting (i.e., student schedules, classroom schedules, etc.). Communication was needed to reinforce reasonable expectations within a university context.

4.2 Establish a Single PMI Contact

We found it works best to have one person from PMI as a contact person for engaging those involved in the guest lecture series, student team mentoring, and project management contest panel, respectively. Establishing one point person for the faculty member to contact for each area helped effectively coordinate the collaboration of so many

PMI volunteers including the relatively few times new volunteers had to be found.

4.3 Insufficient Guest Lecturers

Some industry volunteers were unable to communicate with a student audience. A survey feedback system was initiated so students could provide input to which guest lecturers, mentors, or contest panelists would be invited back each semester and which needed to be replaced.

4.4 Varying Quality of Student Team Mentoring

Some mentors are better than others. Faculty must monitor how teams are doing and whether the mentor is responding to team requests for help adequately. The faculty member must communicate with the PMI lead for student team mentoring to quickly respond to issues. Some mentors may not have been totally committed or found they did not have the time needed to devote to the class and they needed to be replaced with other PMI volunteers as soon as this is uncovered and early in the semester.

4.5 Time Commitment

Given the steps involved, the initial arrangement of the collaboration took considerable time involving introductory meetings, idea sharing, and level-of-involvement negotiations with PMI professionals. Once the general framework is established, the first semester of running the class using this collaboration method can take considerable faculty time as expectations must be set and met on both sides. However, once the class has been repeated several times (i.e., our courses have been taught twice per year for five years now), returning volunteers know what to expect and what their role is. New volunteers learn from the veterans and faculty commitment is much less. At this point, a faculty member may need to send an occasional email to share the upcoming course schedule and update that schedule based on the needs of volunteers (e.g., guest speakers may prefer an alternative day than originally planned). Overall, flexibility is important as industry professionals have other priorities and may need alternative timing (e.g., with a 2-day notice a guest speaker is called away to an important meeting out of town and cannot make the original presentation date).

4.6 One Winner of PM Contest (basic class)

Students must be made aware that their course grade is determined by the faculty member. The contest can get competitive with PMI team mentors pushing their teams to succeed. While this is not an entirely negative scenario, students need to be reassured that those who complete the class and learn about the important facets of project management are still 'winners'. When only one team can win this may lead to a negative course experience with one team winning the PMI award and other teams feeling this is unfair.

4.7 Support Team Panels (basic class)

Based on student feedback after the first few semesters of running the class, we found student team mentors advised their teams differently. Different mentors told their teams different things and offered varying amounts of help. The mentors provided inconsistent advice across the teams in

what they told students to do. The mentors offered varying levels of support in how much input and feedback they provided. The mentors offered different levels of accessibility regarding their time commitment and ability to meet with their groups. To improve the consistency of communication flow between mentors and students, we instituted instructional support team (IST) panel sessions where the student team mentors all attended to make a presentation about what the student teams should have accomplished by that point and answer any questions. Three sessions were created, one for getting started with the projects, another for following up with progress, and a final one for closing out the projects. The project management contest panel (judges) was also invited. The goal was to have open forums where the PMI support team members and students come together to agree on the requirements of the projects. An additional session was also created mid-semester specifically for questions and answers to be shared between the project management contest panel (judges) and students with mentors invited. These sessions have improved overall communication and student understanding.

4.8 Developing a Plan and Mentor Involvement (advanced class)

Creating a structure to approach the analysis of the organizational project for the “lessons learned” report, and developing a plan of attack is consistently the most difficult activity the students face. It requires them to take their knowledge of project management, make decisions about the relevant meaning of those concepts in their current project context, and then develop an approach for their current class project. The mentors are typically excited to get the analysis started but they need to allow time for the team to “flounder”, reflect, and develop a plan. Once the plan is developed the mentor can assist with refinement and moving the project forward.

4.9 Feedback from Executive Panel (advanced class)

The executive panel comprises high level, influential members, of the business community. While this motivates high quality of project deliverables, it can be intimidating for the students, especially given the individual nature of the feedback. The students need to be made aware that the comments from the panel are in the spirit of being constructive and they should value both positive comments and those related to areas of potential improvement. In addition, students need to be reminded that their grade is determined solely by the faculty member.

