| **#** | **COMPETENCY** | **FULFILLMENT** PMCDP course, equivalent training, experience | **JUSTIFICATION**  2,000 characters max | **VERIFICATION METHOD**  Course certificate, professional license, etc. |
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| **2.1** | **General Project Management** |  |  |  |
| 2.1.1 | The certification candidate must demonstrate **working-level** knowledge of systems engineering. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the Project Management Career Development Program (PMCDP) core course *Advanced Concepts in Project Management*; OR 2) the successful completion of an equivalent course or training; OR 3) a description of the candidate's demonstrated equivalent experience.  The justification of fulfillment through equivalent experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * The systems engineering model as used in project management * Functional allocation and functional requirements definition as used in systems engineering * Design reviews (conceptual, preliminary, critical, system, etc.) * Trade-off analyses * Configuration management from a systems engineering perspective |  |  |  |
| 2.1.2 | The certification candidate must demonstrate **working-level** knowledge in pre-project planning. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Project Management Simulation*; OR 2) the successful completion of an equivalent course or training; OR 3) a description of the candidate's demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate all of the following knowledge examples covered in the PMCDP course:   * The use of up-front project definition in developing project scope * The use of stakeholder alignment techniques * The use of the Project Definition Rating Index |  |  |  |
| 2.1.3 | The certification candidate must demonstrate **working-level** knowledge of facilitation techniques and conflict resolution methods. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Leadership Through Effective Communication*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate the following knowledge examples covered in the PMCDP course:   * Problem solving and conflict resolution * Facilitation techniques and facilitating discussions/meetings   **Note:** Applicants who have successfully completed *Project Leadership* prior to January 1, 2013, will have satisfied this competency. |  |  |  |
| **2.2** | **Leadership/Team Building** |  |  |  |
| 2.2.1 | The certification candidate must demonstrate **working-level** knowledge of leadership principles. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Leadership Through Effective Communication*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Developing and communicating clear goals and vision * Recognizing individual and team performance * Using effective leadership styles for different situations * Leading integrated project teams * Developing and implementing operating procedures and systems * Working with external project stakeholders   **Note:** Applicants who have successfully completed *Project Leadership* prior to January 1, 2013, will have satisfied this competency. |  |  |  |
| 2.2.2 | The certification candidate must demonstrate **working-level** knowledge of motivational techniques. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Leadership Through Effective Communication*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Using motivational techniques * Assigning and evaluating work * Identifying individual team members’ strengths and weaknesses   **Note:** Applicants who have successfully completed *Project Leadership* prior to January 1, 2013, will have satisfied this competency. |  |  |  |
| 2.2.3 | The certification candidate must demonstrate **working-level** knowledge of integrated project team building. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Leadership Through Effective Communication*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Building consensus * Developing trust and confidence among team members * Organizing teams * Effectively planning and managing multiple tasks among team members * Monitoring and tracking results * Assigning work   **Note:** Applicants who have successfully completed *Project Leadership* prior to January 1, 2013, will have satisfied this competency. |  |  |  |
| **2.3** | **Scope Management** |  |  |  |
| 2.3.1 | The certification candidate must demonstrate **working-level** knowledge of the techniques used in scope management, baseline development, and work breakdown structure (WBS) development. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Scope Management/Baseline Development*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Using baseline development techniques * Developing and decomposing a WBS * Identifying requirements as functional or non-functional and discretionary or non-discretionary * Prioritizing requirements * Recognizing and controlling scope changes |  |  |  |
| **2.4** | **Communication Management** |  |  |  |
| 2.4.1 | The certification candidate must demonstrate a **working-level** knowledge of effective briefing techniques. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Leadership Through Effective Communication;* OR 2) the successful completion of equivalent courses or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP courses:   * Making formal presentations to senior management * Communicating with diverse audiences * Making persuasive communications with well-founded convincing arguments * Communicating with multiple types of stakeholders   **Note:** Applicants who have successfully completed *Effective* *Program and Project Communication* prior to January 1, 2013, will have satisfied this competency. |  |  |  |
| **2.5** | **Quality/Safety Management** |  |  |  |
