

# *Project Management Career Development Program*

## Course Catalog



2012

# PMCDP Curriculum Learning Map – effective January 2012

## Key

Purple outline = change  
Gold outline = addition

1. Participate in a peer review
2. Lead a peer review
3. Course from the PMCDP curriculum not previously taken, not taken within 3 years, or not taken since the course underwent a major revision
4. Developmental course of FPD's choosing

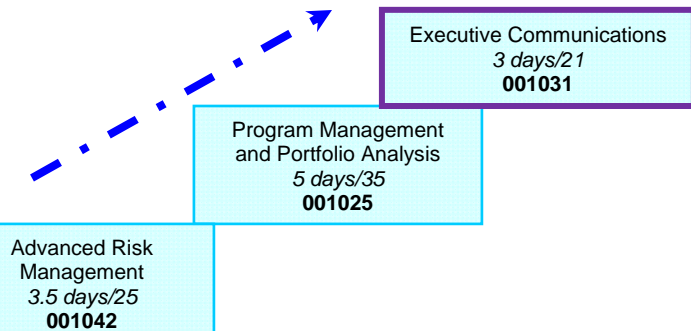
Level 4

Level 3

Level 2

Level 1

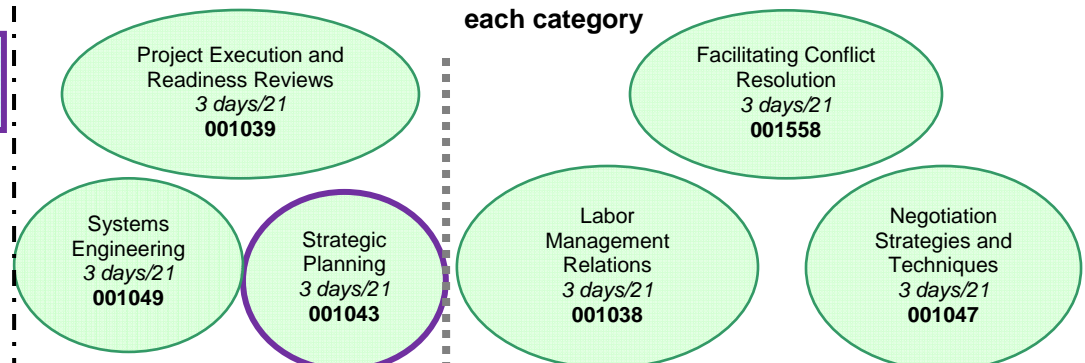
### Level 3 Core Courses



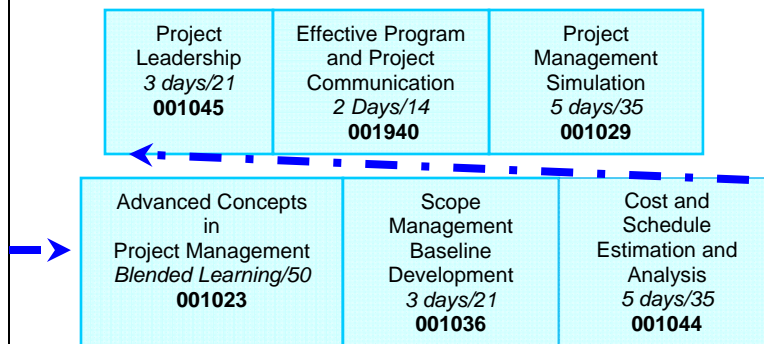
### Technical

### Level 3 Electives — Select one from each category

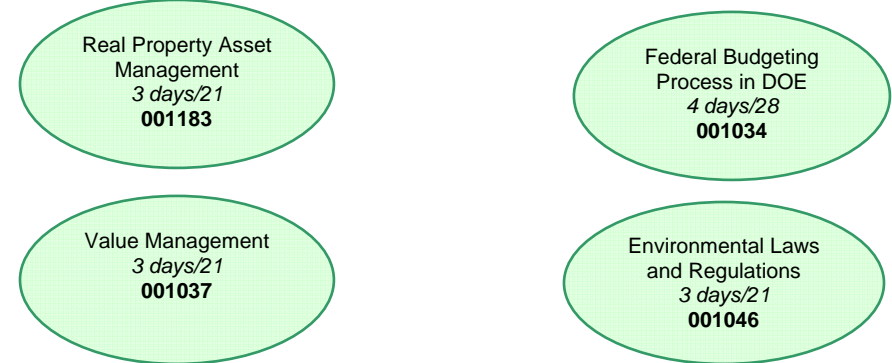
### Communication



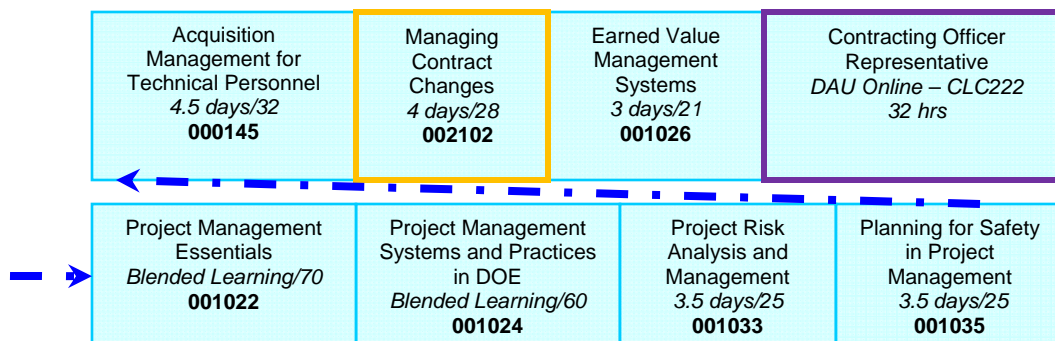
### Level 2 Core Courses



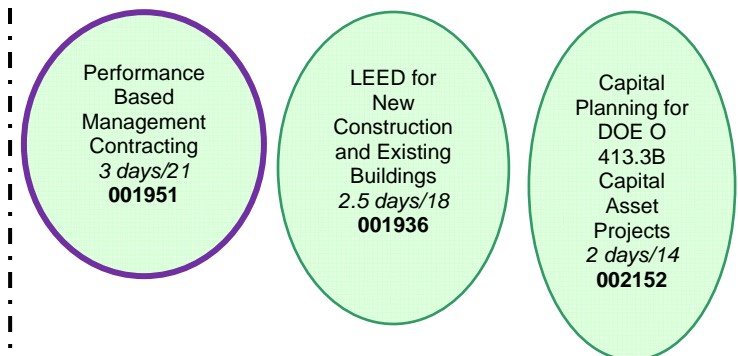
### Level 2 Electives — Select Two



### Level 1 Core Courses



### Level 1 Electives — Select One



Level 1 Notes: PM Essentials is waived with current PMP® Certification. COR may be taken in classroom or online through DAU.

# Table of Contents

## Level One Courses

Project Management Essentials	4
Project Management Systems and Practices in DOE	6
Project Risk Analysis and Management	9
Planning for Safety in Project Management	11
Acquisition Management for Technical Personnel	13
Managing Contract Changes	15
Earned Value Management Systems	17
Contracting Officers Representative (COR) Online Training	18