5. CONCLUSION

We set out to address the question how can a university information systems department provide effective industry connected project management courses and programs for its students? We presented the experiences of the collaboration of one University with a local PMI chapter. We described several years of planning and implementation activities that resulted in two project management classes with an ongoing relationship with PMPs that have resulted in a sustainable project management minor program with consistency across both projects and mentors. Through our efforts we have

created a sustainable program that facilitates “real world” project experiences for project management students, a connection with industry experts, embedded in a traditional classroom curriculum. We propose that these partnerships can prove effective in other contexts as well. And, that advance deep-learning can move beyond the case study experience by partnering with industry to facilitate activities that require the application of class concepts to project management issues in an actual organizational setting.

6. REFERENCES

- Brill, J.M., Bishop, M.J. and Walker, A.E. (2006) “The Competencies and Characteristics Required of an Effective Project Manager: A Web-Based Delphi Study,” *ETR&D*, Vol. 54, No. 2, pp. 115-140.
- Cusing, K. (2002) “Why Projects Fail,” *Computer Weekly*, November 21 issue.
- Davis, C. K. (2007) “Technical Staffing Crises and Managing System Projects,” *Journal of Information Systems Education*, Vol. 18, No. 4, Winter, pp. 403-407.
- Frailie, D.J. (2007) “Experience Teaching Barry Boem’s Techniques in Industrial and Academic Settings,” *The Journal of Systems Software*, Vol. 80, No. 8, pp. 1217-1221.
- Geraldi, J.G., Lee-Kelly, L., and Kutsch, E. (2010) “The Titanic Sunk, so what? Project Manager Response to Unexpected Events,” *International Journal of Project Management*, Vol. 28, No. 6, pp. 547-558.
- Guthrie, C. (2010) “Toward Greater Learner Control: Web Supported Project-Based Learning,” *Journal of information Systems Education*, Vol. 21, No. 1, pp. 121-130.
- Hanford, M (2008) “Most IT Leaders are Heads Down on PPM Initiatives,” *www.Gartner.com*, Sept. 15th.
- Holzle, K. (2010) “Designing and Implementing a Career Path for Project Managers,” *International Journal of Project Management*, Vol. 28, No. 8, pp. 779-786.
- Jewels, T. and Bruce, C. (2003) “Using a Case Method Approach in IT Project Management Curriculum: A Long Look Over the Shoulder of a Practitioner at Work,” *Proceedings of the Informing Science + IT Education Conference, Pori, Finland*.
- Jewels, T. and Bruce, C. (2003) “Using a Case Method Approach in IT Project Management Curriculum: A Long Look Over the Shoulder of Practitioners at Work,” *Proceedings of the Informing Science + IT Education Conference, Pori, Finland*.
- Jewels, T. and Ford, M. (2004) “A Single Case Study Approach to Teaching: Effects on Learning & Understanding,” *Issues in Informing Science and Technology*, Vol. 1, No. 3, pp. 359-372.
- Jones, C. (1996) “Patterns of Software Systems Failure and Success,” *American Programmer*, Vol. 9, No. 3, pp. 36-37.
- Kloppenborg, T.J. and Baucus, M.S. (2004) “Project Management in Local Nonprofit Organizations: Engaging Students in Problem-Based Learning,” *Journal of Management Education*, Vol. 28, No. 5, pp. 610-629.
- KPMG, 2005, Global IT Project Management (<http://www.kpmg.com>) downloaded 02/01/10.

