



51A Middle Street Newburyport MA 01950
Phone: 800-588-7039 Fax: 877-902-4284
contact@bhfe.com www.bhfe.com

Course Information

Course Title: Project Management #367319

Number of continuing education credit hours recommended for this course:

In accordance with the standards of the National Registry of CPE Sponsors CPE credits have been granted based on a 50-minute hour.

CPA: 14 (All states)

National Registry of CPE Sponsors ID Number: 107615.

Sponsor numbers for states requiring sponsor registration

Florida Division of Certified Public Accountancy: 4761 (Ethics #11467)

Hawaii Board of Accountancy: 14003

New York State Board of Accountancy: 002146

Ohio State Board of Accountancy: M0021

Pennsylvania Board of Accountancy: PX178025

Texas State Board of Accountancy: 009349

Course Description

Projects tend to take longer and cost more than expected. How is it possible to balance the many demands on a project manager in order to improve a project's outcome? *Project Management* shows how to be a successful project manager by exploring how projects are initiated, evaluated, and selected. It also addresses all phases of project planning, the use of CPM and PERT to schedule tasks, and how to make trade-offs between the various project constraints. The course tackles many other subjects as well, including change management, project estimating, risk management, reporting, and project management at the enterprise level. In short, *Project Management* is intended to improve the performance of a new project manager, as well as to refine the skills of a more experienced one.

Program Delivery Method: NASBA QAS Self-Study (interactive)

Subject Codes/Field of Study

NASBA (CPA): Business Management & Organization

Course Level, Prerequisites, and Advance Preparation Requirements

Program level: Overview

Prerequisites: None.

Advance Preparation: None

Course Content

Publication/Revision date: 6/21/2019

Author: Steven M. Bragg, CPA.

Final exam (online): Seventy questions (multiple-choice).

Instructions for taking this course

You must complete this course within one year of the date of purchase (if you do not complete the course within one year, contact us to determine whether an updated edition of the course is available, in which case we will provide you with a PDF of the updated course and the online exam at no charge).

A passing grade of at least 70% is required on the final exam for this course. You may retake the exam if you do not pass it on the first attempt (no charge).

Complete the course by following the learning objectives listed on the following page, studying the text, and studying the review questions at the end of each major section (or at the end of the course). Once you have completed studying the course and you are confident that the learning objectives have been met, answer the final exam questions (online).

Instructions for Taking the Final Exam Online

- Login to your account online at www.bhfe.com.
- Go to "My Account" and view your course.
- Select "Take Exam" for this course and follow instructions.

Additional Information

- The exam may be started, stopped, then resumed at a later date.
- The exam is "open book," it is not timed, and it may be retaken if not passed on the first attempt (no charge).
- Results (correct, incorrect answers) and certificate appear immediately upon passing the exam.

Have a question? Call us at 800-588-7039 or email us at contact@bhfe.com.

Learning Objectives

- Recognize the characteristics of a project.
- Cite the areas of responsibility for a project sponsor.
- Specify the factors that impact the success rate of a project.
- Specify the different ways to manage stakeholders.
- Identify the reasons why feasibility studies may be needed.
- Specify the reasons for conducting a gap analysis.
- Recognize the uses to which a strategic alignment analysis can be put.
- Recognize the different types of quantitative evaluations for projects.
- Identify how a discounted payback analysis can be used.
- Identify the problems with using the internal rate of return.
- Specify the different elements of a net present value analysis and their effects.
- Describe the different phases of a project.
- Recognize the conditions under which phase overlapping occurs.
- Specify the reasons for continuing an over-budget project.
- Recognize the activities in a project planning and control system.
- Identify the components of a work breakdown structure.
- Identify the formatting of a Gantt chart.
- Cite the circumstances under which a negative float can occur.
- Specify the different types of project constraints.
- Identify the risk involved with outsourcing project tasks.
- Recognize the circumstances under which a scope change is acceptable.
- Specify the types of enterprise-level constraints.
- Recognize the membership of the change order committee.
- Specify the contents of a change request form.
- Recognize the nature of gold plating in a project.
- Cite the parties involved in a project handoff.
- Identify the tasks included in a project close-out.
- Specify the correct way to respond to a request for a ball park estimate.
- Recognize the method used to calculate a rough order of magnitude estimate.
- Describe the types of risk involved in risk management.
- Identify the factors comprising the risk attitude of a business.
- Specify the characteristics of a high priority risk.
- Recognize the different costs of quality and their characteristics.
- Cite the reasoning behind using a quality audit.
- Identify the criteria used to select a supplier.
- Specify the circumstances under which a pre-bid conference is used.
- Recognize the clauses that can be included in a contract with a supplier.
- Define an employee and a contractor.
- Identify the differences between a contract and a purchase order.
- Recognize the calculations of variances for a project.
- Recognize the circumstances under which an escalation threshold is used.
- Cite the dimensions of earned value management.
- Identify the different types of best practices related to project management.