Performance-Based Management Contracting	19
LEED® for New Construction and Existing Buildings	21
Capital Planning for DOE O 413.3B Capital Asset Projects	22

## Level Two Courses

Advanced Concepts in Project Management	23
Scope Management Baseline Development	25
Cost and Schedule Estimation and Analysis	27
Project Leadership	29
Effective Program and Project Communication	31
Project Management Simulation	32
Value Management	33
Federal Budget Process in DOE	35
Real Property Asset Management (RPAM)	37
Environmental Laws and Regulations	39

## Level Three Courses

Advanced Risk Management	41
Program Management and Portfolio Analysis	43
Executive Communications	44
Project Execution and Readiness Reviews	46
Systems Engineering	48
Strategic Planning	50
Negotiation Strategies and Techniques	52
Labor Management Relations	53
Facilitating Conflict Resolution	54



# Project Management Essentials

## Course Description:

Project Management Essentials is a “hybrid” learning environment course – a combination of traditional lecture, an intense on-site workshop, classroom discussions at regional sites, case studies, and video-teleconferences (VTCs). This course will cover the primary concepts of project management at an intermediate level of expertise, and introduce best practices in project management from DOE, other Federal agencies, and the private sector. Subsequent course and work-related experience will build upon this to establish working and expert levels of project management ability.