- Kruck, S.E. and Teer, F.P. (2009) "Interdisciplinary Student Team Projects: A Case Study," *Journal of Information Systems Education*, Vol. 20, No. 3, pp. 325-330.
- Longman, A. and Mullins, J. (2004) "Project Management: Key Toll for Implementing Strategy," *Journal of Business Strategy*, Vol. 25, No. 3, pp. 54-60.
- Mengel, T. (2008) "Outcome-based Project Management Education for Emerging Leaders: A Case Study of Teaching and Learning Project Management," *International Journal of Project Management*, Vol. 26, No. 3, pp. 275-285.
- Mitchell, V. (2006) "Knowledge Integration and Information Technology Project Performance," *MIS Quarterly*, Vol. 30, No. 4, pp. 919-936.
- Murphy, M.G. (1999) "Teaching Software project Management: A Response-Interaction Approach," *The Journal of Systems and Software*, Vol. 49, No. 2/3, pp. 145-148.
- Papke-Shields, K.E., Beise, C., and Quan, J. (2010) "Do Project Managers Practice What they Preach, and does it Matter to Project Success?" *International Journal of Project Management*, Vol. 28, No. 7, pp. 650-662.
- Petter, S. and Randolph, A.B. (2009) "Developing Soft Skills to Manage User Expectations in Project Management: Knowledge Reuse Among IT Project Managers," *Project Management Journal*, Vol. 40, No. 4, pp. 45-59.
- Pant, L. and Baroudi, B. (2008) "Project Management Education: The Human Skills Imperative," *International Journal of Project Management*, Vol. 26, Issue 2, pp. 124-128.
- Reif, H.L. and Mitri, M. (2005) "How University Professors Teach Project Management for Information Systems," *Communications of the ACM*, Vol. 48, Issue 8, pp. 134-136.
- Ruuska, I. and Vartiainen, M. (2003) "Critical Project Competencies – A Case Study," *Journal of Workplace Learning*, Vol. 15, No.7/8, pp. 307-312.
- Smith, H., Smarkusky, D. and Corrigan, E. (2008) "Defining Projects to Integrate Evolving Team Fundamentals and Project Management Skills," *Journal of Information Systems Education*, Vol. 19, No. 1, pp. 99-110.
- Soe, L.L. and Hwang, D. (2007) "Career Track Design in IS Curriculum: A Case Study," *Information Systems Education Journal*, Vol. 5, No. 29, pp. 1-19.
- Turner, J.R. (1999). *The Handbook of Project-based Management: Improving the Processes for Achieving Strategic Objectives*, McGraw-Hill, London.
- Wearne, S. (2008) "Stakeholders in excellence in Teaching and Learning of Project Management," *International Journal of Project Management*, Vol. 26, pp. 326-328.
- Wideman (2003). "Project Teamwork, Personality Profiles and the Population at Large: Do we have enough of the right kind of people?" <http://www.maxwideman.com/papers/profiles/profiles.pdf>. (last accessed Sept. 2010)
- Wilson, B.G. (1995) *Constructivist Learning Environments: Case Studies in Instructional Design*, Educational Technology Publications, Englewood Cliffs, NJ.

AUTHOR BIOGRAPHIES

Robin S. Poston received a Ph.D. degree in Management



Information Systems from Michigan State University. She is the Associate Professor of MIS and Associate Director of the Systems Testing Excellence Program of the FedEx Institute of Technology, & Suzanne Downs Palmer Professor of the Fogelman College of Business & Economics at The University of Memphis. She has published articles in publications such as *MIS*

Quarterly, *Communications of the ACM*, *Information Systems Management*, *Journal of Organizational and End User Computing*, and in major international conference proceedings. Dr. Poston's teaching and research focuses on understanding how individuals use information in web-based knowledge management applications, internet-based dissemination of information, and project management. Dr. Poston has over 10 years of experience in the information systems field working in project management for KPMG Consulting, Educational Computer Corporation, Meta Group Research, and Convergys, as well as consulting with organizations, such as FedEx Corporation, First Horizons, St. Jude/ALSAC, Pinnacle Airlines, Rhodes College, and Department of Defense, and the University of Memphis IT Division to conduct projects and educational programs.

Sandra M Richardson is an Assistant Professor in the



Department of Management Information Systems at the University of Memphis. Dr. Richardson's teaching and research focus on organizational strategic leveraging of information technology to enable economic and social value creation and the role of individual stakeholders in this process.

She conducts her research in two primary contexts; healthcare and the social sector (non-profit). Current projects focus on the impact of information technology on enabling emergent leadership, global collaboration, and autonomy and for individual and autonomy for individual stakeholders. Dr. Richardson has over 10 years of industry experience working in project management, systems development, Accounting, Finance and Operations Management. She has worked extensively in the healthcare industry, utility industry, banking and finance

**APPENDIX A
BASICE PM COURSE – SYLLABUS**

BASIC PM COURSE – Strategic Information Technology Project Management

Course description Introduces the basic principles, processes, and tools of modern project management. Covers both general project management and information technology specific project management. Strategic implications management to organizational strategy will be addressed. Students will use currently available project management software tools to successfully plan and execute projects.

