PMI-CP™

Construction Professional in Built Environment Projects (PMI-CP)™

Exam Content Outline

Project Management Institute

Construction Professional in Built Environment Projects (PMI-CP)™ Examination Content Outline

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INTRODUCTION

The Project Management Institute (PMI) offers a professional certification for construction and built environment professionals known as the Construction Professional in Built Environment Projects (PMI-CP)™. 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 credentialing examinations are directed to use a Role Delineation Study (RDS) or Job Task Analysis (JTA) as the basis for the creation of the examination. This process utilizes knowledge and task-driven guidelines to assess the practitioner's competence, and determine the levels 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 a construction professional.

PMI conducted a Job Task Analysis with a global audience of expert panel members which produced the content of the built environment e-learning curriculum, the basis for the certification exam. This ensures the validity and relevance of the PMI-CP examination. Validation assures the outcome of the exam is, in fact, measuring and evaluating appropriately the specific knowledge and skills required to function as a construction professional. Thus, the Job Task Analysis guarantees that each examination validly measures all elements of the construction profession in terms of real settings.

PMI-CP 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.

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[1] PUBLISHED JOINTLY BY THE AMERICAN EDUCATION RESEARCH ASSOCIATION, NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION, AND AMERICAN PSYCHOLOGICAL ASSOCIATION.

The PMI-CP examination is a vital part of the activities leading to earning a professional certification, thus it is imperative that the PMI-CP examination reflect accurately the practices of the construction professional. All the questions on the examination have been written and extensively reviewed by qualified construction professionals who hold PMI's PMP certification and are aligned with industry best practices. These questions are mapped against the PMI-CP *Examination Content Outline* to ensure that an appropriate number of questions are in place for a valid examination.

Finally, there are noticeable differences between this PMI-CP Examination *Content Outline* and *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* – Seventh Edition. While there are some commonalities, it is important to note that the volunteer taskforce involved in the study described previously were not bound by the *PMBOK® Guide*. The taskforce members were charged with outlining critical job tasks of individuals who lead and direct construction and built environment projects based on their experience and pertinent resources.

EXAM CONTENT OUTLINE

The following table identifies the proportion of questions from each domain that will appear on the examination.

Domain	Percentage of Items on Test
I. Contracts Management	51%
II. Stakeholder Engagement	15%
III. Strategy and Scope Management	29%
IV. Project Governance	5%
Total	**100%**

IMPORTANT NOTE: THE RESEARCH CONDUCTED THROUGH THE JOB TASK ANALYSIS VALIDATED THAT TODAY'S CONSTRUCTION AND BUILT ENVIRONMENT PROFESSIONALS WORK IN A VARIETY OF PROJECT ENVIRONMENTS AND UTILIZE DIFFERENT PROJECT APPROACHES. ACCORDINGLY, THE PMI-CP CERTIFICATION WILL BE REFLECTIVE OF THIS AND WILL INCORPORATE APPROACHES ACROSS THE VALUE DELIVERY SPECTRUM. THESE APPROACHES WILL BE FOUND THROUGHOUT THE FOUR DOMAIN AREAS LISTED ABOVE AND ARE NOT ISOLATED TO ANY PARTICULAR DOMAIN OR TASK

DOMAINS, TASKS, AND ENABLERS

In this document you will find the structure for the PMI-CP Examination Content Outline. Based on feedback from customers and stakeholders, we have worked on simplifying the format so that the PMI-CP Examination Content Outline is easier to understand and interpret.

On the following pages you will find the domains, tasks, and enablers as defined by the Role Delineation Study.

- **Domain:** Defined as the high-level knowledge area that is essential to the practice of construction and built environment project management.
- **Tasks:** The underlying responsibilities of the construction professional within each domain area.
- **Enablers:** Illustrative examples of the work associated with the task. Please note that enablers are not meant to be an exhaustive list but rather offer a few examples to help demonstrate what the task encompasses.

