Guide: Workbook to Accompany Online Course

Issue   I co-developed a Project Management Essentials course for Purdue University's online Engineering Professional Development Programs. Students used the Project Management Book of Knowledge (PMBOK) as the accompanying text, but they didn't have a convenient tool for note taking. The course was PowerPoint slides with a voiceover, which resembled a video.

Solution   The workbook I created gave students note taking space as well as:
- verification of learning via knowledge checks
- exercises
- structured note taking areas
- unstructured note taking areas
- enlargements of graphics from the videos
- Provides student with a personalized summary of the course content, which helped during preparation to take the Project Management Principal certification exam.

The structured note taking areas made it easier to take notes and emphasized key points. The layout of the workbook is one I developed to increase the value and usability of handouts. The features of the layout are:
- Solid blocks at the top of the page, to the outside, showing the section title to make it easier to locate a section
- Solid blocks at 90° to the section title blocks, with the module title to make it easier to locate a module
- Page number in the upper outside corner
- Note taking areas in the right column, which makes it easy for right-handed people to take notes on odd-numbered pages and left-handed people can easily take notes on the even-numbered pages
- Name of the workbook at the bottom, to the outside

I created a features document to accompany the workbook.
See the features document on page 2 and an excerpt from the workbook on pages 3 – 17.

Results   Students were able to capture notes, verify their learning, and rapidly navigate through the workbook.

Classifications   The table below lists two classifications and the recipients of this work sample.

Performance Experience Design[1]	Characteristics [2]	Recipients
Innovative	Creative	Purdue University's Engineering Professional Development Program
Meaningful	Customer-focus	
Empathetic		

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[1] Click here to view list and descriptions of Performance Experience Design characteristics
[2] Reason(s) it was provided as a work sample

Workbook Features Overview

This participant guide is designed to enhance your learning as you take this course as well as provide a reference following the course.

The participant guides are designed to accomplish the following:

- Help you to follow along in class via the **thumbnails of the slides**.
- Provide a **place to take notes** during the class. There are note spaces on the right and left pages to accommodate left-handed and right-handed students. Additionally, structured note areas are provided in some areas to make note taking easier as well as to emphasize important points.
- **Display graphics** that may be difficult to see on the screen and/or will be **important references** following the course.
- Furnish an area to do some of the **exercises**.
- Produce a **personalized summary** of the module(s).

The features of the participant guide are called out below.

Project Management Course Workbook

Scope Module

Intro to Scope

Your notes on the videos

Learning Outcomes

- List the 6 scope processes
- Draw and explain the triple constraints triangle using PMBOK as a reference

Scope Definitions

- **Project Scope** the work performed to deliver a product, service, or results with the specified features and functions.
- **Project Scope management** includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.

Scope Management Processes
(Try listing the scope management processes from memory.

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The Triple Constraints
(Draw the triple constraints triangle below. Add Time, Cost, and Scope labels.

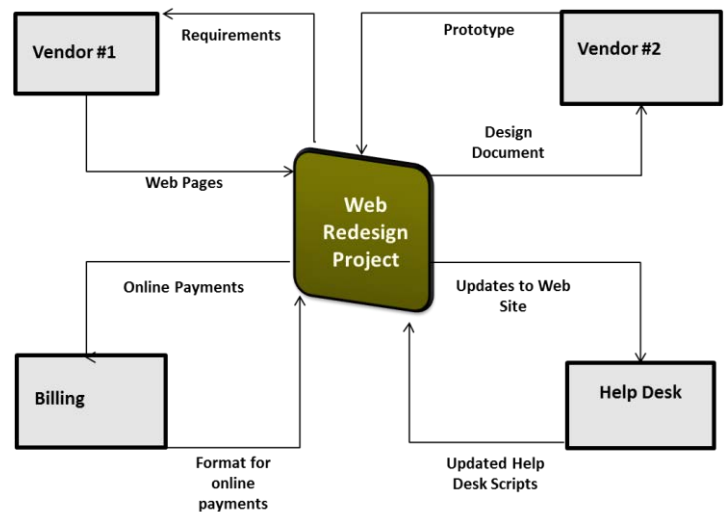*Knowledge Check is at the top of the next page.*

Knowledge Check on Intro to Scope
Refer to your notes on the previous page or the video for answers.