Technical Requirements

If students do not have the following software, all the FCBE computer labs have the following tools available:

- Microsoft Project Professional
- Microsoft PowerPoint or PowerPoint viewer
- Adobe Acrobat Reader

Course Goals

Upon successful completion of this course, students will be able to:

1. Understand and be able to perform project management activities and be able to properly use the associated tools and techniques,
2. Understand and be able to implement project phases and life cycles,
3. Know how to properly use Microsoft Project,
4. Understand the role of project managers – what they do and their skills,
5. Understand the relationship between project planning and execution,
6. Conduct all aspects of project planning and control,
7. Understand and be able to communicate the implications of project management to organization strategy,
8. Make better decisions and give advice to others on issues identified above,
9. Plan, charter, structure, execute, and control information systems projects,
10. Build and lead information systems project teams,
11. Use advanced project management technologies,
12. Use collaboration technologies and development environments, and
13. Understand the key technologies underlying collaborative computing

Course Deliverables & Exams

- Lectures
- Text and other assigned readings
- Class discussions
- Project Practicum
- Examinations

Since the course is about project management, the best way to learn relevant content is to have you manage a project. I will grade these project deliverables as the course progresses, and you'll receive a grade consistent with the quality of your efforts at the end. In addition there will be three short exams.

<i>Date</i>	<i>Topic /Assignment</i>	<i>PMI Support</i>	<i>Deliverable Due</i>
Week 1	Introduction to the course Ch. 1 Intro to Project Management		
Week 1	Ch2. Project Management Life Cycle		
Week 2	Ch. 3 Managing Project Teams, Templates Intro		Assignment 1
Week 2	Managing Project Communication (Chapter 4)	Guest Speaker	
Week 3	Intro to PMI, PM / Outsourcing, Strategic PM, Contest Intro, IST Intro	Core Team	
Week 3	Getting Started Session Team Breakout (Charter, RAM, minutes, other)	IST Panel	
Week 4	Managing Project Risk (Chapter 9)	Guest Speaker	
Week 4	Exam 1	Chapters 1-4 and	
Week 5	MS Project Software	COMPUTER	
Week 5	Challenges of Team Work		
Week 6	Follow Up Session Team Breakout (Process Review, send docs to panel)	IST Panel	Assignment 2
Week 6	Ch. 5, 6 Scope Management & Project		
Week 7	Q&A Bidders Conference with project sponsor	Project Contest	
Week 7	Team Breakout	Invite your IST	
Week 8	BREAK – University Closed		
Week 8	Ch. 7, 8 Managing Project Resources & Quality		Assignment 3
Week 9	Case Studies in Project Management	Guest Speaker	
Week 9	Team Breakout	Invite your IST	
Week 10	Exam 2	Chapters 5-8	
Week 10	Close Out Session Team Breakout (Finishing Review, send to panel)	IST Panel	
Week 11	Team Breakout	Invite your IST	
Week 11	Local Site Visit with PMs		
Week 12	Team Breakout	Invite your IST	
Week 12	Chapter 10 Managing Project Procurement		
Week 13	Project Mgmt and the Global Market	Guest Speaker	Team Project Due
Week 13	HOLIDAY – University Closed		
Week 14	Course Project - Team Presentations	Project Contest	
Week 14	Course Project - Team Presentations	Project Contest	
Week 15	Ch. 11, 12 Managing Project Execution, Control / Closure		
Week 15	Final Exam 3	Chapters 10-12	
Week 15	PMI Memphis Chapter Meeting	Awards	

APPENDIX B.

BASIC PM COURSE - PROJECT DESCRIPTION

Strategic Information Technology Project Management

This is a team project. The project teams and project leads will be assigned. At the end of the project, each member will rate the contribution of the other members of his/her team. The final set of material comprising the project is to be submitted as attachments to an e-mail to the instructor on the due date, see the Course Schedule.

Email any questions or project materials to the instructor and copy your project mentor and use the subject line of "Basic PM Course-". The team leader, who will be assigned, will set project meetings and responsibilities. See the umdrive.memphis.edu/rposton/public for the templates. The course instructor is the main stakeholder (i.e., person funding your project). See the RFP for project details.

As part of the information gathering for the requirements, you are to interview at least six people regarding what features and functionality should be included in the system. These interviewees should include a broad cross-section of people who will be using and/or affected by the system. Develop an interview guide and include it with the final documentation of your project. Also include complete contact information for all of your interviewees.