The course focuses on four major aspects of project management: the basic project management framework, project planning, project execution, and effective leadership. The primary source material for this course comes from the Project Management Institute’s Project Management Body of Knowledge (PMBOK® Guide) Fourth edition. Where specific examples of project management processes or policies are provided, the course will use relevant DOE examples.

## Course Objectives:

- Familiarity with the discipline of project management to include the project management framework, risk management, strategic planning, and project funding in the Federal government.
- Understanding of project planning to include initiation, acquisition strategy, baseline development and procurement management
- Working-level knowledge of teambuilding and effective leadership techniques
- Understanding of project execution processes to include quality management, change management, project control, and performance management and reporting

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1 Federal Project Directors. Members of Integrated Project Teams (IPTs).

Pre-requisite: None

Delivery Method: Blended Learning, 8 weeks (eleven 2-hour video-teleconferences, one 3-day onsite)

CEUs: 70

CHRIS Code: 001022

PMI Number (PDUs): REP #2241 – PM0007 (70 PDUs)

## Topics addressed in this course:

- Team building methods and recognizing individual and team performance
- Results/goal oriented work processes
- Team leadership and coordination of team activities
- Consensus building and conflict resolution techniques
- Trust and confidence development among team members
- Effective leadership models and their application
- Project mission need determinations
- Conceptual and detailed design documentation development and review
- WBS development
- Project scope baseline development techniques and their application
- Project alternatives development and analysis
- Scope change management
- Configuration management
- Interpersonal relationship development
- Team development
- Effective team leadership
- Effective written and oral communication techniques
- Lifecycle estimating techniques and methodologies
- The principles of time value of money
- Basic cost estimating techniques, including parametric estimating, estimating by analogy, bottom up estimating, and activity-based costing
- Contingency estimation and usage
- The principles and use of range estimating
- Procurement guidelines and performance regulations
- The principles of earned value management
- Project schedule networks, including the definition of activity durations, and logic
- Critical paths and other scheduling terms
- Resource allocation
- Methods for reporting and displaying schedule information

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of all sessions. Attendance at the full three-day onsite is mandatory. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.
3. This course is waived with PMP® certification.





# Project Management Systems and Practices in DOE

## Course Description:

Project Management Systems and Practices in DOE is a “hybrid” learning environment course – a combination of traditional lecture, an intense on-site workshop, classroom discussions at regional sites, case studies, and video-tele conferences (VTCs). It is reading, thought, and analysis-heavy. This course is not a general overview of project management. Participants must have taken Project Management Essentials (or equivalent) before signing up for this course.

This course focuses on DOE’s systems and practices for project management and provides participants with a detailed knowledge of the critical decision (CD) process, including how to manage it, as required by DOE Capital Assets directives. The course is organized around and primarily focused on DOE O 413.3B and the accompanying Guide series. Additionally, the course articulates how the critical decision process interfaces with the budget process, project schedule, and key elements of project management at DOE.

