

PMGT 324: Project Estimation and Management

Prerequisite(s): None

Credits: 3



I. Course Description

This course is intended to support the applied management process by summarizing the accounting, budgeting, cost estimate, financial management and project design to ensure the best potential business outcomes. It outlines and analyzes the financial and economic impact on projects to include product and system development.

II. Course Objectives

1. Explain how project costs are managed
2. Analyze the financial information provided for a project budget
3. Apply the process for making management decisions
4. Examine various cost estimate procedures such as Bottom-Up, Top-Down, Phased and Parametric cost estimate procedures
5. Perform calculations related to cost management
6. Evaluate software packages used to estimate and manage project costs
7. Develop projected cost estimates for a project, utilizing the tools and techniques needed to make a management decision
8. Apply the process of Project Cost Management (estimate costs, determine budget, and control costs) to a project

III. Course Textbooks and Reading Materials

****Students must purchase in advance texts and/or materials for this course.***

Project Management: Achieving Competitive Advantage, 4th ed. (2016)
Jeffery K. Pinto
ISBN: 9780133798074

A Guide to the Project Management Body of Knowledge (PMBOK Guide), 5th ed.
(2013)
Project Management Institute
ISBN: 9781935589679

Integrated Cost and Schedule Control in Project Management, 2nd edition
(2011)
Ursula Kuehn
ISBN: 9781567262964

Module One – Week 1

Introduction to Cost Management

Objectives

At the end of this Module, you should be able to:

- 1.1 Discuss the importance of cost management to the successful completion of projects
- 1.2 Examine the process of determining indirect costs
- 1.3 Perform calculations related to the direct cost of labor for a project team
- 1.4 Explain the various types of common project costs
- 1.5 Classify project costs by type, frequency, adjustment, and schedule

Reading

Read in your textbook, *Project Management: Achieving Competitive Advantage*, 4/e:
Chapter 8: Cost Estimation and Budgeting, pp. 256-262

Read in your textbook, *Integrated Cost and Schedule Control in Project Management*,
2/e:

Chapter 2: The Integrated Process, pp. 20-22 (“Integrated Cost and Schedule
Control in the Federal Government”)

Read additional materials (articles, web sites, and case studies) as assigned by your
instructor.

Deliverables

Discussion: Introduction

Discussion: Project Profile: "Sochi Olympics"

Project Selection

Written Assignment: Identifying and Classifying Costs

Quiz

Module Two – Week 2

Project Estimation and Cost Management I

Objectives

By the end of this Module, you will be able to:

- 2.1 Discuss the various reasons why project cost estimation is often done poorly

- 2.2 Discuss the reasons for and against the use of personal time charges in a cost estimate
- 2.3 Explain the common forms of cost estimation for project work, including ballpark estimates and definitive estimates
- 2.4 Determine a ballpark estimate for a project
- 2.5 Perform calculations related to learning rate time

Reading

Read in your textbook, Project Management: Achieving Competitive Advantage, 4/e:
Chapter 8: Cost Estimation and Budgeting, pp. 262-273

Read in your textbook, Integrated Cost and Schedule Control in Project Management, 2/e:

Chapter 3: Defining the Scope, pp. 25-29

Read additional materials (articles, web sites, and case studies) as assigned by your instructor.

Deliverables

Discussion: Project Profile: Boston's Central Artery/Tunnel Project 1

Assignment: Estimating Costs

Quiz

Module Three – Week 3

Project Estimation and Cost Management II

Objectives

At the end of this Module, you should be able to:

- 3.1 Explain the importance of cost estimation in project planning
- 3.2 Explain how cost estimation relates to the Work Breakdown Structure and the project schedule
- 3.3 Discuss the use of parametric estimating and its advantages
- 3.4 Estimate costs for a project cost management overview based on a given scenario
- 3.5 Evaluate tools and techniques used to estimate costs

Reading

Read in your textbook, A Guide to the Project Management Body of Knowledge (PMBOK Guide®), 5/e:

Chapter 7: Project Cost Management, pp. 193-208

Read in your textbook, Integrated Cost and Schedule Control in Project Management, 4/e:

Chapter 4: Estimating the Cost and Duration of Work Packages, pp. 41-56

Read additional materials (articles, web sites, and case studies) as assigned by your instructor.

