PMI Agile Certified Practitioner (PMI-ACP)®

Examination Content Outline

Project Management Institute

PROJECT MANAGEMENT INSTITUTE

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INTRODUCTION

The Project Management Institute (PMI) offers a professional certification for agile practitioners, known as the PMI Agile Certified Practitioner (PMI-ACP)®. PMI's professional certification examination development processes stand apart from other project management certification examination development practices. PMI aligns its process with certification industry best practices, such as those found in the *Standards for Educational and Psychological Testing*[1].

A key component of this process is that organizations wishing to offer valid and reliable professional certification examinations are directed to use a Role Delineation Study (RDS) as the basis for the creation of the examination. This process utilizes knowledge and task-driven guidelines to assess the practitioners' competence, and determine the level of salience, criticality, and frequency of each of the knowledge, tasks, and skills required to perform to the industry-wide standard in the role of an agile practitioner—that is, professionals who use agile principles, methods, and approaches when working on or leading agile teams.

The Role Delineation Study ensures the validity of an examination. Validation assures that the outcome of the exam is, in fact, appropriately measuring and evaluating the specific knowledge and skills required to function as an agile practitioner. Thus, the Role Delineation Study guarantees that each examination validly measures all elements of agile practice in terms of real settings.

PMI-ACP® certification holders can be confident that their professional certification has been developed according to the best practices of test development and based upon input from the practitioners who establish those standards. Please see Appendix A for a detailed description of the process.

The PMI-ACP examination is a vital part of the activities leading to earning a professional certification, thus it is imperative that the PMI-ACP examination reflect accurately the practices of the agilist. All the questions on the examination have been written and extensively reviewed by qualified agile subject matter experts and are supported by current published references in agile topics. These questions are mapped against the *PMI-ACP Examination Content Outline* to ensure that an appropriate number of questions are in place for a valid examination.

PMI retained Professional Examination Service (ProExam) to develop the global *PMI-ACP Examination Content Outline*. Since 1941, ProExam has provided a full range of assessment and advisory services to organizations across a broad range of professions, in support of professional licensure and certification, training, and continuing professional education. ProExam is dedicated to promoting the public welfare through credentialing as a mission-driven, not-for-profit organization.

[1] American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2014). *Standards for educational and psychological testing.* Washington, DC: American Educational Research Association.

Candidates studying for the PMI-ACP examination are urged to use the *PMI-ACP Examination Content Outline* as a guide to the areas included on the examination. Further, trainers are urged to use the *PMI-ACP Examination Content* Outline to structure their training. Candidates are also encouraged to study current references in agile, such as those on the PMI-ACP examination preparation reference list.

PMI-ACP® EXAM CONTENT OUTLINE

The PMI-ACP® examination will consist of 100 scored items and 20 unscored (pre-test) items. The unscored items will not be identified and will be randomly distributed throughout the exam. The allocation of questions will be as follows:

Domain	Percentage of Items on Test
Domain I. Agile Principles and Mindset	16%
Domain II. Value-driven Delivery	20%
Domain III. Stakeholder Engagement	17%
Domain IV. Team Performance	16%
Domain V. Adaptive Planning	12%
Domain VI. Problem Detection and Resolution	10%
Domain VII. Continuous Improvement (Product, Process, People)	9%

DOMAINS AND TASKS

Domain I. **Agile Principles and Mindset** (9 tasks)

Explore, embrace, and apply agile principles and mindset within the context of the project team and organization.

Domain II. Value-Driven Delivery (4 sub-domains, 14 tasks)

Deliver valuable results by producing high-value increments for review, early and often, based on stakeholder priorities. Have the stakeholders provide feedback on these increments, and use this feedback to prioritize and improve future increments.

Domain III. Stakeholder Engagement (3 sub-domains, 9 tasks)

Engage current and future interested parties by building a trusting environment that aligns their needs and expectations and balances their requests with an understanding of the cost/effort involved. Promote participation and collaboration throughout the project life cycle and provide the tools for effective and informed decision making.