## Course Objectives:

- Working knowledge of DOE FPD roles and responsibilities, and project management ethics
- Understanding of DOE HQ-field relationship and Lead Program Secretarial Officers (LPSO’s)
- Familiarity with NEPA and other environment, safety and health laws
- Expert knowledge of DOE O 413.3B principles and requirements
- Working level knowledge of the Federal budget process and the FPD role in it

## Course Information

### Level 1 Core Course

#### Target Audience: Prospective Level 1

Federal Project Directors. Members of Integrated Project Teams (IPTs) who currently work in a project management position

#### Pre-requisite: Project Management

Essentials, or PMP® Certified

#### Course Delivery method and Length:

Blended Learning, 7 weeks (seven 2-hour video-teleconferences, one 3-day onsite)

CEUs: 60

CHRIS Code: 001024

PMI Number (PDUs): REP #2241 -

PM0008 (60 PDUs)

## Topics addressed in this course:

- The FPD's responsibilities relative to the Management & Operating (M&O) or Management & Integrating (M&I) contractor
- The purpose and operation of the integrated project team (IPT)
- Ethics requirements for FPDs
- Department of Energy (DOE) Headquarters-Field relationships and Lead Program Secretarial Officers (LPSOs)
- Roles and responsibilities associated with managing federal projects
- The purpose and content of each of the following environmental documents and the impact on DOE projects:
  - o Environmental Impact Statements
  - o Environmental Assessments
  - o Safety Analysis
  - o Categorical Exclusions
  - o Finding of No Significant Impact
- The role of the FPD in the National Environmental Protection Act (NEPA) process
- The requirements of the following laws as they impact DOE projects:
  - o 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)
- The purpose, scope, and application of DOE Order 413.3B and the DOE 413.3 Guides; this includes the definition of key terms, essential elements, and personnel responsibilities and authorities
- The source documents necessary to effectively manage the project
- The critical decision process including the roles, responsibilities, and authorities for critical decisions
- The procedures for determining contractor compliance with the requirements of DOE Order 413.3B and with the DOE Project Management Guides
- The role of the participants in the Energy Systems Acquisition Advisory Board (ESAAB) process, the steps in the process, and the associated schedules
- The FPD's role in baseline development, change control, and project status reporting, including Quarterly Project Reviews

*Continued on next page...*

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of all sessions. Attendance at the full three-day onsite is mandatory. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Project Management Systems and Practices in DOE (continued)

### More topics addressed in this course:

- The role of the FPD in the performance of independent reviews (headquarters, external reviews, internal assessments, Government Accountability Office [GAO] and Inspector General reviews)
- General engineering or scientific principles required to perform DOE projects
- The purpose, use, and content of the:
  - o Project Acquisition Strategy
  - o Project Execution Plan (PEP)
- The earned value management systems (EVMS) and project reporting requirements in DOE Order 413.3B
- The steps to integrate safety into the business case
- The steps to integrate safety management into the critical decision (CD) process
- The relationship between DOE Headquarters-Field and LPSOs
- The role of the FPD in implementing DOE policy on value management
- The requirement for a value management assessment prior to CD-1 approval
- Participation in the development and execution of the acceptance test plan
- Acceptance of deliverables against performance metrics standards
- Application of contract terms and conditions to waivers and deviations
- The impacts of the federal budget process on the project
- The role of the FPD in the federal budget process
- The participants in the federal budget process and the major phases of budgeting
- Budget documents, their development, and their use
- Congressional, Office of Management and Budget (OMB), and DOE-internal budget roles and processes
- Definitions of budget terminology



# Project Risk Analysis and Management

## Course Description:

Project Risk Analysis and Management is a classroom course based on the requirements of DOE Order 413.3B and the guidance provided in DOE Guide 413.3-7A, Risk Management Guide. In addition, other DOE reference materials will be highlighted throughout the course.

Risk management is an integral part of project management as required by applicable DOE orders and guidance, DOE Order 413.3B, specifically requires that all projects establish a risk management program and evaluate risks at each stage of the project. This course is designed to assist the FPD and the Integrated Project Team (IPT) members in implementing risk management according to DOE guidance and best practices on their projects.

