MGT 553

PROJECT MANAGEMENT FOR PROFESSIONALS

STUDY GUIDE

CALIFORNIA INTERCONTINENTAL UNIVERSITY

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Please Note: Some chapters of the textbook may not be included in the Study Guide. The content of the excluded chapters is not within the scope of the course objectives. Learners are encouraged to read all textbook chapters as supplementary reading.

Contents

HOW TO USE THIS GUIDE

This Study Guide is intended to facilitate understanding of key learning points found in the textbook. Read this guide as you go through each unit of your course. Reflect on the 'Ask Yourself' questions as a **TRA** (Transfer, Retention, and Application) method. The guide is organized as follows:

- An overview of learning objectives
- Key learning points of each chapter
- Activities
- Chapter Practice Exams (If provided)
- Chapter Discussion Questions
- Unit Exams
- Unit Assignments
- End of Course Survey
- Week 6 Discussion Questions
- Final Exam
- Course Project

This Guide is not a substitute for the textbook. The Summary at the end of each Chapter of the textbook highlights the learning points for each chapter and must be read.

The Syllabus for this Course is provided as a separate document in the 'Course Document Folder' Tab in your Course room. You will find the following information in the Syllabus:

- How to Study
- Credit Hours Defined
- Study Schedule
- Library Services
- Academic Integrity Policy
- University Policies
- Help Desk

You must read the Syllabus and other documents posted in the Course Document folder of your Course Room so you will understand how to maximize learning, grading requirements, and how to earn the desired grade.

Faculty qualifications and contact information are available in the General Discussion Forum of your Course Room as an attachment entitled: Instructor Policies. Please do not hesitate to contact your course instructor if you have questions.

ACADEMIC INTEGRITY POLICY

Ideas and learning form the core of the academic community. In all centers of education, learning is valued and honored. No learning community can thrive if its members compromise their achievement and seek to establish an unfair advantage over their fellow student/learners. The academic standards are based on a pursuit of knowledge and assume a high level of integrity in every one of its members.

When this trust is violated, the academic community suffers injury and must act to ensure that its standards remain meaningful. The vehicle for this action is the Academic Integrity Policy outlined in CalUniversity's Student Handbook.

The Academic Integrity Policy is designed to foster a fair and impartial set of standards upon which academic dishonesty will be judged.

All student/learners are required to read, understand, and adhere to these standards, which define and specify the following mandatory sanctions for such dishonest acts as copying, plagiarism, lying, and unauthorized collaboration, alteration of records, bribery, or misrepresentation for the purpose of enhancing one's academic standing.

Please comply with the following:

1. Please read your Instructor's policy on submitting papers for plagiarism check and the consequences of plagiarism
2. Sign and submit the Probity Form (See Course Room Important Documents) to the General Discussion Forum
3. Submit your paper for plagiarism check (Go to the Student Resource Center). The similarity index should not be higher than 20%. If it is higher than 20%, reduce the percentage by deleting or paraphrasing the words identified as matching other papers. Submit your papers for grading only after you have taken this step.
4. Know the consequence of plagiarism:
   a. First Offense – Instructor's discretion (See Instructor Policies)
   b. Second Offense – "F" grade for the paper; student to attend and complete plagiarism workshop
   c. Third Offense – "F" grade for the course; student may be placed on academic probation/dismissal at the discretion of the Chief Academic Officer

If you need more information on plagiarism, contact your Student Advisor to register for a workshop on how to avoid plagiarism.

COURSE OVERVIEW

MGT 553: STRATEGIC HUMAN RESOURCE MANAGEMENT

Course Description:

This course offers tools, techniques, tips, and other information that can assist the student in preparation of the PMP certification examination. The emphasis is on reconciling the student approach to the PMI's viewpoint and perspective. This is not a guide to general project management but rather, a specific study area following the PMI's approach to project management as set forth in the PMBOK 3rd Edition. Project initiation, planning, execution, control, and closing are the core topics covered in this course.

Course Objectives:

The objectives of the course are;

- To approach the project management process from PMI's views on project management properly initiate projects, understand the project planning process
- To control and close projects, follow PM's professional responsibility standards, streamline exam preparation with exam insights, tips, and study strategies.

Learning Outcomes (LO):

At the end of the course, learners will be able to:

LO 1.   Clarify the difference between a project and a non-project.

LO 2.   Describe the relation of the three goals of a project: scope, cost, and time project performance targets.

LO 3.   List the roles handled by a Project Manager (PM).

LO 4.   Address the three responsibilities held by a PM to acquire resources and personnel; to deal with the obstacles that arise; and to exercising the leadership to bring the project to a successful conclusion.

LO 5.   Define the characteristics of a project charter.

LO 6.   Identify the primary function of a project plan.

LO 7.   Identify different steps in the budgeting and cost estimating process.

LO 8.   Describe the application of the learning curve and the tracking signals within a project.

LO 9.   Discuss what a project schedule is and describe its most common formats.

LO 10.   Assess the challenge of balancing of allocated resources to a project.

LO 11.   Describe techniques to monitor a project.

LO 12.   Describe techniques to control a project.

LO 13.   List the steps needed to evaluating project results.

LO 14.   Discuss methods to terminate the project.

UNIT ONE

Chapters & Learning Outcomes

The key points of the following chapters (see textbook) will be discussed in this Unit:

- Chapter One
  The World of Project Management   pages 1 to 42

UNIT ONE LEARNING OUTCOMES

This Unit meets the following learning outcomes:

LO 1.   Clarify the difference between a project and a non-project.

LO 2.   Describe the relation of the three goals of a project: scope, cost, and time project performance targets.

CHAPTER ONE

The World of Project Management

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Be able to define what a project is.
- Establish the difference between a project manager and a general manager.
- Describe the relation of the three goals of a project: scope, cost, and time project performance targets.

In Chapter 1 we start by defining a project and differentiating project management from general management. After discussing the project life cycle, we briefly cover project selection. We feel strongly that project managers who understand why a project was selected by senior management also understand the firm's objectives for the project. Understanding those things, we know, will be of value in making the inevitable trade - offs between time, budget, and the specified output of the project.

What Is a Project? (Page 1)

A project is defined when each task is specific and unique with a specific deliverable aimed at meeting a specific need or purpose by a specific date. The difference between a project and a non-project are not always clear. The Project Management Institute (PMI) defines a project as "A temporary endeavor undertaken to create a unique product or service" (Project Management Institute, 2008). Another company factor of a project is that they are multidisciplinary. This is because projects require input from people with different kinds of knowledge and expertise.

Trends in Project Management are being driven by quickly changing global markets, technology, and education. Global competition is putting pressure on prices, response times, and product/service innovation. Computer and telecommunication technology, along with rapidly expanding higher education across the world allows the use of project management for types of projects and in regions where these sophisticated tools had never been considered before.

Project can be used to achieve an organization's strategic goals, and existing major projects are screened to make sure that their objectives support the organization's strategy and mission. Project are also undertaken to achieve routine company or departmental goals. You may also encounter Quasi-projects and virtual projects. Virtual projects involve global teams whose members operate in different locations, countries and/or different time zones, each bringing a unique set of talents to the project. A quasi projects is one that is extended to areas of the organization where the project objectives are not

well understood. This ill-defined type of project is extremely difficult to conduct and to date has often resulted in setting an artificial due date and budget, and then specifying project objectives to meet those limits.

Ask yourself: What is a virtual project?

Project Management vs. General Management (Page 4)

Project management differs from general management largely because projects differ from what we have referred to as "non-projects." The naturally high level of conflict present in projects means that the project manager (PM) must have special skills in conflict resolution. The fact that projects are unique means that the PM must be creative, flexible and have the ability to adjust rapidly to changes. When managing non-projects, the general manager tries to "manage by exception." In other words, for non-projects almost everything is routine and is handled routinely by subordinates. The manager deals only with the exceptions. For the PM, almost everything is an exception.

Project management differs greatly from general management. Every project is planned, budgeted, scheduled, and controlled as a unique task. Unlike non-projects, projects are often multidisciplinary and usually have considerable need to cross-departmental boundaries for technology, information, resources, and personnel. Crossing these boundaries tends to lead to intergroup conflict. The development of a detailed project plan based on the scope and due date of the project is critical to the project's success.

Unlike their general management counterparts, project managers have responsibility for accomplishing a project, but little or no legitimate authority to command the required resources from the functional departments. The PM must be skilled at win - win negotiation to obtain these resources. Some skills a project manager needs include being able to negotiator, plan, meet budgets and deadlines.

Ask yourself: What are some key differences between a project manager and a general manager?

What Is Managed? The Three Goals of a Project (Page 6)

The performance of a project is measured by three criteria. Is the project on time or early? Is the project on or under budget? Does the project deliver the agreed - upon outputs to the satisfaction of the customer? **Figure 1-1 Scope, cost, and time project performance targets** shows the three goals of a project. The performance of the project and the PM is measured by the degree to which these goals are achieved.