| 2.5.1 | The certification candidate must demonstrate **working-level** knowledge of quality management. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Advanced Concepts in Project Management;* OR 2) a description of the candidate's demonstrated equivalent experience (for this competency, there is no equivalent class to *Advanced Concepts in Project Management* that covers the same topics, hence the PMCDP does not permit applicants to claim alternative training).  The justification of fulfillment through equivalent experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Quality Assurance (QA) and Quality Control plans and procedures development and interpretation * Systems and component testing and inspection processes * The requirements of Department of Energy (DOE) Order 414.1D, Quality Assurance, and 10 CFR 830.120 Nuclear Safety Management * Time quality management principles * The quality auditing process |  |  |  |
| **2.6** | **Cost Management** |  |  |  |
| 2.6.1 | The certification candidate must demonstrate **working-level** knowledge of cost and schedule estimating processes. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Cost and Schedule Estimation*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Cost Estimate Initiation – Using Government Accountability Office (GAO) Cost Estimation Guide Steps to provide a framework for estimate development * Scope Estimate – WBS and the parameters; ground rules and assumptions needed for estimate development * Estimate Data Sources – Estimate tools, data sources and the collection, analysis and use of data * Parametric Cost Estimate Development – Cost estimating methods and procedures for parametric type estimating * Detailed Cost Estimate Development – Cost estimating methods and procedures for detailed, bottom-up estimating * Schedule Development – Techniques for development of project schedules * Cost-Schedule Integration – How cost estimates and schedules are integrated and used together within DOE * Estimate Review and Sensitivity Analysis – Approaches used to review cost estimates developed by contractors and others, including sensitivity analysis of the estimate * Risk and Uncertainty Analysis – Principles and techniques; management reserve, contingency, and how both are calculated/determined * Comprehensive, complete and accurate estimate documentation * Clear, concise and useful presentation of cost estimates to management and stakeholders * Estimate Update and Maintenance – Issues encountered after a cost estimate is developed and approved, including subsequent revision and updates * Development and Use of Government Estimates – DOE requirements and use of independent estimates and estimate reviews * Life Cycle Cost Estimates and Analysis – How they are developed and used |  |  |  |
| **2.7** | **Time Management** |  |  |  |
| 2.7.1 | The certification candidate must demonstrate **working-level** knowledge of automated scheduling software. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP core course *Project Management Simulation*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate the following knowledge examples covered in the PMCDP course:   * The use of automated scheduling tools * The use of schedule analysis, crashing, and resource-leveling |  |  |  |
| **2.11** | **Training/Electives:** Successfully complete at least two electives or demonstrate equivalent experience |  |  |  |
| 2.11.1 | The certification candidate must demonstrate **working-level** knowledge of value management. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP elective course *Value Management*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * DOE policy on value management * The limited impact of the FAR requirements on DOE value management studies * The value management assessment requirements for critical decision (CD)-1 approval * Team composition and the importance of value management experience * The advantages of using value management early in the project lifecycle * The use of value management for re-examining projects with a view to reducing total project costs * The value engineering/vale management concepts, principles, definitions, and the various legal and regulatory drivers that now mandate its application * Value management team development and leadership with a focus on the value management process * The 6-step value management job plan * Contractual aspects * The project life cycle and function analysis in the value management process |  |  |  |
| 2.11.2 | The certification candidate must demonstrate **working-level** knowledge of DOE environmental regulations. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP elective course *Environmental Laws and Regulations;* OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate the following knowledge examples covered in the PMCDP course:   * Current DOE environmental policies and implementing guides, as well as federal environmental regulations to include:   o National Environmental Policy Act (NEPA)  o Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)  o Resource Conservation and Recovery Act (RCRA)  o Clean Water Act (CWA)  o Clean Air Act (CAA)  o Toxic Substances Control Act (TSCA)  o Occupational Safety and Health Act (OSHA) |  |  |  |
| 2.11.3 | The certification candidate must demonstrate **working-level** knowledge of the federal budget process. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP elective course *Federal Budgeting Process in DOE;* OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * The budget formulation process * The budget execution process * The impact of the Government Performance and Results Act (GPRA) on the budget process * The implementation of DOE Order 135.1A, Budget Execution - Funds Distribution and Control * Congressional and Office of Management and Budget (OMB) roles and requirements in budget formulation * Strategies/techniques for responding to OMB and Congressional inquiries, questions and answers, etc. |  |  |  |