Domain IV. Team Performance (3 sub-domains, 9 tasks)

Create an environment of trust, learning, collaboration, and conflict resolution that promotes team self-organization, enhances relationships among team members, and cultivates a culture of high performance.

Domain V. Adaptive Planning (3 sub-domains, 10 tasks)

Produce and maintain an evolving plan, from initiation to closure, based on goals, values, risks, constraints, stakeholder feedback, and review findings.

Domain VI. Problem Detection and Resolution (5 tasks)

Continuously identify problems, impediments, and risks; prioritize and resolve in a timely manner; monitor and communicate the problem resolution status; and implement process improvements to prevent them from occurring again.

Domain VII. Continuous Improvement (Product, Process, People) (6 tasks)

Continuously improve the quality, effectiveness, and value of the product, the process, and the team.

TASKS

Domain I	Agile Principles and Mindset
Task 1	Advocate for agile principles by modeling those principles and discussing agile values in order to develop a shared mindset across the team as well as between the customer and the team.
Task 2	Help ensure that everyone has a common understanding of the values and principles of agile and a common knowledge around the agile practices and terminology being used in order to work effectively.
Task 3	Support change at the system or organization level by educating the organization and influencing processes, behaviors, and people in order to make the organization more effective and efficient.
Task 4	Practice visualization by maintaining highly visible information radiators showing real progress and real team performance in order to enhance transparency and trust.
Task 5	Contribute to a safe and trustful team environment by allowing everyone to experiment and make mistakes so that each can learn and continuously improve the way he or she works.
Task 6	Enhance creativity by experimenting with new techniques and process ideas in order to discover more efficient and effective ways of working.
Task 7	Encourage team members to share knowledge by collaborating and working together in order to lower risks around knowledge silos and reduce bottlenecks.
Task 8	Encourage emergent leadership within the team by establishing a safe and respectful environment in which new approaches can be tried in order to make improvements and foster self-organization and empowerment.
Task 9	Practice servant leadership by supporting and encouraging others in their endeavors so that they can perform at their highest level and continue to improve.

Domain II	Value-Driven Delivery
Define Positive Value	
Task 1	Define deliverables by identifying units that can be produced incrementally in order to maximize their value to stakeholders while minimizing non-value added work.
Task 2	Refine requirements by gaining consensus on the acceptance criteria for features on a just-in-time basis in order to deliver value.
Task 3	Select and tailor the team's process based on project and organizational characteristics as well as team experience in order to optimize value delivery.
Avoid Potential Downsides	
Task 4	Plan for small releasable increments by organizing requirements into minimally marketable features/minimally viable products in order to allow for the early recognition and delivery of value.
Task 5	Limit increment size and increase review frequency with appropriate stakeholders in order to identify and respond to risks early on and at minimal cost.
Task 6	Solicit customer and user feedback by reviewing increments often in order to confirm and enhance business value.
Prioritization	
Task 7	Prioritize the units of work through collaboration with stakeholders in order to optimize the value of the deliverables.
Task 8	Perform frequent review and maintenance of the work results by prioritizing and maintaining internal quality in order to reduce the overall cost of incremental development.
Task 9	Continuously identify and prioritize the environmental, operational, and infrastructure factors in order to improve the quality and value of the deliverables.
Incremental Development	
Task 10	Conduct operational reviews and/or periodic checkpoints with stakeholders in order to obtain feedback and corrections to the work in progress and planned work.
Task 11	Balance development of deliverable units and risk reduction efforts by incorporating both value producing and risk reducing work into the backlog in order to maximize the total value proposition over time.

Task 12	Re-prioritize requirements periodically in order to reflect changes in the environment and stakeholder needs or preferences in order to maximize the value.
Task 13	Elicit and prioritize relevant non-functional requirements (such as operations and security) by considering the environment in which the solution will be used in order to minimize the probability of failure.
Task 14	Conduct frequent reviews of work products by performing inspections, reviews, and/or testing in order to identify and incorporate improvements into the overall process and product/service.