Deliverables

Discussion: Cost Estimation

PowerPoint Assignment: Tools and Techniques for Estimating Costs

Quiz

Module Four – Week 4

Project Budgets I

Objectives

By the end of this Module, you will be able to:

- 4.1 Compare and contrast top-down budgeting and bottom-up budgeting procedures for cost management
- 4.2 Demonstrate the four steps of the activity-based costing (ABC) budgeting method
- 4.3 Explain the challenge of producing accurate cost estimation when working in harsh geographical conditions
- 4.4 Discuss the advantages and disadvantages of using different types of bidding processes, including “fixed price” contracts versus lowest construction bids
- 4.5 Explain how the bidding process can contribute to gross underbids and successive cost escalations
- 4.6 Perform cost calculations related to budgeting

Reading

Read in your textbook, Project Management: Achieving Competitive Advantage, 4/e:
Chapter 8: Cost Estimation and Budgeting, pp. 275-278

Read in your textbook, Integrated Cost and Schedule Control in Project Management, 2/e:

Chapter 5: Balancing the Scope to the Budget, pp. 66-76

Read additional materials (articles, websites, and case studies) as assigned by your instructor

Deliverables

Discussion: Budgets I

Written Assignment: Creating a Preliminary Budget

Quiz

Module Five – Week 5

Project Budgets II

Objectives

- 5.1 At the end of this Module, you should be able to:
- 5.2 Discuss the uses and principal strengths of time-phased budgets
- 5.3 Discuss the issue of cost adjustments in a project budget requested by the customer
- 5.4 Determine the budget for a project management overview based on a given scenario
- 5.5 Analyze the financial information provided for a project budget
- 5.6 Explain the process for management decision-making

Reading

Read in your textbook, A Guide to the Project Management Body of Knowledge (PMBOK Guide®), 5/e:

Chapter 7: Project Cost Management, pp. 208-214

Read in your textbook, Integrated Cost and Schedule Control in Project Management, 2/e:

Chapter 1: The Integrated Process, pp. 14-15 (“Balancing the Triple Constraint”)

Chapter 10: Readdressing the Scope to Balance the Triple Constraint, pp. 177-184

Read additional materials (articles, web sites, and case studies) as assigned by your instructor.

Deliverables

Discussion: Budgets II

Written Assignment: Creating a Budget

Quiz

Module Six – Week 6

Controlling Costs

Objectives

At the end of this Module, you should be able to:

- 6.1 Discuss a case study of a disastrous government-funded project and the Modules to be learned from it
- 6.2 Explain the reasons for including contingency funding in project cost estimates
- 6.3 Devise examples of contingencies and explain how they would be resolved
- 6.4 Explain the importance of implementing project cost control activities
- 6.5 Implement the process of controlling costs for a given scenario

Reading

Read in your textbook, Project Management: Achieving Competitive Advantage, 4/e:

Chapter 8: Cost Estimation and Budgeting, pp. 278-280

Read in your textbook, A Guide to the Project Management Body of Knowledge (PMBOK Guide®), 5/e:

Chapter 7: Project Cost Management, pp. 215-226

Read additional materials (articles, web sites, and case studies) as assigned by your instructor.

Deliverables

Discussion: Cost Control

Written Assignment: Contingency Funding Essay

Quiz

Module Seven – Week 7

Cost Management Software

Objectives

At the end of this Module, you should be able to:

- 7.1 Discuss the use of earned value analysis (EVA) for measuring performance and forecasting future cost issues.
- 7.2 Research cost management software.
- 7.3 Prepare a stakeholder presentation.

Reading

Read in your textbook, Integrated Cost and Schedule Control in Project Management, 2/e:

Chapter 14: Performing Earned Value Analysis, pp. 223-248

Read additional materials (i.e., articles, web sites, case studies) as assigned by your instructor

Deliverables

Discussion: Cost Management

PowerPoint Assignment: Integrated Cost Management

Quiz: Reflections

V. Course Information and Grading

Course Requirements (Weekly)

Each Module will be based on the inclusion and grading of the following segments:
Discussion Boards, Assignments/ Case Studies/ Projects.

Criteria	Point Details	Points
Introductory discussion post	One submission	20
Discussion Forums	7 (40 Points each)	280
Assignments/Case Studies/Projects	7 (75 points each)	525
Quizzes	7 (25 points each)	175
Total		1000

Class Discussions

Successful online learning requires active and meaningful participation in the Discussion Board Forum. Critical thinking, appropriate use of judgment and professional comments are required for all responses. Simple agreement or disagreement with a fellow student does not constitute a quality response. Student opinions are important but must be supported by relevant data obtained in the literature or text.

1. One initial discussion board post is due by the fourth day (Thursday @ 11:59 pm) of each weekly module and two response posts are due by the last day (Sunday @ 11:59 pm) of each weekly module.
 - a. Undergraduate Word Count Requirements:
 - i. Initial post must be >200 words
 - ii. Responses must be >150 words
 - b. Graduate Word Count Requirements:
 - i. Initial post must be >250 words
 - ii. Responses must be >200 words
2. Participation – Students must meet initial and response post deadlines to be eligible for full points. Late initial posts may be accepted with a 33% reduction in the overall score assessed for each day late. Two response posts are required. If only one is received, then the overall score will be reduced by 25%. If no response posts are received, then the overall score will be reduced by 50%.
3. Students should be respectful and write in a proper and professional manner.