One of these goals, "scope", is set by the client (although the client agrees to all three when contracting for the project). It is the client who must decide what capabilities are required of the project's deliverables — and this is what makes the project unique. Some writers insist that "quality" is a separate and distinct goal of the project along with time, cost, and scope. We do not agree because we consider quality an inherent part of the project specifications.

Unfortunately, we live in a world characterized by chance events (uncertainty) and the result is that the most skilled planning is upset by uncertainty. Thus, the PM spends a great deal of time adapting to unpredicted change. The primary method of adapting is to trade - off one objective for another. If a construction project falls behind schedule because of bad weather, it may be possible to get back on schedule by adding resources — in this case, probably labor and some equipment. If the budget cannot be raised to cover the additional resources, the PM may have to negotiate with the client for a later delivery date. If neither cost nor schedule can be negotiated, the contractor may have to "swallow" the added costs (or pay a penalty for late delivery) and accept lower profits.

Projects have three interrelated objectives: to (1) meet the budget, (2) finish on schedule, and (3) generate deliverables that satisfy the client. Because we live in an uncertain world, as work on the project proceeds, unexpected problems are bound to arise. These chance events will threaten the project's schedule or budget or scope. The PM must now decide how to trade off one project goal against another (e.g., to stay on schedule by assigning extra resources to the project may mean it will run over the predetermined budget). If the schedule, budget, and scope are rigidly predetermined, the project is probably doomed to failure unless the preset schedule and budget are overly generous or the difficulty in meeting the specifications has been seriously overestimated.

Ask yourself: What are a projects three interrelated objectives?

The Life Cycles of Projects (Page 8)

A project's life cycle measures project completion as a function of either time (schedule) or resources (budget). This life cycle must be understood because the PM's managerial focus subtly shifts at different stages of the cycle (Adams and Barndt, 1983; Kloppenborg and Mantel, 1990).

During the early stages, the PM must make sure that the project plan really reflects the wishes of the client as well as the abilities of the project team and is designed to be consistent with the goals and objectives of the parent firm. As the project goes into the implementation stage of its life cycle, the PM's attention turns to the job of keeping the project on budget and schedule —or, when chance interferes with progress, to negotiating the appropriate trade-offs to correct or minimize the damage. At the end of the project, the PM turns into a "fuss-budget" to assure that the specifications of the project are truly met, handling all the details of closing out the books on the project, making sure there are no loose ends.

There are two different paths (life cycles) along which projects progress from start to completion. One is S - shaped and the other is J - shaped. It is an important distinction because identifying the different life cycles helps the PM to focus attention on appropriate matters to ensure successful project completion.

Ask yourself: What is a products life cycle?

Selecting Projects to Meet Organizational Objectives (Page 10)

Project selection is the process of evaluating individual projects or groups of projects and then choosing to implement a set of them so that the objectives of the parent organization are achieved. Before a project begins its life cycle, it must have been selected for funding by the parent organization and, it is subject to approval by a more or less formal selection process. Often conducted by a committee of senior managers, process the major function of the selection is to ensure that several conditions are considered before a commitment is made to undertake any project. These conditions vary widely from firm to firm, but several are quite common:

1. Is the project potentially profitable? Does it have a chance of meeting our return - on - investment hurdle rate?

2. Is the project required by law or the rules of an industrial association; i.e., a "mandate?"

3. Does the firm have, or can it easily acquire, the knowledge and skills to carry out the project successfully?

4. Does the project involve building competencies that are considered consistent with our firm's strategic plan?

5. Does the organization currently have the capacity to carry out the project on its proposed schedule?

6. In the case of R & D projects, if the project is technically successful, does it meet all requirements to make it economically successful?

This list could be greatly extended. The selection process is often complete before a PM is appointed to the project. However, the PM should know exactly why the organization selected the specific project because this sheds light on what the project (and hence the PM) is expected to accomplish, from senior management's point of view, with the project.

Project may have been selected because it appeared to be profitable, or was a way of entering a new area of business, or a way of building a reputation of competency with a new client or in a new market. This knowledge can be very helpful to the PM by indicating senior management's goals for the project, which will point to the desirability of some tradeoffs and the undesirability of others. There are many different methods for selecting projects, but they may be grouped into two fundamental types, nonnumeric and numeric. The former does not use numbers

Understand the different types of nonnumeric selection methods including the sacred cow, the operating/competitive necessity method and the comparative benefits method.

Know the different types of numeric selection methods including Financial Assessment Method, the Scoring Method, the Financial Options and Opportunity Costs.

Ask yourself: Explain one of the selection methods?

Confronting Uncertainty—the Management of Risk (Page 21)

Before and during a project there are actions that may be taken to reduce the uncertainty or risk of problems. But there is no actions a PM can take to ever eliminate risk all together. The first thing a PM must do is to identify the potentially uncertain events and the likelihood that any or all may occur. This is called risk analysis.

The essence of risk analysis is to make estimates or assumptions about the probability distributions associated with key parameters and variables and to use analytic decision models or Monte Carlo simulation models based on these distributions to evaluate the desirability of certain managerial decisions. Real - world problems are usually large enough that the use of analytic models is very difficult and time consuming. With modern computer software, simulation is not difficult.

Ask yourself: What could be a risk to your project?

The Project Portfolio Process (Page 31)

The Project Portfolio Process (PPP) attempts to link the organization's projects directly to the goals and strategy of the organization.

Link the organization's projects directly to the goals and strategy of the organization. This occurs not only in the project's initiation and planning phases, but also throughout the life cycle of the projects as they are managed and eventually brought to completion. Thus, the PPP is also a means for monitoring and controlling the organization's strategic projects.

Derivative projects are projects with objectives or deliverables that are only incrementally different in both product and process from existing offerings. They are often meant to replace current offerings or add an extension to current offerings (lower priced version, upscale version). Platform projects -The planned outputs of these projects represent major departures from existing offerings in terms of either the product/service itself or the process used to make and deliver it, or both. As such, they become "platforms" for the next generation of organizational offerings, such as a new model of automobile or a new type of insurance plan. They form the basis for follow - on derivative projects that attempt to extend the platform in various dimensions.

Breakthrough projects typically involve a newer technology than platform projects. It may be a "disruptive" technology that is known to the industry or something proprietary that the organization has been developing over time. Examples here include the use of fiber-optic cables for data transmission; cash -balance pension plans, and hybrid gasoline - electric automobiles.

Research and Development (R&D) projects are "blue- sky," visionary endeavors, oriented toward using newly developed technologies, or existing technologies in a new manner. They may also be for acquiring new knowledge, or developing new technologies themselves.

Be able to describe the 8 steps of the project portfolio process

Ask yourself: Choose and explain one step of the project portfolio process.

Activities

Chapter One Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week One section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week One Discussion Question (Chapter One):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

Explain the difference between a project and non-project.

(Note: Your instructor will post the question to the Week One Weekly Discussion Question Forum

UNIT ONE ASSIGNMENTS

Unit One Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week One section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Unit One Case Analysis

Read the case on pages 41 to 42 called, "Handstar Inc." Prepare your composition to cover the following topics or questions with in the Body section of the paper described for this assignment:

   a. Choose the projects you would you recommend Handstar to pursue based on the NPV approach? Explain why you choose this project and not the others choices?

   b. Argue whether you agree or disagree with the founders who believed it is reasonable to assume each product had a three - year life.

   c. Can you think of a better project or focus for the company to take?

Write a 3 to 5 page paper (1000 to 1500 words) in APA format. Below is a recommended outline.

   1. Cover page (See APA Sample paper)

   2. Introduction

      a. A thesis statement

      b. Purpose of paper

      c. Overview of paper

   3. Body (Cite sources with in-text citations.)

   4. Conclusion – Summary of main points

      a. Lessons Learned and Recommendations

   5. References – List the references you cited in the text of your paper according to APA format.

      (Note: Do not include references that are not cited in the text of your paper)

GRADING

Your instructor will provide a grading rubric to evaluate your paper. Please see the Instructor Syllabus and Policies for details.

UNIT TWO

Chapters & Learning Outcomes

The key points of the following chapters (see textbook) will be discussed in this Unit:

- Chapter Two
  The Manager, the Organization and the Team   pages 42 to 77
- Chapter Three
  Planning The Project   pages 79 to 113

UNIT TWO LEARNING OUTCOMES

This Unit meets the following learning outcomes:

LO 3.   List the roles handled by a Project Manager (PM)
LO 4.   Address the three responsibilities held by a PM to acquire resources and personnel; to deal with the obstacles that arise; and to exercising the leadership to bring the project to a successful conclusion.
LO 5.   Define the characteristics of a project charter.
LO 6.   Identify is the primary function of a project plan.

CHAPTER TWO

Organizing and Visualizing Data

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- List the roles of a PM.
- Address the three responsibilities held by a PM to acquire resources and personnel; to deal with the obstacles that arise; and to exercising the leadership to bring the project to a successful conclusion.
- Name four essential parts of persuasion.
- Steps used to select a PM.
- Determine how to fit PM into the parent organization.
- Choosing and managing a project team.