## Course Objectives:

- Identify project risks
- Develop and implement effective risk management on the project
- Create a comprehensive Federal Risk Management Plan and effectively manage risks throughout the project life cycle
- Evaluate a contractor Risk Management Plan and provide oversight of the contractor's risk management program
- Determine appropriate DOE contingency and evaluate contractor management reserve for the project
- Assess reasonableness and adequacy of contingency (cost and schedule) allowances throughout the project life
- Develop baselines with appropriate confidence levels
- Assess reasonableness and adequacy of contractor management reserve allowances throughout the project life

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1

Federal Project Directors, DOE Program Managers, IPT members assigned to projects (including matrixed personnel)

Pre-requisite: Project Management Essentials, or PMP® Certified

Course Delivery method and Length:

3.5-day Instructor-led Classroom

CEUs: 25

CHRIS Code: 001033

PMI Number (PDUs): REP #2241-PM0031 (25 PDUs)

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Project Risk Analysis and Management (continued)

Topics addressed in this course:

- Risk assessment and quantification
- The importance of assigning risk management responsibility
- Tools to assess and manage risk
- Risk mitigation plan development
- Risk management integration into project management



Environmental Management INL Site

# Planning for Safety in Project Management

## Course Description:

Planning for Safety in Project Management is a classroom course which assists the FPD to determine their role in safety throughout the Critical Decision (CD) process. Based on the requirements of DOE Order 413.3B and the guidance provided in DOE Guides and other DOE reference materials, the course examines safety issues in representative projects.

The course aims to demonstrate to FPDs and IPT members that safety is central to every project even if it is not central to the mission. The course examines nuclear, environmental, and worker safety issues and helps prepare the participant to effectively apply safety management requirements throughout the project acquisition life cycle. Particular emphasis is given to the planning and design phases where application of a Failure Mode and Effects Analysis should identify potential hazards and mitigation strategies.

## Course Objectives:

- Determine the importance of safety to projects and DOE's image and viability
- Identify safety requirements and considerations at each CD level
- Determine the Federal Project Director's (FPD) role in safety throughout the Critical Decision (CD) process
- Discuss the importance of alternatives analysis and conceptual design
- Identify how to perform a failure mode and effects analysis (FMEA)
- Identify how to control environmental safety hazards
- Identify how to control worker safety hazards
- Learn how to conduct a hazards analysis
- Determine how to evaluate the final design in reference to safety
- Discuss how to manage safety during construction

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1

Federal Project Directors; integrated project team members

Pre-requisite: Project Management

Essentials, or PMP® Certified

Course Delivery method and Length:  
3.5-day Instructor-led Classroom

CEUs: 25

CHRIS Code: 001035

PMI Number (PDUs): REP #2241-  
PM0023 (25 PDUs)

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Planning for Safety in Project Management (continued)

### Topics addressed in this course:

- The importance of safety to projects and DOE's image and viability
- Emphasis of centrality of safety to every project even if it is not central to the mission
- Identification of safety requirements and considerations at each CD level
- The FPD's role in safety throughout the CD process
- The importance of alternatives analysis and conceptual design
- How to perform and conduct a failure mode and effects analysis (FMEA)
- How to control environmental safety hazards and worker safety hazards
- How to conduct a hazards analysis
- How to evaluate the final design in reference to safety
- How to manage safety during construction
- The roles and responsibilities of the contractor for Health, Safety and Security (HSS) protection, including integrated safety management (ISM)

# Acquisition Management for Technical Personnel

## Course Description:

Acquisition Management for Technical Personnel is a classroom course that examines the portion of the acquisition process commonly referred to as “procurement.” This part of the process typically begins with the completion of the acquisition strategy and the development of the acquisition plan. The process proceeds through development of a solicitation, solicitation and evaluation of proposals, and contract award.

This course is intended for a non-procurement audience. The course is ideal for program and project personnel involved in generating procurement requests or participating in source selection activities. Participants will receive a solid foundation in the processes and applications of acquisition activities that happen before a contract is awarded.