The main purpose of the project and use of the templates is that the deliverables are to include coverage of all the issues covered by the PMI knowledge areas as appropriate. In fact, the templates are developed for you in order to cover all these areas and will be the main focus of judging and grading your project outcomes. At a minimum you must comply with the RFP, but you will be assessed as to how well you used the templates and 'ran' your project. Document/Data formats of the Documents submitted should be Microsoft Word, Excel, PowerPoint, Visio, and Project and combined in one file. Your projects will be graded and judged based on the project management performance of your entire team. Peer evaluations will be used to assign individual grades.

Course Project RFP

Basic PM Course — Strategic Information Technology Project Management

REQUEST FOR PROPOSALS

Project Title: Personal Digital Assistant (PDA) New Application Offering

Organizational Overview: You are to develop a complete project plan for analysis, design, development, and implementation of a personal digital assistant (PDA) new application offering for a the device of your choice (i.e., Palm Pilot, iPhone, BlackBerry, etc.) and the application of your choice (i.e., weather, chat, gaming, etc). You may search on the internet or talk to PDA developers to get ideas about how others have addressed this issue. Do this early in the process. You should include a full range of mechanisms that allow users to be able to use the new functionality easily, ubiquitously, and have it be useful to them.

Main Stakeholder (Project Sponsor): The system is funded by the course instructor. Any questions related to this project that would be handled by the main stakeholder should be raised in class. There will be a mid-term Question and Answer (Q&A) session for all issues and questions to be discussed in order to make sure all teams, judges, and mentors have identical information and are on track.

Target Audience: The system is for PDA users. Your system should be very inclusive of features and functionality that you think the users would like to have but still be very "user friendly." Remember that some of the users will be very computer literate and considered 'heavy users' and some will not know as much about how to use computers and are considered 'light users'.

Required Deliverables: The team leader, who will be assigned, will set project meetings and responsibilities.

1. As part of the information gathering for the requirements, you are to interview at least six people regarding what features and functionality should be included in this kind of system. These interviewees should include a broad cross-section of users – heavy and light users, and a range of ages, socio-economic levels, and ethnicities. Develop an interview guide and include it with the final documentation of your project. Also include complete contact information for all of your interviewees.
2. The deliverables are to include coverage of all the issues covered by the PMI knowledge areas as appropriate. Specific deliverables and templates (and some of required timetables) will be provided to you-see below. Document/Data formats of the Documents submitted should be Microsoft Word, Excel, PowerPoint, Visio, and Project.
3. Assumptions and Agreements:
 - The project must be completed by the due date in the Course Schedule in the syllabus.
 - A preliminary budget for this project has been approved.
 - Vendor bids may not exceed \$50,000.

- The course instructor will serve as a project main stakeholder and project sponsor.
- There will be no significant changes to the requirements during the project.
- The project team shall warrant that on delivery, all project materials are free of material faults and processing errors.
- At the conclusion of the project, all materials developed by the project team will become the exclusive property of the project sponsor.
- When applicable, any expenses incurred are the project team's responsibility.

Required Proposal Format: The proposal must contain all the following for your completed project plan for analysis, design, development, and implementation of a personal digital assistant (PDA) new application offering.

1. Interview notes from at least six people regarding what features and functionality should be included in this kind of system.
 - a) The interview guide
 - b) Complete contact information for all of your interviewees.
2. The project plans for completing the project (i.e. what should be done to make the system a reality), including timing/dates.
3. Completed deliverables based on templates and some required timetables that were provided to you (see below). Submit documents In MS Word, Excel, PowerPoint, Visio, and Project.
 - a) Following are the typical deliverables that should be included (requirement checklist):

<i>Project Management Deliverable</i>	<i>Project Phase</i>
1. Project Charter	INITIATION
1a. Scope Statement	
2. WBS / Work Breakdown Structure	PLANNING <i>Schedule, budget monitored and updated. Processes contained in PM management documents (6, 7, 8) used throughout the life of the project.</i>
3. RAM / Responsibility Assignment	
4. Project Schedule	
5. Project Budget	
6. Change Management Plan	
6a. CR Entry Form	
6b. Change Request Table	
7. Risk / Issue Management Plan	
7a. Risk Assessment Form	
7b. Risk / Issue Table	
8. Communication Plan	
8a. Meeting Minutes	ALL PHASES <i>Minutes for all team meetings.</i>
8b. Meeting Minutes	
8c. Meeting Minutes	
8d. Meeting Minutes, etc.	
9. Final Project Report	CLOSEOUT <i>of your project to write the Proposal</i>
10. Product Acceptance / Closeout	
11. Lessons Learned	

4. Project Presentation. You will present your project and every team member must talk (i.e., present a portion of the project). My heuristic, which has served me well in industry and academics, is about 3 minutes/slide on average and remember to leave plenty of time for Q&A (Questions and Answers).