- Describe the reasoning behind the best practices associated with project management.
- Identify the structure of a project portfolio bubble.
- Specify the problems associated with only soliciting new project ideas annually.
- Recognize the advantages of chunking.
- Cite the different uses to which a project management office can be put.
- Identify the characteristics of a minimum viable product.
- Specify the key success factors for an agile project development effort.
- Recognize the environment in which a task board is used.
- Define the circumstances under which a company can avoid change initiatives.
- Identify the means by which one can decide upon change initiatives to implement.
- Recognize the circumstances under which a change initiative could fail.
- Recognize the proper structuring for a successful project.
- Cite the issues that can cause a team to be ineffective.
- Specify the characteristics of the best team members.
- Recognize the different types of communication methods.
- List the characteristics of an effective project team.
- Identify the different types of listening in which a person can engage.
- Recognize a method for showing that a company values the contributions of its team members.
- Recognize the circumstances under which the use of majority voting would work.
- Cite the reasons why a consensus building initiative could fail.

About the Author

Steven Bragg, CPA, has been the chief financial officer or controller of four companies, as well as a consulting manager at Ernst & Young. He received a master's degree in finance from Bentley College, an MBA from Babson College, and a Bachelor's degree in Economics from the University of Maine. He has been the two-time President of the Colorado Mountain Club, and is an avid alpine skier, mountain biker, and certified master diver. Mr. Bragg resides in Centennial, Colorado. He has written numerous books on accounting, finance, and human resources/personnel.

Copyright © 2019 by AccountingTools, Inc. All rights reserved.

Published by AccountingTools, Inc., Centennial, Colorado.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without the prior written permission of the Publisher. Requests to the Publisher for permission should be addressed to Steven M. Bragg, 6727 E. Fremont Place, Centennial, CO 80112.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

Table of Contents

Chapter 1 - Overview of Project Management	1
Project Management Activities	2
The Need for Project Management.....	3
Program Management	4
Portfolio Management.....	4
Project Support.....	4
Project Sponsor	5
Project Stakeholders.....	5
Project Steering Committee	6
Resource Managers.....	6
The Customer.....	6
Impacted Employees.....	7
The Project Team	7
The Impact of Organizational Structures on Projects.....	7
Stakeholder Management	9
The Notification Matrix.....	10
Managing Expectations	10
Resistance to Change.....	11
Chapter 2 - Project Initiation	14
Triggering Conditions	14
Solution Analysis	14
Risk Analysis.....	15
Interdependency Analysis	15
Stakeholder Analysis.....	15
Other Factors to Consider.....	16
Requirements Analysis.....	17
Chapter 3 - Project Selection	20
Qualitative Evaluations	20
Quantitative Evaluations	21
Payback Period	21
Discounted Payback.....	22
Internal Rate of Return.....	23
Net Present Value	24
Real Options	26
Capital Rationing.....	28
Chapter 4 - Project Phases.....	31
Phase 1 – Project Concept.....	31
Phase 2 – Project Definition.....	32
Phase 3 – Project Planning	32
Phase 4 – Preliminary Studies	32
Phase 5 – Project Performance	32
Phase 6 – Project Post-Completion	33
Additional Commentary on Project Phases	34
Overlapping Phases.....	34
Stopping a Project.....	34
Not Stopping a Project.....	34
Using a Reduced Number of Phases	35
Additional Topics	35
Project Charter	36
Project Scope	36
Statement of Work	37
Project Management Plan	39
Chapter 5 - Project Planning	41

