

Foundations of Project Management — Quick Review

Version 1.2 · Robert Caldwell · Six sessions, August 24–September 14, 2026 · Updated October 5, 2026

Use this after the complete guide. This is a memory aid, not a current certification outline. Updated with Foundations workbook v8.1; verified course details and remaining differences are distinguished.

The new Module 2 and Module 5/6 review questions are already covered here and in the complete guide. Retain **PMO = Project Management Office**, program benefits from related work, and **project scope = work / product scope = features and functions**. Iterative and Agile are not interchangeable labels. (*Module review: Foundations M2 Review MASTER.docx, body blocks 17, 43, 91–93.*) (*Module review: Foundations M5 Review MASTER.docx, body blocks 3–5.*)

Core distinctions

If a prompt describes...	Think...
Temporary, unique work producing a product/service/result	Project
Continuing, routine work	Operations
Related projects coordinated for additional benefits	Program
PM authority stronger than functional-manager authority	Strong matrix
Functional-manager authority stronger	Weak matrix
Optional assistance, tools, templates	Supportive PMO
Required standards and compliance	Controlling PMO
Direct supervision/management of projects	Directive PMO
Product features and functions	Product scope
All work needed to deliver the result	Project scope
Hierarchical decomposition of the total scope	WBS
Lowest official WBS level in this course	Work package
Unique WBS component identifiers	Code of accounts

If a prompt describes...	Think...
Labor units, usually hours	Effort
Working periods occupied by an activity	Duration
Longest-duration network path	Critical path
Assigned work commitments	Resource loading
Addressing excess demand against available capacity	Leveling / resource adjustment
Data collection, measurement, reporting	Monitoring
Analysis and corrective action	Controlling
Doing/directing the planned work	Executing
Change over an interval	Progress report
Current snapshot	Status report
Prediction of future performance	Forecast

Sources: (Aug 24 · 01:23:51 · segments 243–263; 01:55:55 · segments 313–315; 02:11:10 · segments 354–358; 02:27:21 · segments 404–418) (Aug 31 · 00:44:32 · segments 119–128; 02:29:07 · segments 293–315) (Sep 2 · 00:40:35 · segments 130–132) (Sep 9 · 00:51:49 · segments 95–104; 01:03:31 · segments 136–165) (Sep 14 · 02:00:36 · segments 244–257; 02:25:49 · segments 310–326)

Recall lists

- **Six constraints:** scope, schedule, quality, budget, resources, risk.
- **Competency areas:** ways of working, power skills, business acumen.
- **Course focus areas:** initiating, planning, executing, monitoring/controlling, closing.
- **Communication plan:** who, what, when, how.
- **Tuckman:** forming → storming → norming → performing → adjourning.
- **Cost estimating:** analogous, parametric, bottom-up.
- **Risk responses:** escalate, avoid, transfer, mitigate; then acceptance/contingency for retained risks.

Sources: (Aug 24 · 02:55:40 · segments 495–519; 03:04:51 · segments 522; 03:15:01 · segments 568) (Aug 26 · 00:34:44 · segments 64–66; 03:04:09 · segments 503–526) (Sep 9 · 02:09:54 · segments 270–281) (Sep 14 · 00:35:46 · segments 92–107; 00:44:35 · segments 126–146; 02:12:30 · segments 275–301)

Formulas and interpretation

Calculation	Formula / convention	Check
ROM — workbook-confirmed course rule	Lower = base/2; upper = base×2	–50% / +100%; asymmetric
Triangular	$(O + M + P) / 3$	Same units in all inputs
PERT beta	$(O + 4M + P) / 6$	Multiply 4M before summing
Early finish — simple FS example	$EF = ES + \text{duration}$	At a merge, wait for all predecessors
Late start — simple FS example	$LS = LF - \text{duration}$	Backward calculation respects all successors
Total float — simple course example	$LS - ES = LF - EF$	Shared along the branch, not additive
Uniform commitment	individual effort / duration	Sum overlapping assignments per period
Labor cost	hours × rate	Include each person's effort
Cumulative planned cost	Prior cumulative + current period cost	Plot this series for the course S-curve
Expected value	probability as decimal × impact	Keep dollars and days separate

O = optimistic; M = most likely; P = pessimistic. In this lesson, **EV = expected value**, not earned value. ES/EF/LS/LF shortcuts here apply to the reconstructed FS-only, zero-lag example, not every type of network.

Sources: (Aug 26 · 01:42:11 · segments 303–312) (Aug 31 · 02:36:47 · segments 324–340) (Sep 2 · 02:01:10 · segments 302–326) (Sep 9 · 00:54:12 · segments 101–104; 02:23:05 · segments 310–325) (Sep 14 · 00:26:26 · segments 67–74)

Additional workbook formulas/details: budgetary –10%/+25%; definitive –5%/+10%. Free float protects successor early starts; total float protects project finish/constraints. In the 58-day network, design has 0 free float and 6 total float; build has 6 of each. Fixed duration is unchanged by more people; variable duration can shorten. (Workbook v8.1, printed pp. 110 [PDF 116]; 126–127 [PDF 132–133]; 117 [PDF 123]; 134–136 [PDF 140–142])