Chapter 2 is devoted to the various roles the project manager must play and to the skills required to play them effectively. In addition, we cover the various ways in which projects can be organized. The nature of the project team and the behavioral aspects of projects are also briefly discussed.

The PM's Roles (Page 45)

Understand the roles a PM plays in a project including being a facilitator, micromanager, communicator, Virtual project manager and meeting, convener and chair.

The PM is a facilitator, unlike the traditional manager who is a supervisor. The PM must adopt the systems approach to making decisions and managing projects. Trying to optimize each part of a project, sub-optimization, does not produce an optimized project. Multiple communication paths exist in any project, and some paths bypass the PM, causing problems. Much project communication takes place in meetings that may be run effectively if some simple rules are followed. In virtual projects much communication is via high technology channels. Above all, the PM must keep senior management informed about the current state of the project.

Ask yourself: Explain one role held by a PM.

The PM's Responsibilities to the Project (Page 50)

The PM has three overriding responsibilities to the project. First is the acquisition of resources and personnel. Second is dealing with the obstacles that arise during the course of the project. Third is

exercising the leadership needed to bring the project to a successful conclusion and making the trade - offs necessary to do so. In addition to the above three responsibilities a PM must also be skilled at Negotiation, Conflict Resolution, and Persuasion.

Ask yourself: Can you identify the four essential parts of persuasion described by Jay Conger (1998)in the Harvard Business Review?

Selection of a Project Manager (Page 53)

Successful PM have some common characteristics. They are "closers." They also have high administrative and technical credibility, show sensitivity to interpersonal conflict, and possess the political know - how to get help from senior management when needed. In addition, the PM should be a leader, and adopt a participatory management style that may have to be modified depending on the level of technological sophistication and uncertainty involved in the project. Another critical project management skill is the ability to direct the project in an ethical manner.

Understand the criteria listed in this chapter including credibility, sensitivity, leadership, and style ethics.

Ask yourself: What was the most important criterion for a prospective PM to have in the language of sales people?

Project Management as a Profession (Page 55)

A professional organization, the Project Management Institute (PMI) has been devoted to project management. The growth in the field has been exponential. Among other reasons for this growth is the project-oriented organization. The PMI has published the Project Management Body of Knowledge (PMBOK). It also publishes two professional periodicals. Many courses and degree programs in project management are available. Project management has numerous career possibilities.

Ask yourself: What is the difference between a normal project and a mega project?

Fitting Projects into the Parent Organization (Page 57)

Below are some key economic reasons to use projects:

1. Integrating product design, engineering, manufacturing, and marketing functions in one team not only improves the product but results in cuts in the time - to - market for the product.
2. The product development/design process requires input from different areas of specialized knowledge. The exact mix of knowledge varies from product to product or service to service. Teams of specialists can be formed, do their work, and disband. The makeup of such teams can easily be augmented or changed.
3. The explosive expansion of technical capabilities in almost every area of the organization tends to destabilize the structure of the enterprise. Almost all industries have experienced the earthquakes of changed technology, revamped software systems, altered communication systems; followed by mergers, downsizing, spin - offs, and other catastrophes — all of which

require system - wide responsiveness. Dealing with the threat of climate change is going to require massive, worldwide changes in technology. It will undoubtedly involve the use of multi-firm, multi-industry, and multinational projects to develop and implement the necessary technological changes. Traditional organizations have difficulty dealing with rapid, large - scale change, but project organizations can.

4. Organizing large -scale, rapid change as projects gives the managers some sense of accountability and control. Finally, the rapid growth of globalized industry often involves the integration of activities carried out by different firms located in different countries, often on different continents. Organizing such activities into a project improves the firm's ability to ensure overall compliance with the laws and regulations of dissimilar governments as well as with the policies of widely assorted participating firms.

Pure Project Organization (Page 58)

Project organization is the natural way to organize large, complex project that often require the services of hundreds of people.

Functional Project Organization, are projects that have a very different types of structure and are embedded in the Functional group where the project will be used.

Functional Project organization has two major. First, communications across functional department boundaries are rarely as simple as most firms think they are. Second the project is rarely a high priority item in the life of the division.

Matrix project organization is a pure project that is superimposed on a functionally organized system as in **Figure 2-4 Matrix project organization** on Page 61. Beware of the advantages and the disadvantages for a matrix project.

Understand what a mixed Organizational system is.

Project maturity measurement models have been developed to measure the degree to which individual organizations have mastered state - of - the - art project management practices.

Ask yourself: What are the advantages and disadvantages of matrix projects?

The Project Team (Page 66)

Effective team members should have some of the following characteristics, being technically competent, senior members should be politically sensitive, goal oriented and finally workers should have a high self-esteem.

Be able to identify the four common threads of intrateam conflict.

Know the six signs of stress in the workplace and six ways to control it.

Ask yourself: What do you think of the list of characteristics for an effective team member? Would you add anything to this list?

Chapter Two Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week two section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Two Discussion Question (Chapter Two):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

List five reasons to organize a new product development project as a trans-disciplinary, matrix-organized project.

(Note: Your instructor will post the question to the Week Two Weekly Discussion Question Forum

CHAPTER THREE

Planning the Project

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Define the characteristics of a project charter
- Identify is the primary function of a project plan.
- Be able to list different types of projects.
- List the nine categories of a plan.
- Explain what it means to empower a work team
- Describe how to balance a multidisciplinary team
- Define the whole brain approach to project planning
- Define the Work Breakdown Structure (WBS)

Chapter 3 focus is on the beginning and planning a project.

The Contents of a Project Plan—The "Project Charter" (Page 79)

The multiple elements required in the project plan fall into one of the following nine categories:

1. Overview.
2. Objectives
3. General Approach
4. Contractual Aspects
5. Schedules
6. Resource Requirements
7. Personnel
8. Risk Management
9. Evaluation methods

Project planning can be overdone, a condition often called "paralysis by analysis".

The Project Charter contains most, if not all, of the nine items listed above. The Charter is often an abridged version of the full project plan containing summaries of the budget and schedule details. The major project stakeholders must sign off on the plan. The list of signatories would include a person representing the project sponsor, the client/user, the Project Manager, and the Program Manager if the project is a part of an overall program. In some cases, representatives of other stakeholders may be

asked to sign their approval. Clearly, this may require negotiation. Once the charter is agreed to, no changes can be made by any one signer without acceptance of the others cannot alter it.

The project plan should contain nine elements: a project overview, a statement of objectives, a description of the technical and managerial approaches to the work, all contractual agreements, schedules of activities, a list of resource requirements or a project budget, personnel requirements, project evaluation methods, and preparations to meet potential problems. When all stakeholders have signed off on the plan, it becomes an operational Project Charter.

Ask yourself: What is the primary function of a project plan?

The Planning Process—Overview (Page 83)

There are many techniques for developing a project plan and Project Charter. They are fundamentally similar. All of them use a systematic analysis to identify and list the things that must be undertaken in order to achieve the project's objectives, to test and validate the plan, and to deliver it to the user.

Be able to list and explain the eight steps of planning process.

Ask yourself: Are the eight steps of the planning process discussed in the book unchangeable? Please explain.

The Planning Process—Nuts and Bolts (Page 84)

This section deals with the problem of determining and listing the various tasks that must be accomplished in order to complete a project. The important matters of generating a project budget and developing a precise project schedule are left to succeeding chapters, though much of the raw material for doing those important things will come from the planning process described here.

PM's first job is to review the project objectives (project scope plus expected desirable outcomes that accrue to stakeholders from matters beyond the project's deliverables) with senior management who is fundamentally responsible for the project. This is to make sure that the PM understands the expectations that the organization, the client, and other stakeholders have for the project; (2) to identify those among the senior managers (in addition to the manager who is party to this interview) who have a major interest in the project; and (3) to determine if anything about the project is atypical for projects of the same general kind.

Understand the team's invitation list, Launch meeting and the Breakdown Structure (WBS).

Review **Table 3-1 Program Launch Meeting Output, Human Resources Development** on Page 86.

Understand what the results of a launch meeting should be.

Identify the primary contributors to the failure of a project.

Sorting Out the Project —The Work Breakdown Structure (WBS) (Pagae 87)

Know how to build a WBS.

Review **Figure 3-1 a partial WBS (Gozinto chart) for an Annual Tribute Dinner project** on Page 88.

Understand the hierarchical planning process and know the only rule that appears to be mandatory.

Understand how a WBS differs from an extension of the everyday WBS.

Review **Table 3-2 A Modified WBS for Improving Staff Orientation** on Page 92

Ask yourself: Can you name the three results of an effective launch meeting?

More on the Work Breakdown Structure and Other Aids (Page 96)

Review of the process to construct the project WBS all project activities will be identified and arranged in successively finer detail, that is, by levels. For each activity, the type and quantity of each required resource (including personnel) are identified. For each activity, predecessors and task duration are estimated. All project milestones are identified and located on the project schedule following their predecessor activities. For each activity, the individual or group assigned to perform the work is identified. Acceptance of the assignment is noted by "signing - off."

