

123 Advanced Construction Project Management



Duration: 60 hours of work, at your pace and schedule with not time limits

PDU: approved by PMI (Project Management Institute) for 60 PDUs

Prerequisites: 2 - 3 years of construction project experience

Designed for: experienced PMs who want to manage larger construction projects

What you will learn: advanced skills for managing larger construction projects including risk management, variance analysis, schedule optimization and multi-discipline team leadership.

Textbook: *Managing Construction Projects* soft cover 8.5' by 11' 231 pages published 2005 3rd edition

Overview

Working directly with your PMI® certified instructor, you'll learn advanced techniques for larger, more complex construction projects with strategic business results, multiple stakeholders and larger teams drawn from across functional departments and sub-contractors. You will begin each module with textbook reading followed by a lecture (on CD) that you can play whenever and as often as you wish. Then you complete the construction case study assignment in each module. You can call or e-mail your instructor whenever you wish and always receive a personal reply within 24 hours. You may work on the course at your pace whenever it fits your schedule. There are no time limitations or expiration dates. You'll practice all the course techniques in three project case studies with project simulation assignments. You'll practice making presentations with sponsors and answering their questions. You'll develop schedules that hit due dates despite limited resources, and identify ways to mitigate risks with a limited budget.

1. Initiation and Stakeholder Management

Reading: You'll begin your course reading about the "best practices" techniques for planning projects and managing multiple stakeholders who have conflicting needs and requirements.

Lecture: Your lecture expands on the techniques you read about and teaches you how to analyze your project's stakeholders, identifying their hot button issues and unearthing their project requirements. You'll also watch videos of PMs working with stakeholders and critique their work, identifying the good and bad points of how they handled the situation.

Practice what you have learned: In the case study, You're starting a new job with Vailcrest Corporation, as their first project manager. Vailcrest is a company which is experiencing 30% annual growth. This explosive growth has created internal operating, system and facility problems and the company faces increasingly aggressive competition. You listen as the stakeholders discuss operational problems that they want addressed in the project you will manage. Using the tools and techniques you read about and watched in the lecture, you will work with the executives to turn their "wish lists" into measured deliverables that will help you manage the project to a successful completion. You'll get feedback from your instructor on your techniques and the project plan you develop based on this meeting.

2. Project Requirements & Planning

Reading: Learn the techniques to decompose the approved scope into a network of high-level achievements. Your reading assignment shows you how to subdivide each achievement down to the level of the deliverables and business results you will hold your team members and contractors accountable for delivering.

Lecture: You'll see the development of a high-level achievement network in the course template and listen to Explanations of exactly how achievements are decomposed using 4 different techniques to sub-divide them down to a level that is appropriate as an assignment. You'll also learn how to convert activities into objective, measurable achievements that everyone on your project understands. You'll also watch videos of PMs gathering requirements and critique their work, identifying the good and bad points of how they handled the situation.

Practice what you've learned: After the project sponsor approves the scope of your project, you'll continue your work with the managers and users to detail their requirements. You'll also have to cope with the interdepartmental conflicts that could affect your project. You'll reconcile the stakeholders' conflicting views of the project and get approval for a plan they will all support. You'll use the information you collected during your requirements discussions with managers to decompose the



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scope into a network of high-level achievements and assignments for your project team members. Then you'll work with the sponsor and stakeholders to get approval of the plan.

3. Chartering Projects

Reading: In the reading you will learn how to craft a short, easy-to-read charter document that includes all the elements for larger cross-functional projects including the accountability structure, authority over borrowed resources, project risks and change control.

Lecture: Your lecture expands on the tools and techniques for designing an appropriate accountability structure for projects with people borrowed from several departments, over which the PM has no authority. You also design the change control process so the sponsor has control without endless escalations. You'll watch a video of a project manager negotiating with a department manager to use some of the manager's people on the project and critique the PM's work, identifying the good and bad points of how they handled the situation.

Practice what you have learned: Your sponsor is putting a lot of pressure on you to move quickly, and get started on the project. But before you start work, you want to address the risks as well as the issues of using people from other departments. You also need to persuade the sponsor to use a strong change control process. To complete this assignment, you will create a charter for the project then present it to the sponsor and company managers. In a live project simulation, you'll answer questions from the managers and deal with their objections. Your instructor will give you feedback on the techniques you used in working with the executives.

4. Estimating Work and Duration

Reading: You'll learn how project managers should estimate work and duration for the project as a whole and then as planning proceeds, how to make accurate estimates with team members to gain their commitment to the estimates.