1. **Define Scope**

2. **List at least 3 of the Scope Management Processes**

Context Diagram

Collecting & Documenting Requirements

Learning Outcomes

• Describe the tools and techniques for collecting requirements

• Describe the Requirements Traceability Matrix tool

Techniques for Collecting Requirements
(Try listing the techniques for collecting requirements from memory.)

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Context Diagram

• The context diagram is used to?

• The items on the arrow are…?

Requirements Traceability Matrix
See example on the next page.

• A grid that links

• Helps ensure

• Helps ensure

Your notes on the videos

Requirements Traceability Matrix Example

	A	B	C	D	E	F	G	H	I	J
1			**Project Name:**	Paint house						
2			**Project Description:**	Paint interior and exterior of house to prepare it for selling						
4	ID #	Category	Requirement	Source of Req.	Business Obj.	Project Obj.	WBS #/Deliverables	Req. Validated	Test Case(s)	Req. Tested
5	1	Prep	Improve appearance of siding	Homeowner	Selling prep	Paint Exterior-Trim	1.1.2.1 Scrape	Yes		Yes
6	2	Repair	Improve appearance of siding	Homeowner	Selling prep	Paint Exterior-Trim	1.1.2.2 Caulk	Yes		No
7	3	Paint	Improve appearance of siding	Homeowner	Selling prep	Paint Exterior-Trim	1.1.2.3 Paint 2 coats	No		No
8	4	Repair	Update interior walls	Homeowner	Selling prep	Paint Interior-Walls	1.2.2.1 Patch	Yes		Yes
9	5	Repair	Update interior walls	Homeowner	Selling prep	Paint Interior-Walls	1.2.2.2 Sand	Yes		Yes
10	6	Paint	Update interior walls	Homeowner	Selling prep	Paint Interior-Walls	1.2.2.3 Paint 2 coats	No		No

Knowledge Check is on the next page.

Knowledge Check on Collecting & Documenting Requirements

Refer to your notes on the previous page or the video for answers.

1. **What is the Requirements Traceability Matrix and what is its purpose?**

2. **List at least 2 techniques for getting project requirements.**

Prioritizing Requirements

Your notes on the videos

Learning Outcomes

- Use the tools and techniques to prioritize some requirements
- Write a project scope statement

How to Prioritize Requirements
Try listing the criteria for your requirements from memory.

- Must

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Project Scope Statement
What are the elements of the project scope statement?

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Knowledge Check is at the top of the next page.

Knowledge Check on Prioritizing Requirements
Refer to your notes on the previous page or the video for
answers.

1. **Name the 4 priorities for requirements.**
    a.

    b.

    c.

    d.

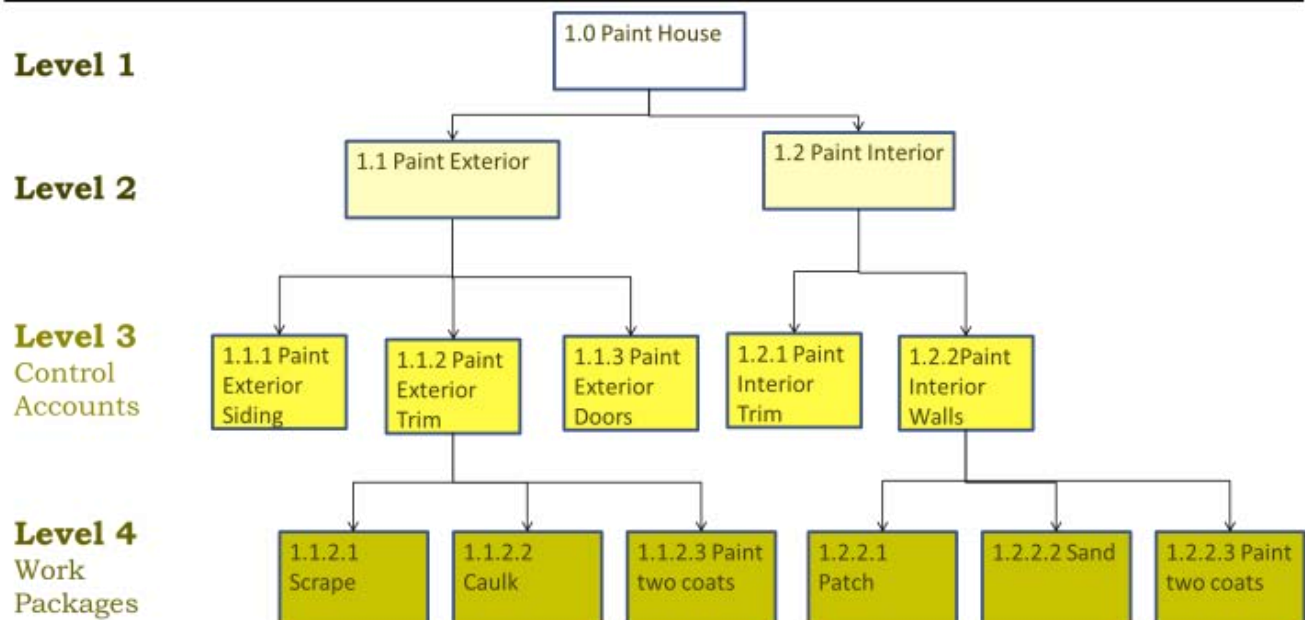2. **List at least 3 of the elements of the scope statement.**
    a.

