Google Project Management Certificate

Course 3 - Project Planning Study Notes

Prepared for Coursera Google Project Management Professional Certificate

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Contents

1 Module 1: Building a Project Plan

1.1 Key Concepts

- **Components of a Project Plan**:
  - A comprehensive document detailing scope, schedule, budget, resources, risk management, and communication strategies.
  - Serves as a roadmap to guide project execution and control.
- **Work Breakdown Structure (WBS)**:
  - Breaks down the project into smaller, manageable tasks organized hierarchically.
  - Ensures all deliverables are accounted for and facilitates task assignment.
  - Example: For a product launch, the WBS might include tasks like market research, prototype development, and marketing campaign.
- **Milestones**:
  - Key checkpoints marking significant project phases or deliverables (e.g., completion of design phase).
  - Help track progress and ensure alignment with the project timeline.
- **Dependencies**:
  - Relationships between tasks where one task depends on the completion of another (e.g., design approval before production).
  - Types: Finish-to-Start, Start-to-Start, Finish-to-Finish, Start-to-Finish.

1.2 Study Tips

- **Create a WBS**:
  - Develop a WBS for a hypothetical project (e.g., organizing a charity event) with at least three levels of tasks.
  - Example: Level 1: Event Planning; Level 2: Venue, Catering; Level 3: Book Venue, Confirm Menu.
- **Identify Milestones**:
  - List 35 milestones for a sample project and map them to a timeline using Google Sheets.
  - Ensure milestones are specific (e.g., "Complete venue booking by April 1, 2026").
- **Understand Dependencies**:
  - Create a task list for a project and identify dependencies (e.g., "Catering setup depends on venue booking").
  - Practice diagramming dependencies using a flowchart or Gantt chart.

- **Review Case Studies**:
  - Analyze the Plant Pals case study to understand how a project plan integrates scope, WBS, and milestones.

2 Module 2: Time Estimation and Scheduling

2.1 Key Concepts

- **Time Estimation Techniques**:
  - *Analogous Estimating*: Uses historical data from similar projects to estimate task duration.
  - *Three-Point Estimating*: Calculates best-case, most likely, and worst-case durations for accuracy (e.g., (Optimistic + 4 × Most Likely + Pessimistic) / 6).
  - *Parametric Estimating*: Uses statistical relationships (e.g., time per unit of work) to estimate durations.
- **Scheduling Tools**:
  - *Gantt Charts*: Visualize task durations, dependencies, and milestones over a timeline.
  - *Critical Path Method (CPM)*: Identifies the longest sequence of dependent tasks to determine the projects minimum duration.
- **Milestone Scheduling**:
  - Set realistic milestones based on task durations and dependencies.
  - Use milestones to monitor progress and adjust schedules as needed.
- **Schedule Management**:
  - Regularly update schedules to reflect changes and ensure timely completion.
  - Use tools like Asana or Microsoft Project for dynamic scheduling.

2.2 Study Tips

- **Practice Estimation**:
  - Apply three-point estimating to a sample task (e.g., designing a website) with optimistic (5 days), most likely (7 days), and pessimistic (10 days) durations.
  - Calculate: $(5 + 4 \times 7 + 10) / 6 = 7.17$ days.
- **Create a Gantt Chart**:
  - Use Google Sheets or a free online tool to create a Gantt chart for a small project with 57 tasks.
  - Include dependencies and milestones in the chart.
- **Calculate Critical Path**:

  - List tasks for a hypothetical project, identify dependencies, and calculate the critical path manually or using a tool.
  - Example: Task A (2 days) → Task B (3 days) → Task C (4 days) = 9 days critical path.
- **Explore Scheduling Tools**:
  - Set up a project schedule in Asana, adding tasks, dependencies, and milestones to practice dynamic updates.

3 Module 3: Budgeting and Resource Allocation

3.1 Key Concepts

- **Budget Development**:
  - Estimate costs for labor, materials, equipment, and contingencies.
  - Use bottom-up estimating (summing task-level costs) or top-down estimating (allocating a total budget).
- **Resource Allocation**:
  - Assign personnel, equipment, and materials to tasks based on availability and project needs.
  - Avoid overallocation by balancing workloads across team members.
- **Cost Control**:
  - Monitor actual costs against the budget using variance analysis (e.g., Cost Variance = Budgeted Cost Actual Cost).
  - Adjust resource allocation or scope to stay within budget.
- **Tools for Budgeting**:
  - Google Sheets for budget tracking and variance analysis.
  - Project management software (e.g., Asana, Trello) for resource allocation and cost monitoring.

3.2 Study Tips

- **Develop a Sample Budget**:
  - Create a budget in Google Sheets for a hypothetical project (e.g., office renovation), including labor, materials, and a 10% contingency.
  - Example: Labor ($5,000), Materials ($3,000), Contingency ($800) = Total $8,800.
- **Practice Resource Allocation**:
  - Assign resources to tasks in a sample project, ensuring no team member is overallocated (e.g., max 8 hours/day).

  - Use a resource allocation matrix to visualize assignments.
- **Calculate Cost Variance**:
  - For a sample task, calculate cost variance (e.g., Budgeted $1,000, Actual $1,200 → Variance = -$200).
  - Analyze causes of variance and propose corrective actions.
- **Review Course Examples**:
  - Study the Plant Pals case study to understand budgeting and resource allocation in a practical context.

4 General Study Tips for Course 3

- **Organize Notes**:
  - Create a dedicated folder in Google Docs or Notion for Course 3 notes, with sub-sections for each module.
  - Maintain a glossary of key terms (e.g., WBS, critical path, cost variance) for quick reference.
- **Engage Actively**:
  - Complete all quizzes, discussion prompts, and peer-reviewed assignments to reinforce learning.
  - Participate in Coursera forums to discuss planning techniques and tool usage with peers.
- **Practice Application**:
  - Apply concepts to a real-world scenario, such as planning a personal project (e.g., community event).
  - Create a WBS, Gantt chart, and budget for this project to practice skills.
- **Time Management**:
  - Allocate 23 hours per module, aiming to complete Course 3 in 34 weeks.
  - Set deadlines for assignments and review sessions to stay on track.
- **Tool Familiarity**:
  - Experiment with Google Sheets for budgeting and Gantt charts, and Asana for task and resource management.
  - Practice updating schedules and budgets based on hypothetical project changes.

5 Additional Notes

- **Course Context**: Course 3 focuses on creating comprehensive project plans, covering WBS, scheduling, budgeting, and resource allocation. It includes videos, readings, quizzes, and hands-on assignments (e.g., Plant Pals case study).

- **Certification Benefits**: Contributes to the Google Project Management Professional Certificate, accredited by PMI, with credits toward CAPM certification (over 100 hours total for the program).
- **Resources**: Use Coursera-provided templates (e.g., WBS, Gantt chart) and explore tools like Asana and Google Sheets for practical experience.
- **Program Cost**: $49/month after a 7-day free trial; financial aid is available.
- **AI Integration**: Course materials may reference AI tools for tasks like schedule optimization or resource allocation.