## Course Objectives:

- Understand the relationship between technical personnel and contracting personnel in the acquisition process
- Understand and be able to participate in the various contracting and solicitation activities for acquiring services and supplies, including: Sealed bidding and competitive contracting; Fixed-price and various types of cost-reimbursement contracts; and DOE-unique solicitation instruments
- Understand and participate in the key tasks involved in development of a Procurement Request, including: Definition of requirements; Development of a Statement of Work (SOW); Preparation and application of evaluation criteria; Evaluation of proposals; and Administration of contracts

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1

Federal Project Directors, project and project personnel involved in generating procurement requests and/or source selection activities

Pre-requisite: Project Management Essentials, or PMP® Certified

Course Delivery method and Length: 4.5-day Instructor-led Classroom

CEUs: 32

CHRIS Code: 0000145

PMI Number (PDUs): REP #2241 – PM0028 (32 PDUs)

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.



# Acquisition Management for Technical Personnel (continued)

## Topics addressed in this course:

- Adhering to federal policy for project planning that includes acquisition strategies and mission need statements
- Adhering to DOE policy for project planning, budgeting, and management
- Determining project acquisition strategies and developing mission need statements that are included in the acquisition plan
- Using risk management skills in analyzing and recommending technical, location, and acquisition alternatives for acquisition strategies
- The relationship between technical personnel and contracting personnel in the acquisition process
- The various contracting and solicitation activities for acquiring services and supplies, including: sealed bidding and competitive contracting; fixed-price and various types of cost-reimbursement contracts; and unique DOE solicitation instruments
- The key tasks involved in development of a procurement request, including: definition of requirements; development of a statement of work; preparation and application of evaluation criteria; evaluation of proposals; and administration of contracts
- The statutes that govern the federal acquisition system, to include the Federal Acquisition Regulation (FAR)
- The types of contracts available to DOE to procure goods
- The complete breadth of acquisition planning and contract execution activities:
  - Pre-solicitation notices
  - Procurement requests
  - Request for Proposals
  - Award
  - Debrief/Protest
  - Payment
  - Contractor management
  - Termination
- The Source Evaluation Board (SEB) and its functions
- The function and applicability of M&O contracts



# Managing Contract Changes

## Course Description:

Managing Contract Changes is a classroom course which aims to better prepare DOE Contracting Officers (COs) and Federal Project Directors (FPDs) to manage project changes on complex construction projects through effective management of contract modifications and change orders. DOE guidance, reference materials and actual cases from the Boards of Contract Appeals and the U.S. Court of Federal Claims will be discussed to improve participant understanding of principles, concepts and doctrines that impact contract change management in DOE

The course discusses DOE's historical and current contracting environment, the doctrine of constructive change, potential differences between project management changes and contract changes, and the things DOE senior level contracting and program officials can do to improve the effectiveness of the change management process.

## Course Objectives:

- Describe the regulatory framework of government contracts and their provisions for managing contract changes
- Manage the change process within contracts
- Explain the concept of "entitlement" and determine when Equitable Adjustments are warranted
- Discuss the project management process within DOE, how the project correlates with the contract, the contractor's performance management baseline, and the changes resulting from progressive elaboration of the planning and design process
- Develop an objective and a strategy for addressing Requests for Equitable Adjustments
- Describe and manage the funding of projects, including potential pricing adjustments and cost overruns
- Describe the legal obligations and procedures for resolving formal disputes under the Contract Disputes Act

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1

Federal Project Directors, DOE contracting personnel, and senior program leaders and officials in Program Secretarial Office.

Pre-requisite: Project Management Essentials, or PMP® Certified

Course Delivery method and Length: 4-day Instructor-led Classroom

CEUs: 28

CHRIS Code: 002102

PMI Number (PDUs): REP #2241-PM0036 (25 PDUs)

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Managing Contract Changes (continued)

### Topics addressed in this course:

- Research and interpretation of regulatory framework for contract changes
- Successful change order management
- Effective management and settlement of Requests for Equitable Adjustments (REA)
- Determination or entitlement for a change or REA
- Price changes and REAs
- Options for providing contract financing for changes
- Dispute settlement in accordance with the Disputes Act
- Change control and configuration management techniques
- Procedures for preparing, reviewing, and approving baseline changes
- Basic decision making techniques
- Project control techniques and their application
- Project and contract management alignment

# Earned Value Management Systems

## Course Description:

Earned Value Management Systems (EVMS) is a classroom course which addresses EVMS and project reporting requirements in order to effectively apply EVMS approaches in project management. The course is based on the requirements of DOE Order 413.3B and the guidance provided in DOE Guide 413.3-10, Earned Value Management Systems.

