

PM3320

Project Cost and Budget Management

[Onsite]

Course Description:

This course examines the importance of cost management in executing a project plan and incorporates the elements of mid-course changes and cash flow management. Topics include cost estimation, creating a realistic baseline, evaluating project performance and presenting project benefits to the customer.

Prerequisite(s) and/or Corequisite(s):

Prerequisites: PM3110 Introduction to Project Management or equivalent

Credit hours: 4.5

Contact hours: 56 (34 Theory Hours, 22 Lab Hours)

Where Does This Course Belong?

This course is required for the School of Business: Bachelors Degree in Project Management and Administration program.

The program exposes students to a variety of fundamental skills utilized in entry-level project management and administrative positions. Students will be exposed to a variety of skills relating to the planning, organizing, implementing, leading, and controlling the work for a project to meet the goals and objectives of the organization. The program explores various areas of the Project Management Body of Knowledge (PMBOK®), considered to be the industry standard by the Project Management Institute (PMI®).

IT Option

The program helps students understand how to apply principles of information technology, computer systems management, and business operations to the planning, management and evaluation of information technology in organizations.

Construction Option

A program exposes students to a variety of techniques utilized to manage, coordinate and supervise the construction process from concept development through project completion on timely and economic bases.

Course Summary

Major Instructional Areas

1. Project cost estimating
2. Project cost budgeting
3. Project cost control
4. Cash flow management
5. Financial management
6. Value management
7. Change management

Course Objectives

1. Create a cost management plan as a part of a project management plan.
2. Apply the cost estimation process to achieve project goals and objectives.
3. Establish a cost baseline by applying the cost budgeting process.
4. Analyze project performance by applying the cost control process.
5. Analyze the integration of project cost and value to achieve project success and enhance project value.
6. Analyze the importance of cash flow management in the context of cost management.
7. Manage change in a project.

Learning Materials and References

Required Resources

Textbook Package	New to this Course	Carried over from Previous Course(s)	Required for Subsequent Course(s)
Venkataraman, R., Pinto, J. (2012). <i>Cost and value management in projects</i> . Hoboken, NJ: John Wiley & Sons, Inc. [Custom Update Edition].	■		■
Project Management Institute (2008.) <i>A guide to the project management body of knowledge (PMBOK guide)</i> . (4 th ed). Project Management Institute, Inc., Newtown Square, PA		■	
Other Items	New to this Course	Carried over from Previous Course(s)	Required for Subsequent Course(s)
Software application Microsoft Project 2007		■	

Recommended Resources

ITT Tech Virtual Library:

Books > Books24x7

- Fabozzi, F. and Drake, P. (2009). "Chapter 12 - Financial Engineering, Asset Securitization, and Project Financing." *Finance: Financial Markets, Business Finance, and Asset*

- Management*. Hoboken, NJ: John Wiley & Sons. Lock, D. (2010). *Project management* (9th ed.). Gower Publishing Limited.
- Shim, Jae K., and Joel G. Siegel. *Budgeting Basics and Beyond*. 3rd ed. Hoboken, NY: John Wiley & Sons, Inc., 2009.
 - Sherman, Eliot H. *Finance and Accounting for Nonfinancial Managers*. 2nd ed. NY: AMACOM, 2006.

External

- Periodicals:
 - PM Network, a monthly magazine by Project Management Institute (PMI, USA). Refer to following link to read the current and previous issues. The complete magazine is available for PMI members only.

<http://www.pmi.org/Knowledge-Center/Publications-PM-Network.aspx>

- Professional Associations:
 - American Society for the Advancement of Project Management
 - International Association of Project and Program Management
 - International Project Management Association
 - Project Management Institute

- Professional References:
 - Chaos Summary 2009 Report
http://www1.standishgroup.com/newsroom/chaos_2009.php
 - Curious Case of the Chaos Report
<http://www.projectsmart.co.uk/the-curious-case-of-the-chaos-report-2009.html>
 - BSM Review Log
<http://www.bsmreview.com/blog/2010/01/two-perspectives-on-standish-groups-more-projects-failing.htm>
 - Standish Group Report 1995
www.projectsmart.co.uk/docs/chaos-report.pdf
 - Project Management Plans
<http://www.projectmanagementdocs.com/templates/cost-management-plan.html>
 - Best Practices
<http://www.bestpractices.osi.ca.gov/sysacq/documents.aspx?index=c>
 - Cost Management Plan Template
<http://www.pmir.com/html/pmdatabase/PMOLGO/file/18.doc>
 - Free ePM book
<http://www.epmbook.com/>
 - Top Ten Causes of Project Scope Change
<http://www.anticlue.net/archives/000916.htm>
 - The Impact of Multiple Changes on Construction Projects
<http://www.fticonsulting.com/resources/documents/impact-of-multiple-changes-on-construction-projects-woods.pdf>
 - A Few Reasons Why Project Changes Occur