Following is an example of the new task structure:

Take statement → **Manage conflict**

Enablers

- Interpret the source and stage of the conflict
- Analyze the context for the conflict
- Evaluate/recommend/reconcile the appropriate conflict resolution solution

Domain I	Contracts Management—51%
Task 1	**Manage risks and the risk process for Construction and Built Environment Projects** • Recognize positive risk and use it to improve project outcomes • Manage the risk process throughout the project and gain input from the required stakeholders • Apply the different risk classifications appropriately • Identify and evaluate risks for better allocation, avoidance, and management of risks • Manage the risk prioritization process during Front End Planning and conduct frequent reviews to the prioritization matrix • Identify and overcome the barriers that built environment companies face when implementing innovative solutions • Determine the impact and risk of technology decisions or lack thereof, on the project throughout the lifecycle and apply corrective actions
Task 2	**Determine how to apply risk tools appropriately** • Use the Integrated Project Risk Assessment (IPRA) tool to improve how risk are managed • Apply risk management tools and techniques to drive a better risk process (Monte Carlo simulations, probabilistic risk management techniques, and risk registers) • Mobilize a risk management framework process at the project outset
Task 3	**Manage the claims process** • Use lessons learned and previous project data to identify problematic areas on projects that result in claims • Recognize how contract types and delivery methods selected impact the frequency of claims • Utilize the claims process and key intervention points to reach early resolution • Distinguish the difference between change/variation orders and claims • Apply best practices to prevent claims and disputes (i.e. FEP, DRB, Documentation, communication, etc.) • Utilize the risk management framework effectively to reduce claims • Determine the root cause of claims and areas that require greater attention on the front end of projects • Apply the different dispute resolution techniques available to be used

Domain I	Contracts Management—51%
Task 4	**Mange the contract lifecycle effectively** • Oversee the full contract lifecycle from discovery to close out • Utilize Lean Integrated Project Delivery and IFOA to help resolve some of the industries contracting pain • Utilize important clauses present in built environment contracts to support project delivery • Advise senior stakeholders on the delivery method and contract structure that best fits the needs of the project • Utilize the various delivery methods and contract structures available for built environment project covering risk apportionment, roles and responsibilities, and project delivery • Apply innovation & technology requirements up-front in the tendering process (RFI/ RFP) • Recognize the potential for communication gaps caused by contractual arrangements found in capital projects • Apply knowledge to support senior leadership throughout the contract lifecycle
Task 5	**Plan the Materials and Procurement Management processes accurately** • Plan and trace the cash flow of materials, its controls and debt service to improve planning and cost accuracy • Implement the end-to-end materials management process with all of its stages: Strategy, Planning & Engineering, Ordering, Delivery, Storing, Managing Goods, Closing & Handing Over, and Managing Waste • Leverage the new and emerging industry trends such as prefabicates or modularization • Assess and determine the impact of critical path and lead times in materials management • Recognize the different stages of the materials lifecycle and utilize the best practices • Efficiently plan all stages of the material delivery process • Apply methods for quantity planning, budgeting, and estimation

Domain I	Contracts Management—51%
Task 6	**Perform the Materials and Procurement Management activities accurately** • Identify the pitfalls involved in on-site and off-site handling, transportation, and tracking of materials • Apply the benefits of the economies of scale role in managing procurement and supply chain processes • Apply waste management practices to a project and integrate materials and suppliers with the schedule • Apply best practices for ordering and managing materials in the project construction phase • Apply methods for inspecting damaged goods, stock control, storage, and warehouse placement
Task 7	**Implement the Interface Management process efficiently** • Establish and plan all the interface points (IPs) between the different packages • Classify the different interfaces found in mega projects • Recognize and use the industry leading frameworks and systems for implementing Interface Management • Apply and design effective Interface Management practices • Identify and apply the important principles and proper timing to guide the implementation of Interface Management throughout the project life cycle • Apply the defined skills needed to effectively lead an interface management plan and monitor this effectively throughout the project • Develop strong communication skills, relationship management skills, and negotiation skills • Utilize the common language, definitions, and elements of Interface Management