Please refer to the Discussion Board Rubric located within course syllabus for specific requirements and guidance on delivering a substantial discussion.

Late and Make-up Assignments

All deliverables are due by 11:59 PM on the due dates indicated. When substantive emergencies occur, acceptance of late submissions is left to the discretion of the course instructor.

Assignments that are submitted after the due date with prior written approval (text or email) from the instructor may receive the following deductions:

1. Late assignments are subject to a deduction of 10% of the available points for each day late.
2. Assignments submitted later than one week after due date will not be accepted and will receive a zero (0).
3. No work may be submitted after the last day of the course.
4. See Class Discussions for late discussion post policy.

Written Work

- All graded assignments must be typewritten, as designated by the professor of record for the course.
- All referenced materials must be presented according to the Publication Manual of the American Psychological Association (APA), based on the most current published edition. (current, 7th edition) (Except for English courses that specify use of MLA format.)
- All required written assignments are due on the last night of each lesson week at 11:59pm EST. This information is included in the course scheduler and calendar of every course.
- All written and graded assignments are considered the property of the College of Adult and Professional Studies and should be returned to the appropriate professor of record for the related course.
- SafeAssign may be used to check for plagiarism.

Grading Scale and Assigned Letter Grades

Charleston Southern Online undergraduate classes follow the following numerical and letter grading scale. Grades will be posted by the Sunday night following the closing of the Module. No grades will be given to students over the phone.

A: 900 - 1,000 points

B+: 870 - 899 points

B: 800 - 869 points

C+: 770 - 799 points

C: 700 - 769 points

D: 600 - 699 points

F: 0 - 599 points

Undergraduate Discussion Board Rubric – Introduction (First week only)

Criteria	Minimal	Effective
<p>Percent Possible: 0 or 50</p> <p>Initial Post</p> <p>Introduction.</p>	<p>Percent Possible: 0</p> <p>No post or did not follow instructions at all.</p>	<p>Percent Possible: 50</p> <p>Posted following instructions.</p>
<p>Percent Possible: 0 or 50</p> <p>Response Posts</p> <p>Welcome.</p>	<p>Percent Possible: 0</p> <p>No post or did not follow instructions at all.</p>	<p>Percent Possible: 50</p> <p>Posted following instructions.</p>

Discussion Board Initial Post Rubric – Undergraduate

Initial Post Rubric	Content	Support & References	Mechanics & Length
Mastery 90-100%	<ul style="list-style-type: none"> • Relevant and thought-provoking viewpoints • Innovative and indicates a high level of thought • High level of critical thought, analysis, and application of concepts and ideas 	<ul style="list-style-type: none"> • Student cites 2 peer-reviewed sources in the body of the posts • Proper APA format 	<ul style="list-style-type: none"> • Post exceeds 200 words • Very well written
Effective 80-89%	<ul style="list-style-type: none"> • Advances the discussion and body of knowledge providing relevant, original thoughts to the question • Conveys thoughts in a well-rounded manner that show understanding, critical thought, and application of concepts 	<ul style="list-style-type: none"> • Student cites 2 peer-reviewed sources in the body of the post • Not in appropriate APA format 	<ul style="list-style-type: none"> • Post 178-200 words • Well written
Competent 70-79%	<ul style="list-style-type: none"> • Makes mostly complete response to the questions • Mostly restatement of materials • Conveys thoughts adequately; however, need to further develop critical aspects 	<ul style="list-style-type: none"> • Student cites 1 peer-reviewed source. • Not in appropriate APA format 	<ul style="list-style-type: none"> • Post is 158-178 words • A few writing errors
Minimal 0-69%	<ul style="list-style-type: none"> • Provides weak contribution to the discussion board • Does not convey concept understanding • Shows evidence of critical thought but is not concise or complete 	<ul style="list-style-type: none"> • Does not cite any peer-reviewed sources • Addresses questions in a manner that is unclear • Not appropriate APA format 	<ul style="list-style-type: none"> • Post is less than 158 words • Poorly written • 0 points for posts submitted after 11:59 PM EST on Thursday