<http://www.itworld.com/development/58006/few-reasons-why-project-changes-occur>

- Work Breakdown Chart
<http://www.criticaltools.com>

- Project Management Templates

<http://www.projectmanagementdocs.com/>

- Change Management Links and Downloads
www.eitoolkit.com/tools/change_management/03_cm_plan_update_dla.doc

- Change Management Plan Template document

http://www.oregon.gov/DHS/admin/bpm/btm/docs/change_mgmt_plan_template.doc

Information Search

Use the following keywords to search for additional online resources that may be used for supporting your work on the course assignments:

- Project Cost Estimation
- Work Breakdown Structure
- Cost Budgeting
- Earned Value Management
- Forecasting
- Integration Management

NOTE: All links are subject to change without prior notice.

Course Plan

Suggested Learning Approach

In this course, you will be studying individually and within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

Use the following advice to receive maximum learning benefits from your participation in this course:

DO	DON'T
<ul style="list-style-type: none">▪ Do take a proactive learning approach▪ Do share your thoughts on critical issues and potential problem solutions▪ Do plan your course work in advance▪ Do explore a variety of learning resources in addition to the textbook▪ Do offer relevant examples from your experience▪ Do make an effort to understand different points of view▪ Do connect concepts explored in this course to real-life professional situations and your own experiences	<ul style="list-style-type: none">▪ Don't assume there is only one correct answer to a question▪ Don't be afraid to share your perspective on the issues analyzed in the course▪ Don't be negative about the points of view that are different from yours▪ Don't underestimate the impact of collaboration on your learning▪ Don't limit your course experience to reading the textbook▪ Don't postpone your work on the course deliverables – work on small assignment components every day

Course Outline

Unit 1: Introduction to Project Cost Management and Budgeting

Upon completion of this unit, the students are expected to:

- Explain the significance of cost and value management in projects
- Describe value management.
- Describe how Needs Identification fits into the project lifecycle.
- Prepare a Statement of Work.
- Map the project management processes to the project management process groups and the PMBOK knowledge areas.
- Describe the procedures for creating a cost management plan.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 1	Assignment	Unit 1. Assignment 1. Needs Identification	3%
Chapter 2, pp. 17-26	Lab	Unit 1. Lab 1. Cost Management Plan	4%
PMBOK, Chapter 7, pp. 43; 78-82; 157-160	Project	Unit 1. Project 1. Project Topic The project in this course will be the Portfolio assignment.	3%

Unit 2: Project Cost Estimation

Upon completion of this unit, the students are expected to:

- Describe some of the problems that occur when estimating costs.
- Describe categories of cost.
- Define project scope.
- Apply the theoretical and practical aspects of scope definition to create the work break down structure (WBS)
- Explain various inputs required for estimating the cost of the project.
- Create a WBS and prepare a WBS dictionary.
- Use the WBS to estimate the cost of the project.
- Apply the processes of cost estimation to estimate the realistic costs for a project.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 2, pp. 28-41 Chapter 3	Assignment	Unit 2. Assignment 1. Work Breakdown Structure	3%
		Unit 2. Assignment 2. Cost Management Plan Template	3%
PMBOK, Chapter 7, Section 7.1	Lab	Unit 2. Lab 1. Work Break Down Structure and Dictionary	4%

Unit 3: Project Cost Budgeting

Upon completion of this unit, the students are expected to:

- Describe the process of determining the budget.
- Explain the importance of the cost baseline.
- Examine the common issues faced by project managers while developing a cost budget.

Contrast the top-down and bottom-up budgeting approaches. <ul style="list-style-type: none"> • Explain the impact of crashing on a budget. • Apply PMBOK tools and techniques to derive a cost budget for a project. • Prepare a Cost Management Plan. 			
READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 4	Lab	Unit 3. Lab 1. Cost Estimation of a Project	4%
	Project	Unit 3. Project 1. Work Breakdown Structure for the Project	3%
PMBOK, Chapter 7, Section 7.2		Unit 3. Project 2. Cost Management Plan for the Project	3%

Unit 4: Project Cost Control

Upon completion of this unit, the students are expected to:

- Explain the process of cost control.
- Describe the relationships among time, cost, and performance.
- Explain how scope creep affects the cost baseline.
- Explain how performance is measured.
- Apply the PMBOK process for plotting the S-curve.
- Apply the PMBOK process for creating a WBS and preparing a WBS dictionary.
- Apply the PMBOK process for budgeting the cost of the project.
- Analyze the tools and techniques for establishing the cost baseline.
- Explain the importance of documenting assumptions and constraints while allocating the budget.
- Apply the PMBOK process for controlling the cost of the project.