In addition, we can determine several other pieces of information from the items previously listed. If project milestones, task durations, and predecessors are combined, the result is the project master schedule. Additional time allowances for contingencies may be added, though we will later argue against this way of dealing with uncertainty. The master schedule allows the PM to compare actual and planned task durations and resource usage at any level of activity, which is to say that the master schedule is also part of a control document, the Project Charter. The need for such comparisons dictates what information about project performance should be monitored. This gives the PM the ability to control the project and take corrective action if the project is not proceeding according to plan.

Review and understand the Responsible - Accountable - Consult - Informed Matrix by reviewing **Figure 3-5 A RACI Matrix** on Page 97.

Understand the Whole Brain Approach to Project Planning.

Review **Figure 3-6 Begin mind mapping with statement of project's objective** on Page 99.

From the Work Breakdown Structure, one can extract a list of all tasks arranged by task level. The WBS will show numeric identifiers for each task plus other information as desired. The WBS may take a wide variety of forms. From the WBS one can also develop the RACI Matrix which details the nature of responsibility of each individual or group involved in the project to the specific tasks required to complete the project. Mind mapping can greatly enrich the planning process.

Ask yourself: Would you be able to mind map?

Multidisciplinary Teams—Balancing Pleasure and Pain (Page 102)

What are the five dysfunctions of a team that you should look for?

What are the problems of integration management?

Understand parallel tasking.

Know what the main problems of interface coordination-interface management and the approaches to one can take to lessen the problem.

Understand the advantages of empowering your work teams.

Understand the steps that Steven Eppinger, a professor at MIT's Sloan School of Management, proposes to use in the development and use of a design structure matrix.

Review **Table 3-6 Example DSM for Project with Six Activities** on Page 106

Review **Table 3-7 Modified DSM to Show Activities to Be Completed Concurrently** on Page 107

The task of managing the ways in which different groups interact during planning and implementation of projects is called "interface coordination." An important aid to interface coordination is mapping the interactions of the various groups. The task of integrating the work of these groups is called integration management. Parallel tasking allows all groups involved in designing a project to work as a single group and join together to solve design problems simultaneously rather than separately and solving the problems sequentially. When information from some project activities is required to complete other activities, the Design Structure Matrix may be quite useful.

Ask yourself: List some advantages of empowerment?

Activities

Chapter Three Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Two section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Two Discussion Question (Chapter Three):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

Under what circumstances is it sensible to do without a project launch meeting?

(Note: Your instructor will post the question to the Week Two Weekly Discussion Question Forum)

UNIT TWO ASSIGNMENTS

Unit Two Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Two section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Unit Two Case Analysis

Read the case on pages 74 to 77 called, "Southern Care Hospital." Prepare your composition to cover the following topics or questions with in the Body section of the paper described for this assignment:

   a.   Would you choose to make this a functional, pure or matrix project? Why?

   b.   Using the resource pool whom would you select to be on your project team? Why?

   c.   Give suggestions on how you would handle trade-offs

Write a 3 to 5 page paper (1000 to 1500 words) in APA format. Below is a recommended outline.

1.   Cover page (See APA Sample paper)

2.   Introduction

   a.   A thesis statement

   b.   Purpose of paper

   c.   Overview of paper

3.   Body (Cite sources with in-text citations.)

4.   Conclusion – Summary of main points

   a.   Lessons Learned and Recommendations

5.   References – List the references you cited in the text of your paper according to APA format.

   (Note: Do not include references that are not cited in the text of your paper)

GRADING

Your instructor will provide a grading rubric to evaluate your paper. Please see the Instructor Syllabus and Policies for details.

UNIT THREE

Chapters & Learning Outcomes

The key points of the following chapters (see textbook) will be discussed in this Unit:

- Chapter Four
  Budget the Project pages 115 to 149
- Chapter Five
  Scheduling the Project pages 151 to 194

UNIT THREE LEARNING OUTCOMES

This Unit meets the following learning outcomes:

LO 7. Identify different budgeting and cost estimating process.

LO 8. Describe the application of the learning curve and the tracking signals within a project.

LO 9. Discuss what a project schedule is and describe its most common formats.

CHAPTER FOUR

Budgeting the Project

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Identify methods of project budgeting.
- Understand how to estimate project Cost.
- Consider ways to improve cost estimates.
- Know how to budget for uncertainty, risk and change.

Chapter 4, the use of project management software is covered in increasing detail. Software is used throughout the book, where relevant, to illustrate the use and power of such software to aid in managing projects. Chapter 4 includes a brief discussion of risk management and a very helpful mathematical model for improving cost estimates, or any other numerical estimates used in planning projects.

Methods of Budgeting (Page 116)

Budgeting is simply the process of forecasting what resources the project will require, what quantities of each will be needed, when they will be needed, and how much they will cost.

Review **Table 4-1 Resource Cost per Unit for Producing a Short Documentary Film** on Page 116.

Review **Table 4-2 Budget by Resource for Producing a Short Documentary Film** on Page 117..

Top -Down Budgeting (Page 118)

The top - down approach to budgeting is based on the collective judgments and experiences of top and middle managers concerning similar past projects. These managers estimate the overall project cost by estimating the costs of the major tasks, which estimates are then given to the next lower level of managers to split up among the tasks under their control, and so on, until all the work is budgeted.

Understand top-down budgeting including the advantages.

Project budgeting is a difficult task due to the lack of precedent and experience with unique project undertakings. Yet, understanding the organization's accounting system is mandatory for a PM. The two major ways of generating a project budget are top - down and bottom - up. The former is usually accurate overall but possibly includes significant error for low - level tasks. The latter is usually accurate

for low - level tasks but risks overlooking some small but potentially costly tasks. Most organizations use top - down budgeting in spite of the fact that bottom - up results in better acceptance and commitment to the budget.

Ask yourself: Why do you think true bottom-up budgeting is rare?

Cost Estimating (Page 120)

Understand how budget cost can impact a project plan.

Know the difference between activity versus program budgeting.

Cost estimating is more tedious than complex except where overhead and GS & A expenses are concerned. Thus, the wise PM will learn the organization's accounting system thoroughly. Low budget estimates or budget cuts will not usually be too serious for S - shaped life - cycle projects but can be disastrous for exponential life - cycle projects. Two kinds of project budget exist, usually depending on where projects report in the organization. Activity budgets show lines of standard activity by actual and budget for given time periods. Program budgets show expenses by task and time period. Reporting unit aggregates program budgets.

Ask yourself: What is the difference between a program budget and an activity budget?

Improving Cost Estimates (Page 125)

Realize the key purpose for using forms to help with budgeting.

Know the factors and the solutions to the most common events that impacts a projects cost estimate.

Identify the two major factors of budget overruns.

There are numerous ways to improve the process of cost estimation ranging from simple but useful forms and procedures to special techniques such as learning curves and tracking signals. Most estimates are in error, however, because of simpler reasons such as not using available tools, common sense, or failing to allow for problems and contingencies, such as having to replace workers midstream. In addition, there are behavioral and organizational reasons, such as informal incentive systems that reward inaccurate estimates.

Ask yourself: How would you protect your project from budget overruns?

Budget Uncertainty and Risk Management (Page 133)

Know the three basic causes for change in projects and their budgets and/or schedules.

There are three ways to revise a budget during the course of a project, know how to choose which one to use.

1. Some changes are due to errors the cost estimator made about how to achieve the tasks identified in the project plan.
2. Other changes result because the project team or client learns more about the nature of the scope of the project or the setting in which it is to be used.
3. The third source of change is the mandate: A new law is passed, a trade association sets a new standard, a governmental regulatory agency adopts a new policy.

Understand risk management and the three areas it should cover:

1. risk identification
2. risk analysis, and
3. response to risk.

Also know the six sub-processes

1. Risk Management   Planning developing a plan for risk management activities.
2. Risk Identifi cation finding those risks that might affect the project.
3. Qualitative Risk Analysis evaluating the seriousness of the risk and the likelihood it will affect the project.
4. Quantitative Risk Analysis developing measures for the probability of the risk and its impact on the project.
5. Risk Response Planning finding ways of reducing negative impacts on the project as well as enhancing positive impacts.
6. Risk Monitoring and Control maintaining records of and evaluating the subprocesses above in order to improve risk management.

Scenario Analysis involves envisioning likely scenarios that may have major repercussions on the organization and then identifying the possible resulting outcomes of events.

Expected value, estimates, game theory, logic chart, table exercise, dress rehearsals and simulation.

Understand risk monitoring and control.

Failure Mode and Effect Analysis (FMEA) FMEA is a structured approach similar to the scoring methods discussed in Chapter 1 to help identify, prioritize, and better manage risk. Review **Table 4-5 FMEA for New Product Development Project at Pharmaceutical Company** on Page 138.It illustrates the results of a FMEA conducted to assess the risk of a new drug development project at a pharmaceutical company.

