

121 Essentials of Construction Project Management

Course Syllabus

Course Textbooks

- *Essentials of Project Management 7th Edition*, e-book by Dick Billows, PMP, GCA, 2010
- *Presentations that Persuade and Motivate*, Harvard Business School Press, 2004

Learning Objectives

Working with your personal instructor, you will learn all the steps in the construction project lifecycle and demonstrate the ability to execute each of these steps at a professional level. You will master the techniques and then demonstrate competence in each of the following steps:

1. Plan with customers/owners
2. Gather requirements from customers/owners
3. Create and present a project charter to the customer and answer their questions
4. Schedule your project in Microsoft Project® software
5. Estimate work and durations with your subs and crew
6. Solve conflicts within the crew
7. Fine-tune your schedule to minimize the duration
8. Track actual progress against the plan
9. Write and present status reports with corrective action plans and answer customers' questions.

How You Learn

Course Process: Reading, Lectures and Homework Assignments

Each of the modules in the course has a textbook reading assignment, a lecture video on the course website, and a project management assignment in a realistic case study to complete one of the steps in the project lifecycle. You will complete the assignments:

7. Using our templates or
8. In a live presentation with your instructor or
9. By submitting a Microsoft Project® file.

You will send each assignment to your instructor via e-mail. The course requires approximately 30 hours of effort in total, including the final exam. You may take up to one year to complete the course.

Streaming Media Lectures

You will view the lectures from the course website. Our server will stream the high-definition videos to you using the latest dynamic technology and constantly monitor your available bandwidth, streaming the appropriate size file for your bandwidth. Students watching from their workplace or from home with a cable TV speed connection will not encounter any buffering.

Live Presentations and Simulations

Because effective communications are such an important skill for project managers, you will practice conducting meetings, presenting plans and status reports, and answering questions from executives. These two project simulations will take place privately, between you and your instructor, at mutually agreed upon times. The live Internet meetings are via web camera. In each of these simulations, you will play the role of the project manager and your instructor will play the sponsor and stakeholders from your case study. Your instructor will send you a video of each of your presentations and written feedback on your content, speaking and presentation techniques.

Apply What You Have Learned to a Case Study

You will practice each course technique on the Vailcrest case study and receive coaching and written feedback from your instructor on all your work. Your instructor will ask you to redo an assignment that is not up to standard. You will manage the case study project through every step in the lifecycle.

Grading Criteria

To pass the course, you must earn a grade of B (80%) or better on each of your assignments and the one-hour final exam. To earn Project Management Institute (PMI®) professional development units (PDUs) for this course, your online final exam must be proctored by an organizational superior or a licensed professional, such as an attorney or certified public accountant.

Course Sequence

Module 1: Project Initiation and Scope

1. Read to page 11 in the *Essentials of Project Management* e-book.
2. Watch the Module 1 lecture on the course website as well as the video of the “Vailcrest Corporation Executives & Staff” to familiarize yourself with the case study organization, its executives and the people on your project team.
3. Read Part 1 of the Vailcrest Case Study, summarized below. Your assignment is to define the project scope. Start by asking questions of the owner and president, Dan Morton. In an email to your instructor, apply what you have learned about defining the project scope and ask Dan the correct questions. Your instructor will respond to your questions as the sponsor and also give you written feedback within 24 hours on how you handled the discussion. Then you write the project scope and submit it to your instructor.

Vailcrest Case Study Part 1 Summary (In the actual course, you’ll read the entire case study):

You have just taken a new job as construction project manager for the Vailcrest Corporation. On your first day, you meet with Dan Morton, President of Vailcrest Lodge. Dan hired you for your project management and technical construction skills because his organization has a poor track record on its projects. Dan describes the new project as aimed at improving service by solving a long list of problems including: office space shortage, excessive noise throughout the building and inadequate systems and operations facilities. He expects you to manage the people and contractors on the project team.

Module 2: Gathering Requirements

1. Read to page 13 in the *Essentials of Project Management* e-book.
2. Watch the Module 2 lecture on the course website.
3. Read Part 2A of the Vailcrest Case Study provided below. Then ask any questions you wish of the Vailcrest executives to gather their requirements. Using that information, decompose the scope from Assignment #1 into 4 to 7 major deliverables using the course template. Send the template to your instructor and receive written feedback and coaching within 24 hours.

Vailcrest Case Study Part 2 Summary (In the actual course, you'll read the entire case study):

With Dan's approval of the project scope, you meet with company executives and quickly realize that there is conflict between the executives from Marketing, Operations and Services. Each of them has different goals for the project. You need to gather their requirements and develop a high level plan they all accept.

4. Submit the requirements to your instructor for feedback and Dan's approval.

Module 3: Project Plan and Charter Presentation

1. Read to page 16 in the *Essentials of Project Management* e-book. Then read pages 1-81 in *Presentations That Persuade and Motivate*.
2. Watch the Module 3 lecture on the course website.
3. Read Part 3 of the Vailcrest Case Study:

Vailcrest Case Study Part 3 Summary (In the actual course, you'll read the entire case study):

After getting approval of your requirements from Dan and the executives, Dan voices his impatience with the planning process and wants to shorten the project duration. In addition, the executives warn you about risks and the limited availability of people in their departments to work on the project.