READING	GRADED ACTIVITIES / DELIVERABLES		
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ASSIGNMENT	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 5, pp. 105-125 PMBOK, Chapter 3, p. 43 Chapter 7, Section 7.3	Lab	Unit 4. Lab 1. Cost Baseline	4%
	Project	Unit 4. Project 1. Cost Estimation for the Project	3%
	Quiz	Unit 4. Quiz 1	1.5%

Unit 5: Evaluate Project Cost Performance

Upon completion of this unit, the students are expected to:

- Apply the earned value management technique.
- Evaluate a project's performance in the context of cost.
- Control costs to measure performance using Key Performance Indicators such as SVI and CPI.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 5, pp. 111-125 PMBOK, Chapter 7, Sections 7.1 and 7.3	Assignment	Unit 5. Assignment 1. Impact of Changes	3%
	Lab	Unit 5. Lab 1. Actual Expenditures	4%

Unit 6: Cash Flow Management

Upon completion of this unit, the students are expected to:

- Explain the importance of cash flow to a project’s success.
- Define capital cost, operating cost, and break-event point.
- Calculate Net Present Value (NPV), Discount rate, and Internal Rate of Return (IRR)>
- Create a Microsoft Project plan.
- Establish a cost baseline and analyze a project’s cash flow.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 6	Assignment	Unit 6. Assignment 1. Earned Value Management	3%
	Lab	Unit 6. Lab 1. Microsoft Project Plan	4%
	Project	Unit 6. Project 1. Determine the Budget	3%

Unit 7: Financial Management

- Describe the difference between “financing of projects” and “project finance.”
- Differentiate the types and sources of project financing.
- Explain the value of project cost management and the financing aspect of it.
- Analyze the significant deviations between actual and planned expenditure.
- Apply the Cost Control process to achieve project goals and objectives.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 7	Lab	Unit 7. Lab 1. Cost and Schedule Variance	4%

	Project	Unit 7. Project 1. Actual Expenditures	3%
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Unit 8: Value Management

Upon completion of this unit, the students are expected to:

- Describe the purpose and importance of value management in project cost management.
- Differentiate the various approaches for value management.
- Explain the value management process used during project life cycle.
- Apply PMBOK process for budgeting the cost of the project.
- Use Microsoft Project to create the project plan.
- Explain the interaction between the project management processes relative to value management.
- Explain how projects are funded in real life.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 8	Project	Unit 8. Project 1. Sources of Financing	3%
		Unit 8. Project 2. Create the Plan	3%
	Quiz	Unit 8. Quiz 2	1.5%

Unit 9: Change Management

Upon completion of this unit, the students are expected to:

- Create a change management plan.
- Examine how a change can impact the cost of project.
- Make reasoned, justifiable decisions while controlling cost of the project and

implementing the changes in the project. <ul style="list-style-type: none"> • Explain the importance of configuration management in change management. • Compare project baselines. • Analyze the cost variance and schedule variance of a project. 			
READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 9	Project	Unit 9. Project 1. Change Management Process	3%
PMBOK, Chapter 4, Section 4.5		Unit 9. Project 2. Cost and Schedule Variance	3%

Unit 10: Project Cost Management and Integration Management

Upon completion of this unit, the students are expected to:

- Describe the factors that affect the cost, time, and overall performance of the project.
- Demonstrate the application of relevant knowledge of tools and techniques for managing the cost of the project effectively.
- Analyze information as part of Project Integration Management.
- Apply the Earned Value technique in controlling and managing integration in a project.
- Implement a Change Request in a project.

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Chapter 12 PMBOK, Chapter 4, pp. 77-99	Project	Unit 10. Project 1. Change Request	3%
		Unit 10. Project 2. Earned Value Technique	3%

Unit 11 Review, Final Exam, and Project

READING ASSIGNMENT	GRADED ACTIVITIES / DELIVERABLES		
	Grading Category	Activity/Deliverable Title	Grade Allocation (% of all graded work)
Venkataraman, Review of all	Exam	Unit 11. Final Exam	15%

Chapters			
	Project	Unit 11. Final Project	3%

Evaluation and Grading

Evaluation Criteria

The graded assignments will be evaluated using the following weighted categories:

Category	Weight
Assignment	15%
Lab	28%
Project	39%
Quiz	3%
Exam	15%
TOTAL	100%

Grade Conversion

The final grades will be calculated from the percentages earned in the course, as follows:

Grade	Percentage	Credit
A	90–100%	4.0
B+	85–89%	3.5
B	80–84%	3.0
C+	75–79%	2.5
C	70–74%	2.0
D+	65–69%	1.5
D	60–64%	1.0
F	<60%	0.0

Academic Integrity

All students must comply with the policies that regulate all forms of academic dishonesty, or academic misconduct, including plagiarism, self-plagiarism, fabrication, deception, cheating, and sabotage. For more information on the academic honesty policies, refer to the Student Handbook and the Course Catalog.

(End of Syllabus)