In spite of the effort taken to make realistic budget estimates, it can still be useful to prepare for changes in the budget as the project unfolds. Such changes derive from multiple sources, including technology, economics, improved project understanding, and mandates. To the extent possible, it is best to try to include these contingencies in the contract in case they come to pass. Risk management

consists of risk planning identification, qualitative and quantitative analysis, response, and monitoring. We deal with risk through such means as decision tables, simulation, and response, which entail identifying, which risks will be prepared for and which will be ignored and simply accepted.

Ask yourself: Can you give one example for each of the three basic causes for change in projects and their budgets and/or schedules?

Activities

Chapter Four Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Three section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Three Discussion Question (Chapter Four):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

Contrast the disadvantages of top - down budgeting and bottom - up budgeting.

(Note: Your instructor will post the question to the Week Three Weekly Discussion Question Forum)

CHAPTER FIVE

Scheduling the Project

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Discuss what a project schedule is and describe its most common formats.
- Define Pert and CPM networks and how they are built.
- Describe a Gantt chart.
- Be able to understand project uncertainty and risk management.

Chapter 5 uses standard manual methods for building project schedules, and Microsoft Project 2010 (MSP) is demonstrated in parallel. Risk analysis using Oracle's Crystal Ball 11.1 (CB) simulations is demonstrated in several chapters with detailed instructions on building and solving simulation models.

PERT and CPM Networks (Page 152)

Program Evaluation and Review Technique (PERT) and the Critical Path Method (CPM) are tools developed in the 1950s to identify a critical path of tasks that could not be delayed without delaying the project. Both methods identify activities with slack (or float) that could be somewhat delayed without extending the time required to complete the project.

Understand these terms as they apply to PERT/CPM; activity, event, milestone, network, path, critical path, nodes and critical time.

Be able to explain the two ways of displaying a project network.

Understand the concept of a critical path and critical time.

All activities, and thus all paths, must be completed to finish the project. The shortest time for completion of the network is equal to the longest path through the network.

The amount of time a noncritical task can be delayed without delaying the project is called slack or float.

Understand how to calculating Activity Slack.

Doing It the Easy Way —Microsoft Project (MSP) (Page 158)

Know when you can use a MSP.

Following the definition of some terms commonly used in PERT/CPM analysis, both AON and AOA networks are illustrated. ES and EF are found for all network activities, and the critical time and critical path are identified by the forward - pass method. LS and LF are calculated for all activities by the backward -pass method, and slack is defined as either LS-ES or LF–EF. The managerial implications of the critical path and of project slack are briefly discussed. The same problem used for illustrating networks is entered into MSP and shown as an output of the software. Review **Figure 5 -11 An MSP version of PERT/CPM network from Table 5 – 3** on page 159.

Ask yourself: What does MSP stand for?

Project Uncertainty and Risk Management (Page 161)

Uncertainty and risk management are introduced. Optimistic, most likely and pessimistic estimates of task duration are made and expected activity times are calculated as well as the standard deviation and variance of task time distributions. From this data the mean times for all paths are calculated, and the probability of the apparent critical path completion on or before a predetermined date can be found. In addition, the probability of completion can be set in advance and the path delivery date consistent with that probability can be determined. The problem of merge bias is then investigated.

Define the following terms pessimistic, optimistic, and most likely or normal. Review and understand **Table 5 -4 A Sample Set of Project Activities with Uncertain Durations** on Page **163**

Be able to find the critical path, backward pass and critical time for the network and understand the advantages and disadvantages.

Be able to calculate the probability of completing a project on time.

Know what is meant by assumption of statistical independence.

Be able to selecting risk and find D.

Identify the problem with mergers.

Ask yourself: How do you find the critical path and critical time for the network?

Simulation (Page 173)

Using the sample problem, risk analysis is carried out by a simulation using Crystal Ball. Each step in the process is described. Conclusions similar to those reached in the statistical procedure of Section 5.2 are reached through simulation. The two procedures are compared by examining the assumptions on which they are based as well as the problems encountered in using them. The computational effort and assumptions required by the traditional statistical approach lead us to the conclusion that simulation is the preferred technique for carrying out risk analysis.

Review **Table 5 –8 Data from Table 5 –4 Entered into a CB Spreadsheet with Assumption and Forecast Cells** on Page 174. Follow the instructions below the table.

Identify the issues in using the traditional Statistics or Simulation approach.

Ask yourself: What does a Simulation analyses do for your project?

The Gantt Chart (Page 178)

The Gantt chart is a useful complement to a project network. It is easily constructed and read. It can contain a considerable amount of information and is an excellent communication device about the state of a project. Its major weakness is that it does not easily expose the project's technology, that is, the technical relationships between a project's many activities. Even with predecessors marked on a Gantt chart, it is difficult to see the project technology and, thus, to use the Gantt chart alone to manage a complex project. PERT/CPM networks are often used as complements to Gantt charts.

Review **Figure 5 -20 A Gantt chart of a sample project in Table 5 - 4 (MSP)** on Page 179.

Be able to identify advantages and disadvantages to the Gantt chart.

Ask yourself: What is a disadvantage of the Gantt chart?

Extensions to PERT/CPM (Page182)

The section discusses a significant extension of Gantt charts and PERT/CPM. Precedence diagramming, developed as a convenient way to include leads and lags between activities, is explained. Finally, we consider some of the managerial problems often associated with risk analysis.

Precedence diagramming is an AON network method that easily allows for these leads and lags within the network. MSP handles leads and lags without problems.

Network node times are calculated in a manner similar to PERT/CPM times.

Ask yourself: Name one disadvantage to the PERT/CPM network method?

Activities

Chapter Five Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Three section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Three Discussion Question (Chapter Five):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

How is slack determined?

(Note: Your instructor will post the question to the Week Three Weekly Discussion Question Forum)

UNIT THREE ASSIGNMENTS

Unit Three Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Three section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Unit Three Case Analysis

Read the case on pages 193 to 194 called, "NutriStar." Prepare your composition to cover the following topics or questions with in the Body section of the paper described for this assignment:

    a.   Should NutriStar adding approximately 10,000 square feet of production space to its facility in Latin America at a cost of $5 million? Defend your answer.

    b.   How would you protect and manage this project from uncertainty and risk.

    c.   Evaluate the scheduling of the project and calculate the probability that the project can be completed within 30 months.

Write a 3 to 5 page paper (1000 to 1500 words) in APA format. Below is a recommended outline.

1. Cover page (See APA Sample paper)

2. Introduction

    a.   A thesis statement

    b.   Purpose of paper

    c.   Overview of paper

3. Body (Cite sources with in-text citations.)

4. Conclusion – Summary of main points

    a.   Lessons Learned and Recommendations

5. References – List the references you cited in the text of your paper according to APA format.

    (Note: Do not include references that are not cited in the text of your paper)

GRADING

Your instructor will provide a grading rubric to evaluate your paper. Please see the Instructor Syllabus and Policies for details.

UNIT FOUR

Chapters & Learning Outcomes

The key points of the following chapters (see textbook) will be discussed in this Unit:

- Chapter Six
  Allocating Resources to the Project   pages 196 to 236
- Chapter Seven
  Monitoring and Controlling the Project   pages 238 to 271

UNIT FOUR LEARNING OUTCOMES

This Unit meets the following learning outcomes:

LO 10.   Assess the challenge of balancing of allocated resources to a project.

LO 11.   Describe techniques to monitor a project.

LO 12.   Describe techniques to control a project.

CHAPTER SIX

Allocating Resources To the Project

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Consider ways to improve cost estimates.
- Know how to budget for uncertainty, risk and change.
- Learn how to allocating physical and human resources.
- Describe to time allocation of resources.
- Determine how to deal with competing demands for the same limited resources.
- Optimize management of resources.
- Identify variable resources and fixed resources.
- Learn how to allocating physical and human resources.
- Explain why time allocation of resources is important.
- Define the meaning of project monitoring and control.
- Discuss the purpose of project monitoring.
- Be able to distinguish monitoring and control.

Chapter 6 deals with resource allocation problems in a multi-project setting. A major section of this chapter is devoted to the insights of E. Goldratt in his book Critical Chain.

Expediting a Project (Page 197)

When task durations are estimated, an assumption is made that task resources are set at "normal " levels. This is the "standard practice" assumption. Traditionally, CPM project duration estimates also include a "crash" estimate together with estimates of the crash time and the resources required to shorten the duration of project activities. By selectively choosing which activities to crash and by how much, we can determine the minimum cost for all possible project completion times.

Understand the terms fast tracking a project, crash cost, and normal cost and crashing a project.

Ask yourself: What is meant by fast tracking a project?

Resource Loading (Page 202)

Resource loading is usually displayed as a list of the amounts of specific resources assigned for use on specific project activities at specific times, or as a graph showing the level of a resource ' s capacity

required against the project calendar. To be useful for scheduling, the resource must have a calendar showing the resource's availability. The calendar should include hours —and days— worked each week, any holidays on which the resource will not be available and any other information affecting the availability of the resource. Resource cost per unit of usage should be included on the calendar, plus any additional cost for overtime or overuse. Over scheduling a resource may cause serious problems for the PM.

Resource loading refers to the amounts of specific resources that are scheduled for use on specific activities or projects at specific times. It usually takes the form of a list or table.