Basis for Award of Grade and Contest Judging: Your projects will be graded and judged based on the project management performance of your entire team. This is a team project. The project teams and project leads will be assigned. At the end of the project, each member will rate the contribution of the other members of his/her team. Peer evaluations will be used to assign individual grades.

Project Management Contest: The following general guidelines are subject to change by the current Contest Manager. PMI Memphis Chapter is supporting a contest to recognize the student team that best manages its course project in compliance with course guidelines (see above) and PMI mandated processes and knowledge areas. In general, team performance was to be evaluated based upon:

1. PM process and deliverable quality – Team meetings / minutes, PM documentation, good control processes, complete administrative closeout.
2. Deliverable quality – Meets sponsor/ customer needs; in conformance with RFP requirements.
3. Delivered on schedule – Completed and delivered (by due date) on time.

1. Panel of Judges: The MIS 3885 Project Management Contest Panel of Judges shall include:

- Three PMI Members
 - PMP Certified
 - BOD Member/Previous BOD member or served as PMI Educational Instructor
- University Faculty Representative
 - Course Instructor or Recommended Alternate

2. Scoring Breakdown

- | | |
|---|--|
| <ol style="list-style-type: none">1. Requirement Checklist (see above)<ul style="list-style-type: none">- Completed All Items- Quality of Documentation2. Final Presentation<ul style="list-style-type: none">- Presentation- Technical & Visual Appeal- Complete and Appropriate Information | <ol style="list-style-type: none">3. Project Submitted<ul style="list-style-type: none">- Adequately Researched- Aligns with Business Needs- Intuitive/ Clients Next Steps are clear- Target Market Identified- Design – User Friendly |
|---|--|

Submit Proposal To: The final set of material comprising the project is to be submitted as attachments to an e-mail to the course instructor on the due date, see the Course Schedule.

For Additional Information or Clarification, Contact: The Project Sponsor (who is the course instructor).

Proposal Due Date: See Course Schedule in Syllabus for the deadline

**APPENDIX C.
ADVANCED PM COURSE – SYLLABUS**

Advanced PM – Project Management Tools & Leadership

Course description

Introduction to advanced planning processes, technical, interpersonal and leadership tools of modern project management. Students will explore advanced project management concepts by utilizing the PMBOK concepts to conduct a post-mortem analysis of a completed project in an organization; resulting in a “lessons learned” report that captures and describes both best practices and areas for improvement. Covers the relationships between project management and the realization of overall organizational goals and strategies. Students will learn about team dynamics, conflict resolution, leadership skills, and technical tools that support project management planning and process (Microsoft Project 2007).

Technical Requirements

If students do not have the following software, all the college computer labs have the following tools available:

- Microsoft Project Professional 2007
- Microsoft PowerPoint or PowerPoint viewer
- Adobe Acrobat Reader
- Online collaboration tools such as Google Groups or Project Pier

Course Goals

1. Upon successful completion of this course, students will be able to:
2. Understand the importance of project management in contemporary organizations and the relationships between organizational projects, missions, strategies and goals.
3. Apply advanced project management concepts in order to provide the structure, planning, and coordination of new organizational projects that often initially lack clear structure.
4. Apply advanced project management concepts to the analysis of existing organizational projects resulting in the identification of areas in need of improvement.
5. Analyze the health of current projects and make necessary adjustments to existing project schedules, budgets, etc. in order to realize successful project outcomes.
6. Understand the importance of project post-mortem analysis techniques and concepts related to project related knowledge management in contemporary organizations.
7. Know how to properly conduct a post-mortem analysis that results in a knowledge base of organizational and project related best practices and areas needing improvement.
8. Understand interpersonal and team dynamics and know how to successfully apply conflict management techniques.
9. Understand the root causes, psychology, and dynamics of organizational change and the impact on organizational projects.
10. Understand and apply leadership skills in a way that motivates team members and results in successful project completion.
11. Hold an in-depth knowledge of how to effectively utilize Microsoft Project.
12. Improved decisions making skills and the ability to advise others on issues identified above.