| 2.11.4 | The certification candidate must demonstrate **working-level** knowledge of real property life-cycle asset management. Fulfillment of this competency may be achieved through the following: 1) the successful completion of the PMCDP elective course *Real Property Asset Management*; OR 2) the successful completion of an equivalent course or training; OR 3) demonstrated equivalent experience.  The justification of fulfillment through equivalent training or experience requires candidates to demonstrate a majority of the following knowledge examples covered in the PMCDP course:   * Management of federal real property through a systematic, integrated approach * Real property planning * Ten-year site plans * Real property status reporting requirements and mechanisms * Value management * Performance management and DOE and contractor role and responsibilities for real property asset management * Requirements contained in the Executive Order, Federal Real Property Asset Management (EO 13327 - 69 r. Reg. 589, February 4, 2004) which places greater visibility on management of real property assets |  |  |  |
| **2.12** | **Work and Developmental Activities** |  |  |  |
| 2.12.1 | Work for a minimum of two years as a Level I FPD (or equivalent) ORsatisfy the following equivalencies (2.12.1.1, 2.12.1.2, or 2.12.1.3). |  |  |  |
| 2.12.1.1 | Equivalency: Possess a combination of one year of Level I FPD experience (or equivalent) and one year of Deputy FPD experience.  A combination of FPD and Deputy FPD experience for two continuous years on the same active, post CD-3 Level II or higher project is acceptable as long as the FPD experience accounts for a minimum of 12 months of that two-year period. |  |  |  |
| 2.12.1.2 | Equivalency: Work for one year as a Level I FPD (or equivalent), and serve one year as a functional manager on a Level IV project (i.e., engineering manager, procurement manager, construction manager, environmental compliance manager, project controls manager, licensing/quality assurance manager). |  |  |  |
| 2.12.1.3 | Equivalency: Work for one year as a Level I FPD (or equivalent), and serve one year as a supervisor of FPDs. Typical roles and responsibilities/activities of a formally documented supervisor of FPDs:   * Assigns FPDs who manage a portfolio of Capital Asset projects > $20M and having an aggregate total project cost (TPC) greater than $100 million * Reviews key project documentation such as project execution plans (PEPs) and Acquisition Strategy * Participates in Quarterly Performance Reviews and Energy System Acquisition Advisory Board (ESAAB) presentations * Concurs in Level II or higher Baseline Change Proposals * Provides recommendations to the Acquisition Executive (AE) on FPD project assignments * Prepares Supervisor's Performance Management Plan which contains critical elements and standards from the projects for which his/her subordinate FPDs are responsible (in accordance with the Deputy Secretary's memorandum dated 12 December 2004) * Demonstrates KSAs related to DOE project management principles and practices by recent work experience or recent completion of PMCDP training courses |  |  |  |
| 2.12.2 | One year of experience as a supervisor or as a team leader. Typical roles and responsibilities/activities while serving as a supervisor or a team leader are assignment and evaluation of the work of professional employees. |  |  |  |
| 2.12.3 | One year of project management experience serving as a FPD (or equivalent) or project engineer on a post CD-3 phase project, or serve one year with an Architecture/Engineering firm or DOE Management & Operating / Management & Integration (M&I) contractor on a post CD-3 project. |  |  |  |
| 2.12.4 | The certification candidate must demonstrate two years (minimum) of experience within the past five years prior to the certification application date serving in project management roles in support of construction, experimental equipment, or environmental management capital asset projects. Expertise should include knowledge and skill from participating in most of the activities listed under competency 1.12.2. |  |  |  |
| 2.13 | **Behavioral** |  |  |  |
| 2.13.1 | **Leading Change**. Certification candidates must demonstrate **working-level** knowledge of leading change by describing how they led a team to develop and implement an innovative solution to a project challenge. |  | • Challenge/Issue:  • What I Did:  • Benefits to Project:  • Outcome/Result: |  |
| 2.13.2 | **Leading People.** Certification candidates must demonstrate **working-level** knowledge of leading people by describing how they build and maintain successful project management business relationships. |  | • Challenge/Issue:  • What I Did:  • Benefits to Project:  • Outcome/Result: |  |
| 2.13.3 | **Producing Results.** Certification candidates must demonstrate **working-level** competence in producing results by describing how they turned a potential organization or policy problem into an opportunity. |  | • Challenge/Issue:  • What I Did:  • Benefits to Project:  • Outcome/Result: |  |
| 2.13.4 | **Business Acumen**. Certification candidates must demonstrate **working-level** competence in business acumen by describing how they solved a potential financial or human capital deficit. |  | • Challenge/Issue:  • What I Did:  • Benefits to Project:  • Outcome/Result: |  |
| 2.13.5 | **Building Coalitions.** Certification candidates must demonstrate **working-level** competence in building coalitions by describing how they motivated project team members with conflicting views to work together to solve a problem. |  | • Challenge/Issue:  • What I Did:  • Benefits to Project:  • Outcome/Result: |  |