The course aims to give participants a framework for applying EVMS approaches to project management and knowledge of the process sufficient to oversee contractor EVMS processes. Participants will learn about Earned Value Management (EVM) processes and how they are interrelated and must be integrated to produce an effective EVM System.

## Course Objectives:

- Know strategies to organize, plan, and authorize project work
- Discuss effective ways to monitor performance
- Present the graphical cost, and schedule elements of the project baseline based on the work breakdown structure (WBS)
- Discuss selection of appropriate EVMS techniques for different WBS elements
- Be able to collect, interpret, and report earned value data.

## Topics addressed in this course:

- Using EVMS processes and techniques for organizing, planning, and authorizing project work
- Monitoring performance
- Presenting the graphical cost, and schedule elements of the project baseline based off the WBS
- Selecting the appropriate EVMS technique for different WBS elements
- Collecting, interpreting, and reporting earned value data

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1

Federal Project Directors; integrated project team members

Pre-requisite: Project Management

Essentials, or PMP® Certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001026

PMI Number (PDUs): REP #2241-  
PM0035 (21 PDUs)

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Course Information

Level 1 Core Course

Target Audience: Prospective Level 1

FPDs or prospective Contracting Officer's Representatives

Pre-requisite: Project Management

Essentials, or PMP® Certified

Course Delivery method and Length:

DAU Online 32 hours (average completion time)

CEUs: 32

CHRIS Code: N/A - DAU Course Code: CLC 222

PMI Number (PDUs): N/A

## Course Notes

1. This course is required for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. There are five exams which must be passed at 100% to pass the course.
3. Register for this course directly through the Defense Acquisition University website.
4. The classroom course CHRIS Code 001028 or 0000058 may be substituted for this course.

## Contracting Officers Representative (COR) *Online Training*

### Course Description:

Contracting Officers Representative is an online course specifically designed for Contracting Officer's Representatives (CORs) who are responsible for assuring that contractors are performing the technical portion of their job. This course provides CORs with the breadth of knowledge required to perform the COR role, including knowledge related to COR roles and responsibilities, fundamentals of contracting regulations--types, phases, and other elements; awareness of ethical, legal, and cultural factors that impact COR responsibilities; and information necessary to effectively evaluate situations, apply knowledge gained, and make correct decisions to carry out COR responsibilities.

### Course Objectives:

- Understanding the role of the COR
- Understanding what constitutes an effective COR
- Learning to read and understand contracts

### Topics addressed in this course:

- The roles and responsibilities of a COR
- The process for modifying an existing contract
- Methods for communicating with the contractor and the roles and responsibilities of project participants
- Contract administration
- Techniques for evaluating change orders
- The process and methods for evaluating contractor deliverables, accepting work, and evaluating contractor procurement guidelines and regulations



# Performance-Based Management Contracting

## Course Description:

Performance-Based Management Contracting (PBMC) is a classroom course designed to help program and project managers understand the advantages of performance-based major site and facility contracts. Although many of the topics covered in this course are also addressed in other PMCDP courses. This course focuses on major site and facility contracts and the unique challenges involved in making them performance-based.

This course assures that program and project managers, as well as contracting personnel, understand the need to continue and accelerate the move toward performance-based major site and facility contracts. The course also addresses the processes by which these performance-based site and facility management contracts are planned, awarded, and managed after award. The overall objective of the course is to focus on major site and facility contracts and to present the performance-based concepts and tools required in each aspect of the planning, award, and post award processes for these contracts.