Lecture: The lecture covers a range of techniques for developing estimates of duration, work and cost during the initiation and planning phases of a project. You learn techniques for coping with the absence of good estimating data and how to avoid making commitments that you cannot meet. You will learn three estimating techniques for duration and budget that you can apply in each phase of the project lifecycle. As well, you will learn 3-point estimating techniques to use with your team. You'll also watch videos of a PM working with team members to make estimates and you'll critique the PM's work, identifying the good and bad points of how they handled the situation.

Practice what you have learned: You tackle the second case study which is a fast-track "crisis" project that needs to be executed on an emergency basis because a problem threatens the organization's survival. In addition to the business challenges, two key department managers have serious conflict issues. You'll use data provided in the case study to estimate cost and duration and then present them to the decision makers. You provide this information to the sponsor for approval and your instructor will send you private feedback and coaching on your work. Then you will suggest a convenient time for your mid-course phone call with your instructor.

5. Risk Management Presentation

Reading: You'll learn how to assess project situations for potential risk and conduct brain-storming meetings with your team to analyze risks. Then you'll read about techniques for assessing the likelihood of a risk occurring and estimating the impact if it does occur.

Lecture: The lecture expands on this topic by explaining the steps in the risk management process from identification, risk analysis and crafting cost effective responses. You learn to reduce or eliminate the impact of specific risks to your project. You'll also learn to combine these elements into a clear risk presentation. You will see a video of a project manager and team member performing risk identification and risk response planning and you'll critique the PM's performance.

Practice what you've learned: The sponsor and department managers you are working with on the fast-track "crisis project" want different risk mitigation efforts. You develop alternative risk mitigation plans and model the impacts. Your instructor will send you feedback and coaching on your work.

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6-7. Dynamic Modeling & Tradeoffs

Reading: The reading demonstrates step-by-step techniques for advanced Microsoft Project® processes. We'll expand on the process of building dynamic schedules with work estimating and modeling alternative project plans. This includes with trade-offs between scope, budget, duration and risk. You'll learn how to fine tune the project schedule to ensure the best possible resource allocation and the earliest possible completion date. Then you'll see how to optimize MS Project® schedules.

Lecture: Learn the techniques for resource driven scheduling and the precision it gives you in scheduling and spotting project problems early, when they are smaller and easier to solve. The lecture discusses how we use trade-offs to negotiate the final scope, budget and duration for a project. You'll learn about the key issue which is to offer the executive a range of choices while preserving the feasibility of the project. You'll watch a video of a PM using tradeoffs with an executive and critique the PM's performance.

Practice what you've learned: Your sponsor won't budge on the tight resource and duration constraints he's placed on the project. It's your job to craft a dynamic project schedule for this fast-track project within tight resource availability and budget constraints. You submit your work to your instructor for feedback and coaching. Then you'll present these tradeoffs to the project sponsor in a live simulation and negotiate options until you can secure agreement on an achievable project plan and schedule.

8. Team Leadership

Reading: Learn how to create a project team culture that promotes productivity and innovation. We'll also discuss the work attitudes of our team members as well as the ways a PM can affect the project team's culture.

Lecture: The lecture expands on the topics in the reading and delves into the topic of conflict on the project team. It includes how to resolve conflicts that develop from different types of disputes including scheduling, resource utilization and personality conflicts. You watch a video of a project manager dealing with conflicting team members and critique the PM's performance.

Practice what you've learned: In your third case study, the president pulls you off other work to save a failing project and get it back on track. You'll take over from an inexperienced PM who has been unable to cope with performance problems and conflict between team members. Also some departments are not meeting their commitment to contribute resources. You analyze the situation and develop a strategy for dealing with the people problems. You send your work to your instructor for coaching and feedback.

9. Variance Analysis & Status Reporting

Reading: You read the step-by-step instructions for tracking and problem identification in MS Project® software, and the techniques to use in making successful status reports to your project sponsors. You will also learn earned value analysis for problem solving and reporting.

Lecture: The lecture explains the techniques for crafting professional level status reports that clearly communicate progress, the options for corrective action, and how to take advantage of opportunities. Then you analyze a video of a project manager discussing a task's overrun with a team member and critique the PM's performance.

Practice what you've learned: At the end of your first week after taking over this failing project, you receive a status report from the team detailing their work on the project. You immediately see how conflict on the project and difficulties with resources has led to some major delays. It's your job to use this information to determine a couple of solutions to get the project back on track. You'll also have to deal with the stakeholders' numerous requests to make changes to the project. You develop your recovery plan and present it in a "real-time" session with your instructor. You'll answer questions from the executive staff and sponsor about your proposals and your suggestions for dealing with variances to the project schedule and budget. You will also need to assess the impact of the proposed changes and make a specific recommendation on each. Your instructor will give you feedback on the plan and the techniques you used in working with the executives.