Domain III	Stakeholder Engagement
Understand Stakeholder Needs	
Task 1	Identify and engage effective and empowered business stakeholder(s) through periodic reviews in order to ensure that the team is knowledgeable about stakeholders' interests, needs, and expectations.
Task 2	Identify and engage all stakeholders (current and future) by promoting knowledge sharing early and throughout the project to ensure the unimpeded flow of information and value throughout the lifespan of the project.
Ensure Stakeholder Involvement	
Task 3	Establish stakeholder relationships by forming a working agreement among key stakeholders in order to promote participation and effective collaboration.
Task 4	Maintain proper stakeholder involvement by continually assessing changes in the project and organization in order to ensure that new stakeholders are appropriately engaged.
Task 5	Establish collaborative behaviors among the members of the organization by fostering group decision making and conflict resolution in order to improve decision quality and reduce the time required to make decisions.
Manage Stakeholder Expectations	
Task 6	Establish a shared vision of the various project increments (products, deliverables, releases, iterations) by developing a high level vision and supporting objectives in order to align stakeholders' expectations and build trust.
Task 7	Establish and maintain a shared understanding of success criteria, deliverables, and acceptable trade-offs by facilitating awareness among stakeholders in order to align expectations and build trust.
Task 8	Provide transparency regarding work status by communicating team progress, work quality, impediments, and risks in order to help the primary stakeholders make informed decisions.
Task 9	Provide forecasts at a level of detail that balances the need for certainty and the benefits of adaptability in order to allow stakeholders to plan effectively.

Domain IV	Team Performance
Team Formation	
Task 1	Cooperate with the other team members to devise ground rules and internal processes in order to foster team coherence and strengthen team members' commitment to shared outcomes.
Task 2	Help create a team that has the interpersonal and technical skills needed to achieve all known project objectives in order to create business value with minimal delay.
Team Empowerment	
Task 3	Encourage team members to become generalizing specialists in order to reduce team size and bottlenecks, and to create a high-performing cross-functional team.
Task 4	Contribute to self-organizing the work by empowering others and encouraging emerging leadership in order to produce effective solutions and manage complexity.
Task 5	Continuously discover team and personal motivators and de-motivators in order to ensure that team morale is high and team members are motivated and productive throughout the project.
Team Collaboration and Commitment	
Task 6	Facilitate close communication within the team and with appropriate external stakeholders through co-location or the use of collaboration tools in order to reduce miscommunication and rework.
Task 7	Reduce distractions in order to establish a predictable outcome and optimize the value delivered.
Task 8	Participate in aligning project and team goals by sharing project vision in order to ensure the team understands how their objectives fit into the overall goals of the project.
Task 9	Encourage the team to measure its velocity by tracking and measuring actual performance in previous iterations or releases in order for members to gain a better understanding of their capacity and create more accurate forecasts.

Domain V	Adaptive Planning
Levels of Planning	
Task 1	Plan at multiple levels (strategic, release, iteration, daily) creating appropriate detail by using rolling wave planning and progressive elaboration to balance predictability of outcomes with ability to exploit opportunities.
Task 2	Make planning activities visible and transparent by encouraging participation of key stakeholders and publishing planning results in order to increase commitment level and reduce uncertainty.
Task 3	As the project unfolds, set and manage stakeholder expectations by making increasingly specific levels of commitments in order to ensure common understanding of the expected deliverables.
Adaptation	
Task 4	Adapt the cadence and the planning process based on results of periodic retrospectives about characteristics and/or the size/complexity/criticality of the project deliverables in order to maximize the value.
Task 5	Inspect and adapt the project plan to reflect changes in requirements, schedule, budget, and shifting priorities based on team learning, delivery experience, stakeholder feedback, and defects in order to maximize business value delivered.
Agile Sizing and Estimation	
Task 6	Size items by using progressive elaboration techniques in order to determine likely project size independent of team velocity and external variables.
Task 7	Adjust capacity by incorporating maintenance and operations demands and other factors in order to create or update the range estimate.
Task 8	Create initial scope, schedule, and cost range estimates that reflect current high level understanding of the effort necessary to deliver the project in order to develop a starting point for managing the project.
Task 9	Refine scope, schedule, and cost range estimates that reflect the latest understanding of the effort necessary to deliver the project in order to manage the project.
Task 10	Continuously use data from changes in resource capacity, project size, and velocity metrics in order to evaluate the estimate to complete.