Dependencies

Type	Constraint	Memory example
FS	B starts after A finishes	Bake, then frost

Type	Constraint	Memory example
SS	B starts after A starts	Baking starts; frosting preparation can start
FF	B finishes after A finishes	Music cannot finish before the aisle walk finishes
SF	B finishes after A starts	Storage cannot end before pickup starts

Mandatory = hard logic; discretionary = preferred logic. Internal/external concerns control and boundary. These classifications can combine. A lead permits overlap; a lag is a wait/delay. (*Sep 2 · 00:09:08 · segments 23–42; 00:18:30 · segments 50–57; 00:23:45 · segments 71–113*)

Workbook recall additions

- **Project wording:** temporary initiative in a unique context undertaken to create value.
- **Seven domains:** governance, scope, schedule, finance, stakeholders, resources, risk.
- **Six principles:** holistic view; value; embed quality; accountable leadership; sustainability; empowered culture.
- **Rolling wave:** detailed near-phase plan, broad later-phase plan; not a synonym for Agile.
- **Modified Delphi:** independent initial expert estimates, discussion/revision, repeat to consensus.
- **Finalize baseline:** validate, approvals, archive, communicate.
- **Control cycle:** actuals/forecasts → compare → analyze causes/impact → correct → authorized revisions → report.
- **Change flowchart:** accept/reject/**defer**; notify; integrate accepted change.
- **Risk definition:** uncertain positive or negative effect; course response exercises focus on threats.
- **Closing:** project, phase, contract, or termination before completion; final actuals → review → document/archive → celebrate success.
- **Risk-planning steps:** identify → qualitative → quantitative → prioritize/threshold → manage → reserve → document.
- **Software:** enter accurate work, logic, resources and calendars; milestones have zero duration; validate before saving the baseline.

Sources: (*Workbook v8.1, printed pp. 28 [PDF 34]; 49–51 [PDF 55–57]; 75–76 [PDF 81–82]; 110 [PDF 116]; 164 [PDF 170]; 169 [PDF 175]; 179–180 [PDF 185–186]; 191 [PDF 197]; 196 [PDF 202]; 212 [PDF 218]; 233–235 [PDF 239–241]*)

Frequent traps

- Strong/weak matrix describes **authority**, not employee ability.
- Team cohesion alone does not establish overall success.
- A sponsor authorizes/supports; a PM manages day-to-day work.
- The WBS covers the **whole** project.

- A RAM assigns involvement; RACI supplies the letter model.
- **Course RACI:** Responsible, Approver/Authority, Contributor, Informed. Workbook p.124 (PDF 130) confirms these labels; the sample O/A/I legend uses I for implementer.
- Effort-hours do not automatically equal calendar duration.
- Critical path is longest by **duration**, not number of activities.
- Two activities with six days of float on one branch do not create 12 days of delay allowance.
- Fast tracking overlaps work and can increase rework risk; crashing adds resources and usually cost.
- Several concurrent assignments can be acceptable if their total fits capacity.
- Analogous uses a similar project; parametric uses a relationship/model; bottom-up aggregates detailed work.
- A cumulative cost baseline is planned spending, not proof of actual spending or work completed.
- Avoidance **eliminates** the threat; mitigation **reduces** it.
- Qualitative analysis prioritizes; the quantitative example calculates exposure.
- A CCB/designated authority evaluates changes to baselines.
- Lessons learned include good practices as well as mistakes.

Numerical benchmarks from class

Example	Answer
Liam: O16, M20, P35 minutes	Triangular 23.67; PERT 21.83
Second commute: O5, M7, P13	PERT 7.67 minutes
Requirements17 → test procedures29 → test12	58 days; critical path
Requirements17 → design15 → build8 → test12	52 days; six shared float days
John: 25 + 28/1.5 hours/week	43.67; 3.67 above a 40-hour threshold
Five-day lawn project	Labor \$1,740 + materials \$4,150 = \$5,890
12% probability × \$40,000 impact	\$4,800 expected value

Sources: (Aug 31 · 02:42:56 · segments 352–366; 02:50:29 · segments 375–384) (Sep 2 · 02:01:10 · segments 302–326) (Sep 9 · 00:55:34 · segments 103–104; 00:59:47 · segments 122–132; 02:23:05 · segments 310–325) (Sep 14 · 00:29:20 · segments 72–74)

Resolved and remaining differences

Resolved from this workbook: course ROM and RACI; free-float definition; modified Delphi steps; rolling-wave meaning; seven-domain/six-principle framework; exact 58-day diagram. (Workbook v8.1, printed pp. 67 [PDF 73]; 110 [PDF 116]; 117 [PDF 123]; 124 [PDF 130]; 49 [PDF 55]; 75–76 [PDF 81–82]; 134–136 [PDF 140–142])

Still distinguish carefully: lecture's new competency labels versus the workbook's older triangle; four workbook team stages versus five in the lecture; level-of-effort listed without definition; QA/QC not fully distinguished; leveling/smoothing terminology; current certification exam claims. See the source/review index.

Suggested review sequence

1. Explain the core distinctions out loud without reading the right-hand column.
2. Recompute PERT, the 58-day network, resource overload, cumulative cost, and expected value.
3. Work through the complete guide's 42 practice prompts and check the answer key.
4. Revisit the recording for missed concepts using the timestamped emphasis index.
5. Use the printed/PDF page references to check missed concepts; keep remaining lecture/workbook differences visible.