Course Deliverables & Exams

- Lectures
- Text and other assigned readings
- Class discussions
- Post Mortem Analysis Project
- Examinations

There will be two exams (mid-term and final exam), both will be in essay format. For each exam you will be provided with a case study scenario and will be required to apply concepts related to PMBOK, conflict management, leadership, and advanced project management skills to developing solutions for the case study project descriptions. Weekly assignments related to Microsoft Project 2007 will be assigned.

You are responsible for all material covered in class lectures. Much of this information is presented only in class (not covered in your textbook). If you miss a class you are still responsible for the information so you may want to set up an arrangement with someone in class to either tape record the class for you or provide you with their lecture notes.

<i>Date</i>	<i>Topic /Assignment</i>	<i>PMI Support Team</i>
Week 1	Course Overview and Introduction to Advanced Project Management	
Week 1	The Project Organization (Projects and the Org Strategy)	
Week 2	Ch. 1 – Planning a Project in Project2007	LAB
Week 2	Impact of Org Infrastructure & Culture on Managing Projects	
Week 3	Managing Geographically Dispersed Project Teams	
Week 3	PMI Kick-off – “Meet your Project Mentor”	PMI Core & Mentors
Week 4	Ch 2 – Creating a Project Schedule in Project2007	LAB
Week 4	Leadership Skills (Leading the Successful Project Team)	
Week 5	PMI Lecture Series – Risk Management	PMI Lecture Series
Week 5	Ch 3 – Communicating Project Information	LAB
Week 6	Team Breakout Session with Project Mentors	PMI Project Mentors
Week 6	Understanding Team Dynamics and Conflict Management in Project Teams	
Week 7	Conflict Management Techniques	
Week 7	PMI Lecture Series – Crisis Management	PMI Lecture Series
Week 8	Break – University Closed	
Week 8	Exam 1	
Week 9	Ch 4 – Assigning Resources and Costs in Project2007	LAB
Week 9	Ch 5 – Tracking Progress and Closing the Project	LAB
Week 10	Communication and Conflict Resolution Strategies	
Week 10	Team Breakout Session with Project Managers	PMI Project Mentors
Week 11	Change Motivators in Orgs and the Psychology of Change	
Week 11	Characteristics of Leadership (Leading vs. Managing)	
Week 12	Leading Organizational Change through Project Management	
Week 12	Innovation in Leadership Strategies	
Week 13	The Future of Project Management & PM Growth Strategies	
Week 13	Break – University Closed	
Week 14	PMI Lecture Series – Lessons Learned from a Recent Graduate	PMI Lecture Series
Week 14	Project Presentation Dry Run (to class)	PMI Project Mentors
Week 15	Team Presentations to Executive Panel	PMI Executive Panel
Week 16 TBD	Final Exam - TBD	
TBD	PMI Memphis Chapter Meeting	Awards

APPENDIX D.

ADVANCED PM COURSE – COURSE PROJECT DESCRIPTION

Advanced Project Management Tools and Leadership

Post Mortem Project: Identifying Best Practices & Lessons Learned

Project Outline:

This project is closely tied to the project management skills that you acquired in the Basic PM Course. The *purpose* of this project is for you to “right-size” the PMBOK conceptual tool box that you acquired Basic PM Course. The *goal* of this project is for you to develop judgment regarding which project management processes, tools, and techniques are needed to meet both the team and project-specific needs; and to decide how best to implement them.

At the start of the semester you will be assigned to a project team, your team will determine which individual will serve as project manager (based on questionnaire completed in class). The second week of class a project mentor will be assigned to your team. Your project mentor will be an experienced XYZ Co. Project Manager who has managed a recently completed multi-million dollar project at XYZ Co.. Your team will work closely with your mentor to conduct a post mortem analysis on the completed XYZ Co. project. The result of that analysis will be a Lessons Learned report and presentation.

Project Deliverables:

You will have two deliverables for this project; (1) a product development deliverable (post mortem & lessons learned report), and (2) a project management deliverable (project level documentation for the management of your own project team).