The Project Planning and Control System.....	41
The Work Breakdown Structure.....	42
Task Relationship Identification.....	45
Bottom-Up Estimating	47
Gantt Charts	49
Critical Path Method (CPM)	50
Program Evaluation and Review Technique (PERT).....	52
Differences between CPM and PERT	54
Project Management Constraints.....	54
What-If Analysis	57
Staffing Management	57
Resource Leveling.....	58
Optimizing the Schedule	59
Chapter 6 - Trade-off Analysis.....	62
Project Constraints	62
Time Frame.....	63
Cost.....	63
Resources.....	63
The Final Variable	64
Scope.....	64
Scope Creep.....	64
Trade-off Analysis.....	65
When no Additional Funds are Available.....	65
When More Funds are Available	66
Adjusting Project Scope	67
Project Constraints at the Enterprise Level	69
Chapter 7 - Change Control	72
Issue Management.....	72
Change Order Management.....	72
Levels of Change Notification.....	73
Configuration Management.....	74
Gold Plating Effects	74
Capping Changes.....	74
Consider Negative Effects.....	75
Chapter 8 - Project Close-Out	77
Is the Project Finished?	77
Scope Analysis	77
Plan Analysis.....	77
Operational Analysis	78
Handoff Analysis.....	80
The Waived Suggestions List.....	80
Personnel Reviews	80
Chapter 9 - Project Estimating.....	82
Estimating and the Nature of a Project.....	82
The Need for Specifications	83
Rough Order of Magnitude Estimates	83
Estimating Methods.....	84
Analogous Estimating	84
Apportionment Estimating	84
Bottom-Up Estimating	85
Parametric Estimating	85
Phased Estimating	86
Expert Judgment.....	86
Types of Contractor Billing Arrangements	87
Estimate Padding.....	87
Dealing with Pushback	88

Budgeting	88
Chapter 10 - Project Risk Management	91
Risk Management.....	91
Risk Identification.....	92
Risk Analysis	94
Risk Mitigation Tactics.....	94
Contingency Funding.....	95
Risk Logging.....	96
Chapter 11 - Project Quality Management	98
Integration of Quality into a Project.....	98
Costs Impacted by Quality	98
Quality Assurance	99
Quality Tools.....	99
Control Charts.....	99
Pareto Charts.....	101
Cause-and-Effect Diagrams	102
Check Sheets.....	103
Root Cause Analysis	104
Chapter 12 - Project Procurement Management.....	107
Procurement Management Plan.....	107
Supplier Selection Criteria	107
Supplier Financial Analysis	108
Supplier Capability Analysis	109
Supplier Responsiveness Analysis.....	110
Other Analysis Issues.....	110
The Bidding Process.....	111
Contents of a Bid Package	111
The Bidding Process Flow	112
Contract Pricing Arrangements	113
Firm Fixed Price	113
Fixed Price with Adjustments.....	114
Cost plus Pricing	114
Time and Materials Pricing.....	115
Summary of Pricing Arrangements.....	116
Make-or-Buy Analysis	117
Contract Terms and Conditions.....	117
The Employee or Contractor Designation	120
Contracts and Purchase Orders.....	121
Closing out Procurement Activities.....	121
Chapter 13 - Project Measurement and Reporting	124
Work Package Measurement.....	124
Progress Monitoring.....	124
Cost Variance Reporting	125
Labor Rate Variance.....	126
Purchase Price Variance	127
Variable Overhead Efficiency Variance.....	127
Fixed Overhead Spending Variance	128
The Cost and Schedule Performance Chart	129
Escalation Thresholds.....	130
Earned Value Management	131
Schedule Performance Index	132
Cost Performance Index.....	132
Project Close-Out	133
Measuring Non-Critical Activities	133
Measuring High-Volume Tasks	133
Measuring the Rate at Which Costs are Incurred	134