Review **Figure 6 -3 Project plan and Gantt chart for production of a short documentary fi lm (MSP)** on Page 203. Task names, WBS numbers, durations, finish dates, and the resource requirements for each step in the process are shown. (Precedences are not listed, but they are illustrated on the Gantt chart.)

Ask yourself: What does the term resource-loading mean?

Resource Leveling (Page 208)

Most project management software will, when asked politely, level out the loads (usage) for individual resources and warn the PM when a resource is scheduled for greater-than-capacity workloads. Whenever possible, the leveling will utilize any available activity slack rather than extend the duration of the project. When a resource is assigned to an activity, it is assigned for 100 percent of its availability unless the PM Specifies otherwise. It is often necessary to have significant excess resource capacity on projects because of the uncertainty that exists in all projects. Dealing with this issue is a major reason for the installation of a competent risk management system.

Review **Figure 6 -10 Thirty - four - week resource loading chart for a software engineering group (MSP and Excel** on Page 215. It illustrates a resource - loading chart for a software engineering group in a large firm.

Ask yourself: How does an activity slack help leveling?

Allocating Scarce Resources to Projects (Page 216)

There are many possible rules for assigning preference to some activities over others when allocating scarce resources. The following are some of these rules.

- As soon as possible — this is the standard rule in scheduling. Activities are scheduled to start on their ESTs, and resources are made available with that in mind.
- As late as possible — with this rule, resources are made available so that activities start on their LSTs whenever possible without increasing the project's duration. This may seem irrational, but it preserves the firm's resources and delays cash outflows as long as possible. This rule is also compatible with Eliyahu Goldratt's contention that the "student syndrome" leads workers to delay starting an activity until the last possible moment (Goldratt, 1997, Ch. 13).

- Shortest task duration first— always consistent with technological precedence's, shorter tasks are given priority over longer tasks. This rule maximizes the number of tasks that can be completed by a system in a given time period.

- Minimum slack first — Tasks are supplied with resources in inverse order of their slacks. This rule usually minimizes the number of late activities.

- Most critical followers —the number of successors on the critical path(s) for each activity is counted. Activities with a higher number of critical successors take precedence. The rationale here is that such activities would cause the greatest damage to the desired project schedule if they are late.

- Most successors— the same as the previous rule except that all successors are counted. This rule has the same rationale as the preceding rule.

- Most resources first —with this rule, the greater the use of a specific resource on a task, the higher the task's priority for the resource. This rule is based on the assumption that more important activities have a greater demand for scarce resources.

When a resource is over allocated, MSP can level resource usage by adopting a variety of priority rules, including available activity slack. If there is insufficient lack, other priority rules may be used to allocate the scarce resource. Most of the priority rules originated as job shop scheduling rules. The minimum slack rule usually works best. Only a few critical resources are actually scarce in the sense that project schedules must be adjusted to resource availability.

Ask yourself: Choose a rule and provide a situation when you would use it.

Allocating Scarce Resources to Several Projects (Page 218)

Allocating scarce resources among multiple projects is more complicated than the single project case, but is not different in its basic logic. The several projects are linked with pseudo-activities and treated as if they were the individual activities of a single project. Schedule slippage, resource utilization, and in - process inventory are measures of the goodness of any priority rule. Much of the allocation problem results because project facilities/resources have insufficient excess capacity to handle the uncertainties associated with projects. The shape of the project ' s life cycle helps determine whether or not resources can be borrowed from ongoing activities to supply stalled activities with critical resource needs.

Understand the terms supper-project, priority rule, schedule slippage, resource utilization and in process inventory.

Review AOA network (see Figure 6 – 11).

The shortest - task - first rule for assigning resources minimizes the level of in - process inventory or how much unfinished work is in the system.

The minimum slack rule is probably the best overall priority rule according to research on the subject. It gives the best combination of minimum project slippage, minimum resource idle - time, and minimum in - process inventory (Fendley, 1968). While first -come - first - served may be the client's idea of "fair," it

is a poor priority rule when measured against almost any of the others. If the minimum slack rule produces ties among two or more projects (or activities), the shortest task rule seems to be the best tie - breaker.

Understand what is meant by the Basic approach.

Whatever the scheduling rule, the scheduling method assigns scarce resources to activities on the basis of the degree to which the activity meets some priority conditions.

Ask yourself: What is a pseudo-activity?

Goldratt's Critical Chain (Page 222)

Know the most common complaints about projects and notice that they will be the same regardless of project industry.

Review **Figure 6 -13 Three project scenarios** on Page 224.

What problems do you face when asking for task estimations?

Review the effect of not reporting early activity completion.

When project team members are assigned to multiple projects, they have to allocate their time across these projects or multitask. Multitasking involves switching from a task associated with one project to another task associated with a different project. To illustrate this, consider the two small projects shown in **Figure 6 -16 Two small projects** on Page 228.

Review **Figures 6 -17 (a) and 6 -17 (b) Alternative Gantt charts for projects A and B on Page 228**. In Figures 6 - 17(a) and 6 - 17(b), Gantt charts have been developed for two alternative ways of completing the tasks. In Gantt chart 6 - 17(a), you switch between projects after each task is completed, while in Gantt chart 6 - 17(b) you complete all of your assigned tasks for Project A before beginning any work on Project B.

Review the 12 common chain of events described by Goldratt on page 229.

Critical chain occurswhen two potential sources that can delay the completion of a project. One source of delay is in the tasks that make up the critical chain. The project buffer discussed earlier is used to protect against these delays (see Figure 6-19Project and feeder buffers on Page 231). The second source of delay is in the tasks external to the critical chain. These tasks can also delay the completion of the project if delays in these "feeder" paths end up delaying one or more of the tasks on the critical chain.

The critical chain concept identifies the facts that activity times are unknown and independent, that workers will inflate their time estimates to protect themselves, early completion tasks will not be reported, the work will expand to fill the time, tasks will not be started until the last minute, multitasking will be misapplied, resource demands will be uneven and result in task delays, and more projects and tasks will be undertaken to increase resource utilization. All these contribute to project

delays and inefficiencies. To correct these problems, feeder time buffers are cut severely to change behavior, a project buffer is added at the end of a project, the release of projects and tasks is based on the availability of bottleneck resources, and time buffers are added to resources that feed bottleneck resources.

Ask yourself: What does it mean to fast track a project?

Activities

Chapter Six Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Four section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Four Discussion Question (Chapter Six):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

Describe the fundamental trade - offs made when deciding whether or not to crash a project. If the decision is made to crash, what additional trade - offs must be made?

(Note: Your instructor will post the question to the Week Four Weekly Discussion Question Forum)

CHAPTER SEVEN

Monitoring and Controlling the Project

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Understand what project monitoring and control mean.
- Know the purpose of monitoring is.
- Be able to distingue monitoring and control.

Chapter 7 concerns monitoring and controlling the project. Earned value analysis is covered in detail.

The Plan-Monitor-Control Cycle (Page 238)

Monitoring is the collection, recording, and reporting of project information that is of importance to the project manager and other relevant stakeholders.

Control uses the monitored data and information to bring actual performance into agreement with the plan.

It is essential to spend time up front designing the planning -monitoring -controlling process, especially for more challenging projects. The project plan is the primary document to guide the design of the monitoring system in terms of the detailed tasks and resources that need to be controlled in order for the project to achieve its time, cost, and output goals. Common errors in setting up monitoring systems are monitoring easy measures instead of relevant measures, monitoring activity in place of results, monitoring inputs as surrogates for outputs, and monitoring measures that don't change from one period to the next.

Ask yourself: What is the purpose of monitoring?

Data Collection and Reporting (Page 241)

The majority of data to be collected will eventually exist in one of the following five formats be familiar with them all; raw numbers, frequency counts, subjective numeric ratings, indicators and surrogates and verbal characterization.

Data Analysis Following the collection of the data through the monitoring system, it is frequently necessary to analyze or process the data in some manner before reporting it for control purposes. This may take the form of simple aggregation of the data, such as averaging the values, or something as complex as fitting statistical distribution functions to the data to ascertain relationships, effects, and trends.

For projects, there are primarily three distinct types of reports: routine (which we have been describing), exception, and special analysis. Be able to describe and provide examples of all three.

In addition to the benefits of reports for the purposes of control, what other benefits do the reports bring?

Meetings can range from regular, highly formalized and structured presentation/question/answer sessions to informal, off-the-cuff get –together. Project review meetings, regardless of the format, are always important. Know what guidelines to use to help avoid the problems within the meetings.

In this chapter on monitoring, reporting, and control, it is important to note that PMs can and do effectively utilize what has come to be called the " information revolution. " Using the Internet to communicate and report about the project's status is now easily accomplished whether project team members are in the next cubicle or across the world. One large high technology company uses secure Web pages on the Internet to collect, store, and disseminate information on various projects. They have several Web pages that are specifically designed to communicate project information to and from clients. Others are designed for the sole use of members of the project team. Still others are created to communicate with the firm's senior management.