Both deliverables will be presented in a combined project Lessons Learned report. The project report will be due two weeks before the end of the semester. Your team will present both the results of its post mortem analysis and the documentation related to the management of your project team. The presentation will be given to an Executive Panel of corporate executives at the end of the semester. The panel will consist of senior level management (i.e. Directors, Sr. VPs, CIOs, etc.) from Fortune500 organizations, as well as large to mid-sized prominent regional and local organizations. The panel will be given your final Lessons Learned report two weeks prior to your presentation in order to assess your post mortem analysis as well as the project management practices of your own project team.

Post Mortem Analysis/Lessons Learned (product development):

A post mortem analysis is a review at the end of a project, the goal of which is to determine how the project was managed, why it was managed in the way that it was, and how the project management decisions throughout the project affected the project’s outcomes (both positively and negatively).

For your group project your teams will conduct a case study analysis, in which you will analyze the XYZ Co project that you have been assigned. Your team should apply its collective knowledge of the PMBOK based functional requirements (from Basic PM Course) as a starting point from which to approach the post mortem analysis. Your team’s PMBOK knowledge base should guide the identification of potential project management processes that occurred in the XYZ Co project, and provide a starting point from which to start the post mortem analysis. Team knowledge of the PMBOK will also assist your team structure an approach to analyzing the XYZ Co project. Finally, the process of applying the PMBOK should result in a scope definition for your team’s project, and aid your team in determining topic areas for information gathering at XYZ Co.

The project your team has been given (conduct a post mortem analysis and create a lessons learned report) will be abstract at first. ***It is up to your team to use the knowledge gained in Basic PM Course to create a structure, scope, and direction for your analysis of the XYZ Co project. This is a critical, and difficult, part of the project. Your team will want to do this early in the semester!!!!*** If it isn’t done early and correctly your team will not formulate the right questions, or gather the right information, to complete a thorough and insightful analysis of the XYZ Co project. In short, your team will not accomplish its goals. This will be clear both during the presentation to the executive panel and in the quality of your final Lessons Learned report.

Your mentor will be working closely with you throughout the semester. He/she will provide initial information regarding the XYZ Co. project so that you are familiar with the project itself. He/she will assist you in conducting interviews with XYZ Co. employees who are project stakeholders. Your mentor will also help you acquire any documentation that you need. You will be invited to the XYZ Co. site to see the result of the project, you will be able to interact with the project deliverable, and meet relevant stakeholders. Your mentor will assist you in gathering the information that your team needs, however he/she will not automatically identify the information that you need. Your team must determine what the information requirements are and request access to the relevant information. It is up to your team to determine how the XYZ Co project will be analyzed.

Team Project Management Deliverable:

Your team is engaged in a project. The goal of that project is to conduct a case study with which you will analyze a XYZ Co project to determine the impact of the management of that project, capture successful management techniques (and describe why they are successful) and make recommendations for improvement (and describe why it is an opportunity to improve).

It is important to determine the difference between the project that you are analyzing and the resulting Lessons learned report, and the management of your own team project.

The following deliverables are required for your team's project management documentation; (1) Evidence of controlling, documenting, and work performed to produce the analysis (case study); and (2) evidence of the development of adequate and sustainable methods to meet PMBOK based function requirements that are determined to be relevant to your team project, the associated documentation must be completed in Microsoft Project 2007. Finally, you will describe the team project management process in the final chapter of the team's final Lessons Learned deliverable. The managing of the team's project is also required as part of the final presentation to the executive panel at the end of the semester.

Each individual member of the team will complete an evaluation of all other team members, to be turned in at the end of the semester as part of your final project grade. The evaluation of individual team members will result in 10% of each team member's final project grade.

Comments:

It is important to keep in mind that this project is very different than the one that you completed in Basic PM Course. You are given specific goals; however the team project is purposefully not well defined. Remember, project documentation for your own project is important but unlike Basic PM Course it is not at the forefront of the grading process. Instead the emphasis is on the ability of your team to utilize the PMBOK and general project knowledge gained in Basic PM Course to define the project, assess the XYZ Co. project, perform a rigorous analysis of the XYZ Co. project management, and provide insight into "best practices" and suggestions for project management improvement.

This is not an easy project. You will receive honest feedback from the Executive Panel based on your analysis. However, your final project grade will be determined by your professor and will be based on; (1) your team's analysis and quality of insight of your Lessons Learned report, (2) application of PMBOK and project management knowledge gained in Basic PM Course to analysis, (3) documentation of your own team's project management, (4) and your team member's assessment of your contribution to the project.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.