Domain VI	Problem Detection and Resolution
Task 1	Create an open and safe environment by encouraging conversation and experimentation, in order to surface problems and impediments that are slowing the team down or preventing its ability to deliver value.
Task 2	Identify threats and issues by educating and engaging the team at various points in the project in order to resolve them at the appropriate time and improve processes that caused issues.
Task 3	Ensure issues are resolved by appropriate team members and/or reset expectations in light of issues that cannot be resolved in order to maximize the value delivered.
Task 4	Maintain a visible, monitored, and prioritized list of threats and issues in order to elevate accountability, encourage action, and track ownership and resolution status.
Task 5	Communicate status of threats and issues by maintaining threat list and incorporating activities into backlog of work in order to provide transparency.

Domain VII	Continuous Improvement (Product, Process, People)
Task 1	Tailor and adapt the project process by periodically reviewing and integrating team practices, organizational culture, and delivery goals in order to ensure team effectiveness within established organizational guidelines and norms.
Task 2	Improve team processes by conducting frequent retrospectives and improvement experiments in order to continually enhance the effectiveness of the team, project, and organization.
Task 3	Seek feedback on the product by incremental delivery and frequent demonstrations in order to improve the value of the product.
Task 4	Create an environment of continued learning by providing opportunities for people to develop their skills in order to develop a more productive team of generalizing specialists.
Task 5	Challenge existing process elements by performing a value stream analysis and removing waste in order to increase individual efficiency and team effectiveness.
Task 6	Create systemic improvements by disseminating knowledge and practices across projects and organizational boundaries in order to avoid re-occurrence of identified problems and improve the effectiveness of the organization as a whole.

TOOLS AND TECHNIQUES

Toolkit	*The examples illustrate the breadth of the toolkit, but are **NOT** meant to provide an exhaustive list of all techniques and tools in the toolkit*
Agile Analysis and Design	Including but not limited to: product roadmap user stories/backlog story maps progressive elaboration wireframes chartering personas agile modeling workshops learning cycle collaboration games
Agile Estimation	Including but not limited to: relative sizing/story points/T-shirt sizing wide band Delphi/planning poker affinity estimating ideal time
Communications	Including but not limited to: information radiator team space agile tooling osmotic communications for co-located and/or distributed teams two-way communications (trustworthy, conversation driven) social media–based communication active listening brainstorming feedback methods

Toolkit	*The examples illustrate the breadth of the toolkit, but are **NOT** meant to provide an exhaustive list of all techniques and tools in the toolkit*
Interpersonal skills	Including but not limited to: emotional intelligence collaboration adaptive leadership servant leadership negotiation conflict resolution
Metrics	Including but not limited to: velocity/throughput/productivity cycle time lead time EVM for agile projects defect rate approved iterations work in progress
Planning, Monitoring, and Adapting	Including but not limited to: reviews Kanban board task board timeboxing iteration and release planning variance and trend analysis WIP limits daily stand ups burn down/up charts cumulative flow diagrams backlog grooming/refinement product-feedback loop

Toolkit	*The examples illustrate the breadth of the toolkit, but are **NOT** meant to provide an exhaustive list of all techniques and tools in the toolkit*
Process Improvement	Including but not limited to: Kaizen the Five WHYs retrospectives, intraspectives process tailoring/hybrid models value stream mapping control limits pre-mortem (rule setting, failure analysis) fishbone diagram analysis
Product Quality	Including but not limited to: frequent verification and validation definition of done continuous integration testing, including exploratory and usability
Risk Management	Including but not limited to: risk adjusted backlog risk burn down graphs risk-based spike architectural spike
Value-Based Prioritization	Including but not limited to: ROI/NPV/IRR compliance customer valued prioritization requirements reviews minimal viable product (MVP) minimal marketable feature (MMF) relative prioritization/ranking MoSCoW Kano analysis