Discussion Board Peer Response Rubric – Undergraduate

Peer Response Rubric	Content	Support & References	Mechanics & Length
Mastery 90-100%	<ul style="list-style-type: none"> Advances discussion providing additional commentary that is relevant or offers an alternative Critical thought development is evidenced by thoughtful and meaningful responses Source is relevant and published in last 3 years 	<ul style="list-style-type: none"> Student cites 2 peer-reviewed sources in the body of the posts Proper APA format 	<ul style="list-style-type: none"> Post exceeds 150 words Very well written
Effective 80-89%	<ul style="list-style-type: none"> Advances discussion providing additional commentary and critique Responses are correct but mostly restate the peers' viewpoints without development of critical thought Source is relevant and published in last 3 years 	<ul style="list-style-type: none"> Student cites 2 peer-reviewed sources Not in appropriate APA format 	<ul style="list-style-type: none"> Post is 133-150 words Well written
Competent 70-79%	<ul style="list-style-type: none"> Shows adequate understanding of the knowledge and concepts posted by peers Responses are mostly, "I agree..." Source is somewhat relevant and published in last 5 years 	<ul style="list-style-type: none"> Student cites 1 peer-reviewed source Not in appropriate APA format 	<ul style="list-style-type: none"> Post is 118-132 words A few writing errors.
Minimal 0-69%	<ul style="list-style-type: none"> Shows minor comprehension of concepts and viewpoints from peers. Responses are vague and do not show understanding or comprehension 	<ul style="list-style-type: none"> Does not cite any peer-reviewed sources Not appropriate APA format 	<ul style="list-style-type: none"> Post 0-118 words Poorly written 0 points for posts submitted after 11:59 PM EST on Sunday

Assignment/Case Study/Course Project Rubric

Assignment Rubric	Critical Thinking	References & Organization
Mastery 90-100%	<ul style="list-style-type: none"> • Relevant use of vocabulary throughout • Demonstrates superior knowledge of concepts and theories • Addresses problem/issue directly • Demonstrates active critical thinking relevant to problem identification and effective solutions 	<ul style="list-style-type: none"> • Professional writing structure. • Well-organized response. • Student cites appropriate, current peer-reviewed sources • Proper APA format • Exceeds 500 words
Effective 80-89%	<ul style="list-style-type: none"> • Demonstrates satisfactory understanding • Lacks answer to all questions/full scenario • Demonstrates some knowledge of content and professional vocabulary • Content needs additional focus for innovative responses other than restatement of text. 	<ul style="list-style-type: none"> • Student cites some relevant, current peer-reviewed sources. • Follows directions • APA formatting demonstrated but not extensive. • 450-500 words
Competent 70-79%	<ul style="list-style-type: none"> • Inconsistent comprehension • Marginal responses • Content, concepts, ideas/responses are not fully developed 	<ul style="list-style-type: none"> • Sources are outdated or ineffective. • Lacks focus on content • Unorganized • Some writing errors • Not in appropriate APA format. • 400-449 words
Minimal 0-69%	<ul style="list-style-type: none"> • Consistently below expectations • Lacks significant details of the assignment • Lacks critical thought, analysis, and application. • Partially addresses the topic 	<ul style="list-style-type: none"> • Does not cite any peer-reviewed sources • Not appropriate APA format • 0-399 words • Poorly written. • 0 points for late assignments

Short Answer Rubric – Undergraduate

Short Answer Rubric	Clarity	Depth	Quality
Mastery 90-100%	<ul style="list-style-type: none"> • Relevant use of vocabulary throughout • Demonstrates superior knowledge of concepts and theories • Addresses problem/issue directly • Demonstrates active critical thinking relevant to problem identification and effective solutions 	<ul style="list-style-type: none"> • Articulates critical thoughts & analysis throughout the answer • Obvious use of outside resources to supplement resources 	<ul style="list-style-type: none"> • Professional writing structure • Well-organized response • Free of grammatical, spelling, & formatting errors
Effective 80-89%	<ul style="list-style-type: none"> • Demonstrates satisfactory understanding • Lacks answer to all questions/full scenario • Demonstrates some knowledge of content and professional vocabulary • Content needs additional focus for innovative responses other than restatement of text 	<ul style="list-style-type: none"> • Demonstrated some form of outside material used • Shows some critical thinking and active thought 	<ul style="list-style-type: none"> • Follows assignment instructions • Well-written • Few writing errors
Competent 70-79%	<ul style="list-style-type: none"> • Inconsistent comprehension • Marginal responses • Content, concepts, ideas/responses are not fully developed 	<ul style="list-style-type: none"> • Provided enough detail for marginal requirement • “Textbook” in nature (restatement of what was in textbook) 	<ul style="list-style-type: none"> • Lacks focus on content • Some writing errors
Minimal 0-69%	<ul style="list-style-type: none"> • Consistently below expectations • Lacks significant details of the assignment • Lacks critical thought, analysis, and application • Partially addresses the topic 	<ul style="list-style-type: none"> • Lacked detail that demonstrates active thought • One-sentence answer 	<ul style="list-style-type: none"> • Unorganized and poorly written • 0 points for late assignments