    b.

    c.

    d.

    e.

    f.

WBS Example

Level 1 — 1.0 Paint House

Level 2 — 1.1 Paint Exterior | 1.2 Paint Interior

Level 3 Control Accounts — 1.1.1 Paint Exterior Siding | 1.1.2 Paint Exterior Trim | 1.1.3 Paint Exterior Doors | 1.2.1 Paint Interior Trim | 1.2.2 Paint Interior Walls

Level 4 Work Packages — 1.1.2.1 Scrape | 1.1.2.2 Caulk | 1.1.2.3 Paint two coats | 1.2.2.1 Patch | 1.2.2.2 Sand | 1.2.2.3 Paint two coats

Project Management Course Workbook

Work Breakdown Structure

Learning Outcomes
- Describe a work breakdown structure (WBS)
- Define work breakdown structure terms
- Create a WBS

Work Breakdown Structures…
See example on facing page. Complete the following bullet points.

- Deliverable-oriented

- Detailed to the level

- Best done with

- Can be used again for other similar projects
- Same level of WBS detail

WBS Vocabulary
Write down definitions.

- Control Accounts –

- Work Package –

- Planning Package –

Your notes on the videos

Knowledge Check is at the top of the next page.

Knowledge Check for Work Breakdown Structure
1. **Same level of WBS detail is needed for all parts of project. Circle one:**

    True   False

2. **What is the official term for "work packages roll up to this level"?**
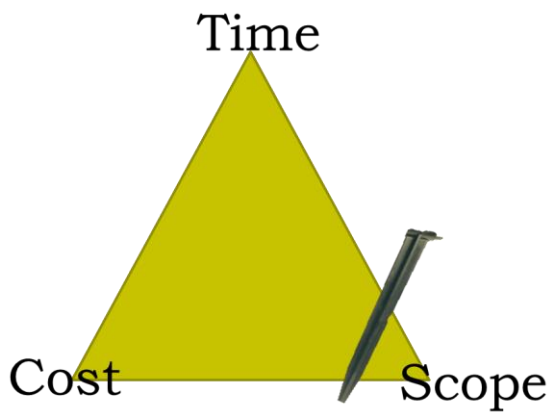
Scope and Change Management

Learning Outcomes

- Define scope baseline
- Describe scope's relationship to change management
- Define relationship to triple constraints

Scope Baseline
Includes:

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Your notes on the videos

Scope and Change Management

- Baseline scope is input to

- Once scope approved, must go through

Knowledge Check is at the top of the next page.

Project Management Course Workbook

Knowledge Check for Scope & Change Management
1. **What is required to be able to establish scope baseline?**

2. **Once scope baseline is approved, changes to the scope should go through a change management process. Circle one:**

    True   False

Assignment

Choose a project to practice what you have learned about Scope:

- A wedding
- Room addition
- Million dollar dream home
- New garage

1. **Create a list all of your requirements on post-its**
2. **(Take a digital picture of the list.**
3. **Prioritize the requirements.**
4. **(Take a digital picture of the prioritized requirements.**
5. **Based on your budget, decide if they are IN or OUT of scope using the picture frame on the next 2 pages. Create your own frame if necessary.**
6. **(Take a digital picture of the "scoped" requirements.**
7. **Using the post-its or some other method, create a work breakdown structure for the project.**
8. **(Take a photo or save it in some way digitally.**
9. **Draft a scope statement for the project.**
10. **Add all your photos, the WBS, and your scope statement to a Word or PowerPoint file. SAVE and place in drop-box on Blackboard.**