Project Reporting.....	134
Traffic Light Reporting.....	134
Management Reviews.....	134
Technical Reviews.....	135
Tollgate Reviews	135
Record Keeping	135
Chapter 14 - Project Management Best Practices	138
Project Management Best Practices	138
Problem Escalation and Resolution.....	141
Megaproject Best Practices	141
Chapter 15 - Enterprise Project Management.....	144
Enterprise Project Management	144
Types of Project Portfolios.....	146
The Flow of Projects	146
The Schedule of Future Projects.....	147
Chunking	147
The Project Management Office	147
Technology Requirements.....	150
The Corporate Knowledge Base.....	151
Chapter 16 - Special Subjects	153
Innovation Projects.....	153
Agile Project Management.....	153
Incremental Delivery.....	155
Task Boards	156
Burndown Charts	157
Dealing with Unfamiliar Situations.....	158
Milestone Analysis	158
The Crash Point.....	159
Fast-Tracking Issues.....	159
Chapter 17 - Change Management	162
When Change Initiatives are Most Necessary	162
The Strategy of Change	163
The Impact of Lead Time on Change Initiatives	164
PEST Analysis.....	164
The Most Difficult Environments for Change.....	165
Change Management Pitfalls.....	165
Dealing with an Environment of Repeated Failures.....	166
Dealing with Adverse Motivations.....	166
How to Structure a Project to Succeed	167
Creating Wins.....	167
Drivers of Change	168
Tipping Point Leadership	168
Development Laboratories	169
Bottom-Up and Top-Down Change	170
The Impact of Turnover	170
The Impact of Prior Sales.....	171
Chapter 18 - Team Development.....	173
What is a Team?	173
Issues Impacting Ineffective Teams	174
Identification of Team Members	174
Team Structure	175
Team Transitions.....	175
Communication Systems	176
Collaboration Issues	176
Team Emotional Intelligence	177
Team Engagement.....	179

Backup Planning	180
Conflict Resolution	180
Dealing with Counterproductive Behavior.....	181
Internal Conflict Resolution	181
Socialization Levels	182
Innovation Issues.....	182
The High-Performance Team.....	183
Team Duration.....	184
Team Termination	184
Characteristics of an Effective Team	184
Chapter 19 - Team Management.....	187
Management Style.....	187
Management Behavior	188
Listening Skills.....	189
Coaching Skills	190
Management's Treatment of Teams	190
Periodic Status Meetings	191
Milestone Analyses	192
Team Measurements	192
The Decision Making Process	192
Consensus Building.....	193
Incorrect Consensus Outcomes	194
Causes of Faulty Decisions	194
Group Pressure.....	194
Conformity.....	195
Decision Cascades	195
Polarization.....	195
Confidence	195
Improvements to the Decision Making Process	195
Deviant Thinking.....	196
Answers to Chapter Questions	198
Glossary	213
Index	216

Preface

Every organization needs to engage in projects from time to time. For example, there may be a need to develop a new product, devise a new ad campaign, or construct a corporate headquarters building. All of these activities require an organized system of planning that increases the probability of completing them on time and at the expected cost. *Project Management* describes how an organization can install a system for estimating projects, selecting the most relevant projects, creating plans for them, and dealing with plan changes. The book also addresses many related topics, including the management of risk, quality, and procurement, plus the use of enterprise project management to deal with a portfolio of projects.

The book is divided into three sections. In Chapters 1 through 8, we cover the essential ingredients of project management, from project initiation to closing out a completed project. In Chapters 9 through 16, we address many refinements to project management, including project measurement and reporting, best practices, and quality management. Finally, in Chapters 17 through 19, we describe the concepts of change management, as well as the project team – how to develop and manage it.

You can find the answers to many questions about project management in the following chapters, including:

- Who can be a project stakeholder?
- What should be included in a requirements analysis?
- What financial analysis methods can be used to select a prospective project?
- Under what circumstances are the CPM and PERT methods used?
- What does a change order management system look like?
- What methods are available for estimating the cost and duration of a project?
- What kinds of analyses can be used to decide whether to employ a contractor?
- What types of project reporting should be issued to stakeholders?
- How can a portfolio of projects be managed for an entire business?
- What is involved in agile project management?

Project Management is designed for the professional who wants to create a system for evaluating, structuring, and overseeing projects.

Centennial, Colorado
June 2019