For the monitoring system, data in various forms have to be collected, analyzed, and reported. Data also need to be aggregated, manipulated in various ways, and compared with planned values in order to allow effective control. The monitoring system helps PMs prevent problems instead of having to solve them. Project reports vary in content and frequency, depending on who the reports are targeted to and what controls they will exert. A special consideration is the relationship between the organization's information system and the project's system. In addition to printed reports, reports may also have to be given orally at meetings, but steps can be taken to maximize the effectiveness of such meetings. The Internet and the organization's local area network or intranet have enhanced project communication and meetings as well as facilitated the management of geographically dispersed virtual projects.

Ask yourself: What does it mean to Flag something?

Earned Value (Page 247)

Earned value represents a way to capture both in - process performance and cost on a certain date as measured against budget or schedule. Including the planned costs and actual costs allows the calculation of spending and schedule variances, where negative values are undesirable. Using these figures, a projection can be made of costs to completion and total cost for the task or project under

consideration. Although percentage completion makes limited sense for individual tasks and work elements, it has little meaning for the project as a whole. Nonetheless, one can aggregate the individual task earned values and variances to make reasonable estimates of project completion costs.

To the best of our knowledge, there is no satisfactory way to measure accurately the percent of completion of most tasks, let alone to measure accurately the percent of completion of an entire project.

Three conventions have been adopted for estimating progress on tasks, but they must not be confused with reality. The most popular is 50–50: the task is listed as 50 percent complete when work on it is initiated, and the other 50 percent is added when the task is completed. This approach avoids the difficult problem of trying to estimate progress while the task is being executed. Clearly, this overstates the EV of tasks that have recently begun, but understates the EV of tasks nearing completion. In a large project, of course, with multiple on - going tasks starting and stopping at different times, the overstating and understating may tend to even out resulting in a relatively accurate portrayal of project progress. Another convention is 100 percent when the task is complete and zero percent before that. This is a very conservative approach that will only how project progress that is definitely achieved. Projects, however, will always appear to be "behind schedule," and upper management will be in a constant state of worry about the project's progress (not to mention the project manager's competence). The last approach is the common, intuitive one of trying to estimate percentage completion by using the ratio of cost expended to the total cost budgeted for a task, the ratio of the actual time elapsed relative to the total scheduled task time, or some combination of both. There is no strong evidence that either the time or cost ratio is an accurate estimator of percent completion.

Review **Figure 7 -6(a) Positive schedule variance, negative spending variance, Figure 7 -6(b) Negative schedule variance, negative spending variance and Figure 7 -6(c) Negative schedule variance, positive spending variance**, all on Page 250

Earned value, the textbook notes, represents a way to capture both in - process performance and cost on a certain date as measured against budget or schedule. Including the planned costs and actual costs allows the calculation of spending and schedule variances, where negative values are undesirable. Using these figures, a projection can be made of costs to completion and total cost for the task or project under consideration. Although percentage completion makes limited sense for individual tasks and work elements, it has little meaning for the project as a whole. Nonetheless, one can aggregate the individual task earned values and variances to make reasonable estimates of project completion costs.

Ask yourself: What does earned value mean?

Project Control (Page 254)

Project control, the final activity in the planning - monitoring - control cycle, involves taking action when reality deviates from plan. It includes both mechanistic and human elements, and because it is closely

concerned with human behavior, is one of the most difficult tasks of the PM. It includes two seemingly antithetical purposes: (1) stewardship of the organization's and the client's physical, human, and financial assets; and (2) the use of these assets to bring project actuality into conformance with the plan. Somehow, the PM must meld these two purposes into a uniform focus of activity.

Control, the act of reducing differences between plan and actuality, is the final element in the planning - monitoring - controlling cycle.

Control has the primary purpose of ensuring that the project is in compliance with its objectives. Particularly in large projects with a wealth of detail and constant hubbub, it is all too easy to lose sight of these three fundamental targets. Know the three fundamental targets of a project.

Know the key factors that make control of a project hard.

Understand the two primary purposes of control.

Physical asset control is concerned with the maintenance and use of the project's physical assets. This includes the timing as well as quality of maintenance being conducted on the assets.

The stewardship of human resources primarily involves controlling and maintaining the growth and development of the project team. Fortunately, projects provide a particularly fertile environment for cultivating humans, given that each project typically offers a unique professional experience over a short duration.

financial control involves stewardship of the organization's expenditures on the project, including both conservation of financial resources and regulation of resource use. Most accounting tools used for projects are excellent in this area of control: current asset controls, project budgets, capital investment controls, audits, and even representation on the project team through the project accountant.

Ask yourself: What are the two primary purposes of control?

Designing the Control System (Page 256)

Designing the project control system entails many issues, but the major guiding objective should be to create a balanced system where the benefits obtained exceed the cost of control. The primary means to active control by the PM are process reviews, personnel reassignment, and resource allocation. Two types of control systems are useful for projects: go/no - go controls and post - controls. Tools to aid the PM in control are variance analysis, trend projections, earned value analysis, critical ratios, control charts, and benchmarking.

When designing the control system, there are certain helpful guidelines to keep in mind. For instance, the primary purpose of the control system is to correct error, not to identify and punish the guilty.

Know the three primary mechanisms that PM uses to exert control.

Control can also be exercised through personnel assignments based on past project productivity.

Controlling resource allocation can be a powerful motivator—and demotivator.

Resources are usually allocated to the more productive or important tasks and this can significantly influence the attainment of project results.

Know the common mistakes PMs and other organizational managers make when trying to control projects.

Any project (or production system) can be described in terms of its inputs, the process by which it works on the inputs, and the outputs that result. To control a project (or any production system) requires components, what are they?

The go/no - go control takes the form of tests (sensors) to determine if some specific precondition (standard and comparator) has been met before permission is granted to continue (decision maker and effector). This type of control can be used on almost every aspect of a project.

Post - controls, also known as post-performance reviews, are applied after the project has been completed.

A critical ratio indicates to a manager when a task or process is becoming unacceptable, typically when the ratio drops below 1. By tracking the ratio, the manager can anticipate when a problem may be brewing. .

The schedule ratio is actual progress divided by scheduled progress, as measured by some common standard such as earned value: EV/PV. Clearly, ratios greater than one are desirable. The cost ratio is budgeted cost divided by actual cost, or if earned value data are available, EV/AC. Again, values greater than one are most desirable. Taking the product of these two ratios thus gives us an overall measure that includes performance, cost, and schedule. CR =(actual progress/scheduled progress) X (budgeted cost/actual cost).

Ask yourself: Provide an example of the effective use of process controls?

Scope Creep and Change Control (Page 263)

Scope creep arises quite naturally from both the client as well as the project team as new capabilities and needs surface during the course of the project. Rather than trying to ignore or handle change requests on an informal basis, the PM must anticipate that they will inevitably arise and institute a formal change control system to handle them. The purpose of the system is to evaluate each change formally to determine its benefits as well as its costs and other impacts on the project, and to make arrangements for obtaining the resources and altering the project specifications as needed to implement the change, if it is eventually approved.

Know the purpose of a change control system.

Controlling "scope creep" is possible — if the PM follows a few rules.

1. Every project charter must include a change control system by which requests for changes in the project ' s plan, processes, budget, schedule, or deliverables are evaluated.
2. Every project change must be introduced by a change order that includes a description of the agreed - upon change together with any resulting changes in the plan, processes, , schedule, or deliverables.
3. Changes must be approved in writing by the client's agent as well as by a representative of senior management of the firm conducting the project.
4. The project manager must be consulted on all proposed changes prior to the preparation and approval of the change order. (The PM's approval is not required.)
5. Once the change order has been approved, the project master plan must be amended to reflect the change and the change order becomes a part of that plan.

Ask yourself: What is the purpose of a change control system?

Activities

Chapter Seven Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Four section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Four Discussion Question (Chapter Seven):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

Using earned value analysis; explain how the total cost of a partially completed project can be estimated.

(Note: Your instructor will post the question to the Week Four Weekly Discussion Question Forum)

UNIT FOUR ASSIGNMENTS

Unit Four Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Four section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Unit Four Case Analysis

Read the case on pages 268 to 270 called, "St. Dismas Assisted Living Facility Case —5." Prepare your composition to cover the following topics or questions with in the Body section of the paper described for this assignment:

  a. What do you think the construction project manager should have done when the Director of Security stopped attending the project meetings? And why?

  b. What information does Fred need to make a decision about building a hair salon?

  c. How much time has to be made up for the original, baseline schedule to be met? Give suggestions on steps to makeup time.

Write a 3 to 5 page paper (1000 to 1500 words) in APA format. Below is a recommended outline.

  1. Cover page (See APA Sample paper)

  2. Introduction

      a. A thesis statement

      b. Purpose of paper

      c. Overview of paper

  3. Body (Cite sources with in-text citations.)

  4. Conclusion – Summary of main points

      a. Lessons Learned and Recommendations

  5. References – List the references you cited in the text of your paper according to APA format.

      (Note: Do not include references that are not cited in the text of your paper)

GRADING

Your instructor will provide a grading rubric to evaluate your paper. Please see the Instructor Syllabus and Policies for details.