4. Develop your charter in the project plan template and send it to your instructor for written feedback.

5. After you receive approval of your charter, schedule your live project presentation and simulation with your instructor.
6. You will enter our live meeting site and give your presentation. Your instructor will play the role of the customer executives. You'll answer their questions about your presentation of the project's charter. Your goal in this live interaction is to secure the executives' approval to proceed with detailed scheduling. Your instructor will send you written feedback on your presentation content and techniques and a link to view your recorded presentation.

Module 4: Task List (Work Breakdown Structure)

1. Read to page 24 in the *Essentials of Project Management* e-book.
2. Watch the Module 4 lecture and the software video on the course website.
3. Read Part 4 of the Vailcrest Case Study:

Vailcrest Case Study Part 4 Summary (In the actual course, you'll read the entire case study):

You interview your crew members about the deliverables you must produce for the project. You ask about their availability to work on the project and the support they will require from the rest of the team to complete their tasks.

4. Use your deliverables as a starting point and the information from the crew members to develop a task list (work breakdown structure) in Microsoft Project® software.
5. Send the Microsoft Project® file as an e-mail attachment to your instructor for written feedback within 24 hours.

Module 5: Dynamic Project Scheduling

1. Read to page 36 in the *Essentials of Project Management* e-book.
2. Watch the Module 5 lecture and the software video on the course website.
3. After you receive approval of your work breakdown structure, link the achievements to tasks that must be done before and after them. Send your instructor the resulting Microsoft Project® file for review and feedback. Along with your written feedback, your instructor will send you information to use on your next assignment.

Module 6: Resources and the Estimating Process

1. Read to page 44 in the *Essentials of Project Management* e-book.
2. Watch the Module 6 lecture and the software video on the course website.
3. Using your feedback on the last assignment, you interact with your crew members to develop estimates of the work required for their tasks. Using your Microsoft Project® schedule, enter the duration of these estimates to complete the schedule.
4. Send the Microsoft Project® file as an e-mail attachment to your instructor for feedback.

Module 7: Fine-tune the Schedule

1. Read to page 47 in the *Essentials of Project Management* e-book.
2. Watch the Module 7 lecture and software movie on the course website.
3. Develop your final project schedule proposal and fine-tune the schedule to finish as early as possible. Also create two alternative schedules that allow the project to finish earlier.
4. Send your project schedules and a brief write up of the alternative schedules to your instructor for written feedback and coaching.

Module 8: Team Leadership and Managing Conflict

1. Read to page 51 in the *Essentials of Project Management* e-book.
2. Watch the Module 8 lecture on the course website.
3. Read Part 8 of the Vailcrest Project Case Study:

Vailcrest Case Study Part 8 Summary (In the actual course, you'll read the entire case study):

Conflict breaks out among the executives. Each of them has their own agenda and their disagreements have the potential to threaten the success of the project. You are responsible for implementing a conflict resolution strategy that will satisfy the executives and bring cooperation to your project crew. Your mediation skills will either resolve the conflict or create even more tension and further jeopardize the project.

4. In an e-mail or a Word document attached to an e-mail, send your instructor a brief write up of the approach and conflict resolution strategy you'd use to address this situation. Write it as a speech you will deliver to the crew members and customer executives. Include possible follow-up action to take after your speech. Your instructor will provide you with written feedback.

Module 9: Tracking Progress and Reporting Status

1. Read to page 60 in the *Essentials of Project Management* e-book. Then read pages 82 - 163 in *Presentations That Persuade and Motivate*.
2. Watch the Module 9 lecture and the software video on the course website.
3. Read Part 9 of the Vailcrest Project Case Study:

Vailcrest Case Study Part 9 Summary (In the actual course, you'll read the entire case study):

You are in the middle of preparing your status report when Dan Morton, Vailcrest's owner and president, brings up another concern. He is worried about a new competitor that is causing Vailcrest to lose a good deal of business. He wants to

accelerate the project and asks you how much you can cut the duration by modifying the project scope. Your task is to maintain the integrity of the project while also keeping Dan satisfied.

4. Use the status data your instructor sent you with your feedback on Module 8. Follow the process you learned in this module for tracking project progress and analyze what has happened to the project.
5. Prepare a status report in your course template describing what has happened and the results if no corrective action is taken. Then identify your solutions and trade-offs to remedy the situation.
6. Send the template and the updated Microsoft Project® schedule with the actual results to your instructor for written feedback and coaching.
7. Schedule a live status report presentation with your instructor. Your goal in this live interaction is to secure the customer's approval to proceed with your plan for corrective action.

Module 10: Final Exam

The final exam consists of 10 short essay questions. It is open book and open notes with a 60 minute time limit. It must be proctored if you wish to earn the PMI® professional development units. Most people ask their boss but any licensed professional (lawyer, accountant, etc.) who is not a relative can serve as your proctor. Send your instructor an e-mail with the date and time you wish to take the final exam.