KNOWLEDGE AND SKILLS

*Each statement is preceded implicitly by **Knowledge of** or **Skill in***

- Agile values and principles
- Agile frameworks and terminology
- Agile methods and approaches
- Assessing and incorporating community and stakeholder values
- Stakeholder management
- Communication management
- Facilitation methods
- Knowledge sharing/written communication
- Leadership
- Building agile teams
- Team motivation
- Physical and virtual co-location
- Global, cultural, and team diversity
- Training, coaching, and mentoring
- Developmental mastery models (for example, Tuckman, Dreyfus, Shu Ha Ri)
- Self-assessment tools and techniques
- Participatory decision models (for example, convergent, shared collaboration)
- Principles of systems thinking (for example, complex adaptive, chaos)
- Problem solving
- Prioritization
- Incremental delivery
- Agile discovery
- Agile sizing and estimation
- Value based analysis and decomposition
- Process analysis
- Continuous improvement
- Agile hybrid models
- Managing with agile KPIs
- Agile project chartering
- Agile contracting
- Agile project accounting principles
- Regulatory compliance
- PMI's Code of Ethics and Professional Conduct

APPENDIX A: ROLE DELINEATION STUDY (RDS) PROCESS

Defining the Responsibilities

The first step in developing a certification examination is to define the responsibilities of the recipients of the certification. It must be known what the individuals who perform agile activities actually do on the job *before* a content-valid test can be developed. A valid examination draws questions from every important area of the profession and specifies that performance areas (domains) considered more important, critical, and relevant be represented by more questions on the examination. Defining the role of individuals who serve in an agile capacity occurs in two major phases: one in which individuals currently in the role defines the responsibilities and another in which the identified responsibilities are validated on a global scale.

Beginning in 2014, PMI commissioned a global Role Delineation Study (RDS) for the PMI Agile Certified Practitioner (PMI-ACP)® certification. The RDS process was led by a steering committee, representing PMI's Certification Governance structure. A project task force comprised of various roles that perform agile activities was responsible for the conduct of work on the project, with oversight from the steering committee. The task force had global representation and diversity in industry, job position, and experience. Others in agile roles were also responsible for the independent reviews of the work of the task force and piloting the information before surveying a larger sample of agile practitioners.

Study participants, working under the direction of the Professional Education Service (ProExam), reached consensus on the performance domains, a broad category of duties and responsibilities that define the role, as well as the tasks required for competence performance and the knowledge/skills needed to perform those tasks.

Validating the Responsibilities Identified by the Panelists

In order to ensure the validity of the study and content outline developed by the panels, a survey requesting feedback on the panel's work was sent to thousands of agile practitioners throughout the world. PMI received a robust set of responses to the survey, with participants from various countries and representing most major industries. This provided PMI with the statistical significance from which to draw conclusions about the criticality for competent performance and frequency of the tasks. Practitioners also rated the knowledge/skills on how essential they were to the work of an agile practitioner and when they were acquired.

Developing a Plan for the Test

Based on respondent ratings, an examination blueprint, clarifying exactly how many questions from each domain and task should be on the examination, was developed. Those domains and tasks that were rated as most important, critical, and relevant by survey respondents would have the most questions devoted to them on the examination.

Results of the study indicated that the 100 scorable questions on the test should be distributed among the domains as shown in the following table. The remaining 20 questions will be dispersed throughout the domains as pretest questions and will not count in the candidates'

scores. The pretest items allow PMI to monitor the question performance better, prior to including the questions in the final databank of test questions.

Domain	Percentage of Items on Test
Domain I. Agile Principles and Mindset	16%
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