Domain II	Stakeholder Engagement—15%
Task 1	**Utilize Communication Tools Appropriately to engage stakeholders and maintain proper communication** • Utilize PMIS to improve communication and project decisions • Incorporate a central communication platform for the project • Utilize Obeya/Big Room to enhance program activities • Recognize the common pitfalls of Obeya/Big Room • Apply Commitment based Management (CbM) to your own teams and across projects to drive effective outcomes • Utilize the Compass tool to highlight communication deficiencies • Assess data collected to infer meaningful insights and take action
Task 2	**Prevent communication issues from occuring and ensure stakeholders are engaged** • Apply approaches to increase stakeholder buy in and alignment from the project outset • Develop an effective communication strategy to ensure all project communication needs are identified and met • Craft messaging that drives greater understanding for tailored audiences • Utilize nuanced communication methods to engage multiple parties on a deeper level • Prevent the effects of poor communication in capital projects from a completion and financial prospective
Task 3	**Mitigate communication issues effectively as they emerge** • Implement feedback loops to highlight gaps and introduce changes to resolve communication gaps • Apply approaches to overcome resistance and secure support through high impact communication • Develop action plans to resolve communication gaps • Identify and address culture issues as they emerge

Domain II	Stakeholder Engagement—15%
Task 4	**Manage stakeholders effectively** • Cooperate with project stakeholders to identify and select the best technology solutions • Recognize what needs to be done, identify the appropriate specialists, and bring the required skills in to do the work • Support the project team when implementing technology • Identify and assess stakeholders to help establish an effective communication strategy • Recognize the rule of culture and the impact on communication with stakeholders • Make appropriate project team organizational recommendations for AWP implementation • Recognize how culture impacts innovation

Domain III	Strategy and Scope Management—29%
Task 1	**Manage Scope Effectively** • Determine the factors to be considered when developing a technology implementation plan • Define scope and drive projects by focusing on project outcomes or missions • Implement scope revisions in order to achieve an accurate and mature project scope • Identify the different ways to innovate (process innovation, product and services innovation, project delivery innovation) and ensure they lead to better project outcomes during implementation • Select the correct metrics and KPIs • Apply Agile practices in construction • Apply concepts including constraint management and continuous improvement appropriately • Recognize and handle problematic Hot Spots within construction and commissioning phases • Build a successful performance management strategy
Task 2	**Implement and Manage the Change Order Process effectively and deliver project benefits and value** • Create a robust change order process • Finalize the change process in the appropriate part of the project lifecycle • Design agile processes to deal with change orders in an efficient and rapid way • Recognize the benefits and downfalls to using technology to manage scope and change orders • Evaluate all scope changes in relation to the core outcomes
Task 3	**Develop and apply methods, tools and techniques to develop and manage project scope** • Apply a decision-making framework for technology implementation • Use scope evaluation tools to identify gaps in scope • Apply scope management tools as a means of managing and pivoting scope (value engineering and cost benefit analysis) • Establish an effective project measurement reporting process • Implement engineering (technical design deliverable) as a critical element of the planning process

Domain III	Strategy and Scope Management—29%
Task 4	**Implement the Advanced Work Packaging model and tools effectively** • Recognize the Advanced Work Packaging (AWP) implementation model and apply it appropriately across the project lifecycle • Recognize and implement the different stages, process steps, activities, and deliverables of the AWP implementation model • Utilize AWP tools, including templates and checklists appropriately • Apply the principles of Lean and the Last Planner System to the planning of projects • Apply the Commissioning and Startup (CSU) activity model and its tools correctly • Utilize the 5 Connect conversations correctly
Task 5	**Implement and utilize innovative planning tools on projects, adhering to best practices** • Apply Lean Deployment Planning Guide core principles • Recommend latest technologies and their value potential to drive productivity and its efficiency within projects • Demonstrate the importance of integrated technology platforms to realize the benefits of technology solutions to drive collaboration • Apply the methods to support innovation on projects