UNIT FIVE

Chapters & Learning Outcomes

The key points of the following chapters (see textbook) will be discussed in this Unit:

- Chapter Eight
  Evaluating And Terminating the Project   pages 272 to 290

UNIT FIVE LEARNING OUTCOMES

This Unit meets the following learning outcomes:

LO 13.   List the steps needed to evaluating project results.

LO 14.   Discuss methods to terminate the project.

CHAPTER EIGHT

Evaluating and Terminating the Project

KEY LEARNING POINTS

What You Will Learn

The key learning points of this chapter are:

- Evaluating the result and shutting down the project.
- Auditing the project
- Termination of the project

Evaluation (Page 272)

A project evaluation is an appraisal for use by top management. Its criteria should include the needs of management; the organization's stated and unstated goals; the original selection basis for the project; and its success to date in terms of its efficiency, customer impact/satisfaction, business success, and future potential. Measuring the project's success on budget, schedule, and performance is easier than measuring revenues or qualitative, subjective factors. Establishing the measures at project formation is helpful, as well as using carefully standardized measurement techniques for the subjective factors. The final chapter deals with auditing, evaluating, and terminating projects.

The terms "evaluate" means to set the value of or appraise. A project evaluation appraises the project against the goals and objectives set for it during the selection process amended, of course, by any changes in the goals and objectives made during the project's life. In addition, evaluations are sometimes made relative to other similar projects.

The project evaluation, however, should not be limited simply to an after-the-fact analysis. Rather, it is useful to conduct an evaluation at a number of crucial points during the project life cycle. Because the primary purpose of a project evaluation is to give feedback to senior management for decision and control purposes, it is important or the evaluation to have credibility in the eyes of both senior management and the project team.

Know why project evaluations are done and be able to provide examples.

Know the evaluation criteria for a project.

Review **Table 8 -1, Items to Consider for Project Evaluation Report Recommendations** on Page 274.

Measuring the project's performance against a planned budget and schedule is relatively straightforward, and it is not too difficult to determine if individual milestones have been reached. As

we have noted several times, there are complications regarding measurement of actual expenditures and earned values, as well as with reporting on difficult technical issues that may have been deferred while progress was being made along other fronts.

Ask yourself: When should a project evaluation be done? Why?

Project Auditing (Page 275)

The project audit is a thorough examination of the entire project at any level of depth. Early audits tend to focus on more technical aspects of the project while later audits focus on schedule and cost. The audit team must have full access to project data and staff familiar with the project, including the project team. Working with the project team is a delicate behavioral process. The final audit report should be written with a professional and constructive tone and should include the following sections: introduction, current status, future status, critical management issues, risk analysis and risk management, plus final comments.

The report information should be arranged so as to facilitate the comparison between planned and actual results. Significant deviations should be highlighted and explained in a set of footnotes or comments.

The audit data should be carefully checked and all calculations verified. Deciding what to include and what to exclude is also important. The audit report should be written with a "constructive" tone or project morale may suffer to the point of endangering the project.

Know the steps of a project audit.

Ask yourself: What is the very minimum that should be contained in a project audit.

Project Termination (Page 280)

Projects are usually terminated either based on (1) the degree to which they are meeting their goals or (2) the degree to which they qualify on factors shown to be linked to success or failure in other projects. The most common reason for early termination is the probability of a technical or commercial failure. The four types of project termination are extinction, addition, integration, and starvation. The termination decision should be decided by a management committee, run by a termination manager, and executed as a project in itself. Placing the project team members in new assignments is a particularly important aspect of termination. The PM should prepare a project final report that makes recommendations for improving the organization's future project management practices.

The criteria commonly applied for deciding whether to terminate a project fall into two general categories: (1) the degree to which the project has met its goals and objectives, and (2) the degree to which the project qualifies against a set of factors generally associated with success or failure.

Review **Table 8 -4 Rank-Ordered Factors Considered in Terminating R &D Projects** on Page 280. It identifies the most important factors in terminating R & D projects at 36 different companies.

The most important reason for the early termination of a project is the likelihood it will be a technical or commercial failure.

The factors associated with project failure, however, vary for different industries, different project types (e.g., R & D versus construction), and different definitions of failure (Pinto and Mantel, 1990). But there also appear to be four fundamental reasons for project failure. Be able to supply them.

Within the Project Report the following items should be addressed :

1. Project performance
2. Administrative performance
3. Organizational structure
4. Project teamwork
5. Project management techniques

Know the five questions that should be asked when thinking about terminating a project.

There are several fundamentally different ways to close out a project: extinction, addition, integration, and starvation. Be able to define and provide an example.

Know the main duties of a termination manager.

Provide a list of the items that should be included in the final report.

Ask yourself: What is the purpose of the final report?

Activities

Chapter Eight Practice Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Five section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Week Five Discussion Question (Chapter Eight):

The purpose of the discussion question is to allow you as the Learner to demonstrate your understanding of the chapter's key learning points and how you might apply them in given situation. Participating in the discussion question forum provides you as the Learner an opportunity to compare your ideas to ideas from others in your class.

Instructions: Using the chapter's key learning points, provide your answer to the questions below.

Under what circumstances is a detailed audit apt to be useful?

(Note: Your instructor will post the question to the Week Five Weekly Discussion Question Forum)

UNIT FIVE ASSIGNMENTS

Unit Five Exam

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Five section. Select the available activities that may include Practice Exams, Unit Exams and Assignments.

Unit Five Case Analysis

Read the case on pages 286 to 289 called, "St. Dismas Assisted Living Facility Case —6." Prepare your composition to cover the following topics or questions with in the Body section of the paper described for this assignment:

      a. What should they do about the work slowdown? And why?

      b. What is the importance of the fact that the Hospital staff expenses were not reported under the project budget?

      c. What is missing from the budget?

Write a 3 to 5 page paper (1000 to 1500 words) in APA format below is a recommended outline.

1. Cover page (See APA Sample paper)

2. Introduction

      a. A thesis statement

      b. Purpose of paper

      c. Overview of paper

3. Body (Cite sources with in-text citations.)

4. Conclusion – Summary of main points

      a. Lessons Learned and Recommendations

5. References – List the references you cited in the text of your paper according to APA format.

   (Note: Do not include references that are not cited in the text of your paper)

GRADING

Your instructor will provide a grading rubric to evaluate your paper. Please see the Instructor Syllabus and Policies for details.

UNIT SIX

Activities

Unit Six is an optimal time for students to review each course assignment and reflect on key learning points.

In this final week of the course, you are required to do the following:

- Respond to the Week Six Discussion Question.
- Complete the end of course survey
- Download and save the study guide
- Complete the Final Exam
- Complete and submit the Course Project

Week 6 Discussion Question

What are the key lessons that you learned in this course?

Why are these lessons important to you?

Your instructor will post the following discussion questions to the Week Six Discussion Question forum.

End of Course Survey

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Six section. Select the available activities that may include Final Exam and Assignments. Once you have finalized and completed your chosen project, click on the End of Course Survey object to document your feedback regarding the strengths and areas for improvement

UNIT SIX ASSIGNMENTS

Final Exam:

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Six section. Select the available activities that may include Final Exam and Assignments.

WEEK 6 PROJECT

Choose one of the following options:

Option 1 – Web Research

Conduct an Internet search to find companies noted for best practices in Project Management. Describe what these best-practice companies do in the field of Project Management. What are the similarities across companies? Describe any major differences. Critique the best practices. State how you would implement the best practices in your organization.

Submit your project in APA format with at least three in-text references. Length: 5 pages (excluding cover and reference pages)

Option 2 – Organization Comparison

Identify two organizations with different Project Management processes. Describe these differences. Indicate how the Project Management strategies of these companies might be similar or different. Provide a rationale for your conclusions using relevant concepts from the text and peer reviewed articles.

Submit your project in APA format with at least three in-text references. Length: 5 pages (excluding cover and reference pages)

Option 3 – Create your own project.

This option provides an opportunity for you to create your own project based on the end of program capstone/dissertation. The project must include the learning objectives of the current course. This option requires the instructor's approval.

Submit your project in APA format with at least three in-text references. Length: 5 pages (excluding cover and reference pages)

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Six section. Select the available activities that may include Final Exam and Assignments. Once you have finalized your course presentation, click on the Course Project object to submit the assignment.

COURSE PRESENTATION

Choose a topic that is related to one or more of the Course Objective.

Describe the topic.

State the purpose and the importance of the course topic.

Provide an overview of the presentation.

Create 5 to 6 PowerPoint slides of the content of the topic using 3 to 5 bullets per slide.

Include speaker notes of the presentation.

Note: You could create a live presentation (such as via YouTube) and provide a link to the presentation.

Log into the CalUniversity Learn Center and enter this specified course. Once in the course, scroll down to the Week Six section. Select the available activities that may include Final Exam and Assignments. Once you have finalized your course presentation, click on the Course Presentation object to submit the assignment.