Domain IV	Project Governance—5%
Task 1	**Implement governance models to drive project outcomes** • Develop governance structures for capital projects • Apply project structures, appropriate practices and leadership tone to foster innovation
Task 2	**Set up scope governance structures and practices on built environment projects**
Task 3	**Leverage scope governance structures to protect project scope and foster efficient decision making**

PMI-CP Application and Payment

PMI-CP Eligibility Requirements

To be eligible for the PMI-CP certification, you must meet certain professional experience requirements.

Professional Experience
Minimum of 3 years of experience in the construction/built environment field.
The experience does not have to be in any supervisory or leadership role.
The experience should be within the last 10 years.

How to Record Your Experience on the Application

Use the experience verification section of the online application to record your experience working in the construction/built environment field. The experience does not necessarily have to be paid work, but it does need to be in a professional setting. Activities such as school projects or planning personal events would not qualify. All work experience must be recorded individually regardless of the number of work experience segments you include.

PMI strives to process applications in a timely manner. The processing time for applications submitted online is 5 calendar days. This processing timeline does not apply if your application has been selected for PMI's audit process (refer to the PMI Audit Process section in the handbook for more details).

PMI-CP Certification Fees

The fee for obtaining the PMI-CP Certification is $499 USD but may be subject to membership and regional pricing. Membership is NOT required to obtain the PMI-CP. Initial examination fees must be paid after applications have been approved before you can schedule your examination.

If you need to retake the exam, and your eligibility period is still current, you may do so for a substantial discount that may be subject to membership and regional pricing. Additionally, once an examination date is confirmed and scheduled, you may be subject to cancellation or no-show fees.

Lastly, renewing your PMI-CP Certification will require a payment that may be based on membership and regional pricing.

We currently support USD, Euros, BRL, and INR currencies.

PMI accepts the following payment methods: credit card and wire transfer

Please note that reexamination fees are waived for candidates who have had their exam scores invalidated solely due to data forensics evidence.

PMI-CP Examination Information

The PMI-CP examination is comprised of 170 questions. Of the 170 questions, 20 are considered pretest questions. Pretest questions do not affect the score and are used in examinations as an effective and legitimate way to test the validity of future examination questions. All questions are randomly placed throughout the examination.

No. of Scored Questions	No. of Pretest (Unscored) Questions	No. of Pretest (Unscored) Questions
150	20	170

The allotted time to complete the center-based examination is 230 minutes.

Alloted Examination Time
230 Minutes

It may take you less than the allotted time to complete the examination.

For the **PMI-CP** exam, there are two 10-minute breaks in the exam. The first will appear after you complete questions 1- 57 and review all of your answers. The second break will appear after you have completed question 114 and confirmed that you have reviewed all of your answers. Please note, once you review your responses and start your break, you will not be able to return to the questions from the previous section of the exam.

When you are signed back in after each break, you will have the remaining allotted time to complete the remaining section(s). In total, you will have 230 minutes to respond to 170 questions.

The examination is **preceded by a tutorial and followed by a survey**, both of which are optional, and take 5-15 minutes to complete. The time used to complete the tutorial and survey is not included in the examination time of 230 minutes.

Retaking the Exam

If you do not pass your first exam attempt, we encourage you to continue your study and retake the exam. You may take the examination up to three times within your one-year eligibility period. After three attempts, you must wait one year from the date of the last examination before you reapply for the certification. This policy is designed to uphold exam security and reduce the overexposure of examination questions to individual candidates. However, during this year you are welcome to apply for any other PMI certification.

If your one-year eligibility period expires without you passing the examination, you must reapply for the certification.

POWERING THE PROJECT ECONOMY™

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