## Course Objectives:

- Understand the importance of Performance-based contracts for DOE's major site facilities
- Become familiar with the Performance-based aspects of planning, soliciting, evaluating, and selecting a contractor
- Understand how Performance-based approaches must be used in the work authorizing process after contract award
- Gain insight into appropriate use and management of performance-based contract incentives
- Understand the concepts involved in comprehensive, risk based oversight of performance-based major site facility contracts
- Become familiar with management tools required to monitor and influence contractor performance

## Course Information

Level 1 Elective Course

Target Audience: Prospective Level 1

Federal Project Directors, Contracting Officers/Contract Specialists, Contracting Officer's Representatives, program and project management staff, Headquarters and field program acquisition and support staff

Pre-requisite: Project Management Essentials, or PMP® Certified

Course Delivery method and Length: 3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001951

PMI Number (PDUs): REP#2241-PM0027 (21PDUs)

## Course Notes

1. This course is an elective for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Performance-Based Management Contracting (Continued)

### Topics addressed in this course:

- DOE policy for Performance-Based Management Contracts (PBMCs):
  - Contract types and their applications
  - FAR requirements
- DOE's Strategic Management System: planning, budget formulation and execution, and program evaluation
- How to align performance incentives to DOE organizational goals
- How to develop PBMCs
- Use of performance-based management elements



# LEED® for New Construction and Existing Buildings

## Course Description:

Leadership in Energy and Environmental Design (LEED®) for New Construction and Existing Buildings is a classroom course designed to provide participants with the knowledge of the LEED® rating system and five LEED® categories and to make existing buildings and new construction environmentally sound. This course supports the Federal mandates for agencies to improve their building's efficiency and environmental performance including green building certification.

## Course Objectives:

- Review the Federal requirements for sustainability
- Examine the LEED® green building rating system and the Federal High Performance Sustainable Building Guiding Principles for new and existing buildings
- Learn about the motivators for green building, the history of the “green building” movement, the development of the United States Green Building Council, the development of LEED®, and the five categories of LEED®
- Understand requirements for Federal agencies to account for greenhouse gases and other environmental impacts

## Topics addressed in this course:

- The LEED® Green Building Rating System and green initiative goal standards for new construction and existing building maintenance
- The relationship of climate change and building impacts to DOE projects
- The five LEED® categories

## Course Information

Level 1 Elective Course

Target Audience: Prospective Level 1

Federal Project Directors; integrated project team members

Pre-requisite: Project Management

Essentials, or PMP® Certified

Course Delivery method and Length:  
2.5-day Instructor-led Classroom

CEUs: 18

CHRIS Code: 001936

PMI Number (PDUs): N/A

## Course Notes

1. This course is an elective for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Course Information

Level 1 Elective Course

Target Audience: Prospective Level 1

Federal Project Directors; integrated project team members

Pre-requisite: Project Management

Essentials, or PMP® Certified

Course Delivery method and Length:  
2-day Instructor-led Classroom

CEUs: 14

CHRIS Code: 002152

PMI Number (PDUs): REP #2241 –  
PM0033 (14 PDUs)

## Course Notes

1. This course is an elective for Level 1 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

# Capital Planning for DOE O 413.3B Capital Asset Projects

## Course Description:

Capital Planning for DOE O 413.3B Capital Asset Projects is a classroom course designed to help FPDs use the documents and reports from the budget formulation and acquisition planning process to support the DOE's budget submission to the Office of Management and Budget (OMB), the President, and the Congress.

This course details deliverables, reports, cyclical budget data and narratives in the context of a structured capital planning process and the Department of Energy's critical decision model for capital asset projects. Participants in this course will review the capital planning process in order to become aware and knowledgeable of questions they should ask regarding capital asset project requirements under DOE order 413.3 B.

## Course Objectives:

- Present the government's structured capital planning process and discuss how it applies to the Department of Energy's Acquisition Management System
- Demonstrate how DOE O 413.3B Critical Decision (CD) process for acquiring capital assets supports this process
- Provide examples of how project information is used to support the Project Data Sheet (PDS) and OMB Exhibit 300 reporting requirements
- Highlight the FPD's role in each step of the Capital Planning process

## Topics addressed in this course:

- The government's structured capital planning process and its application to the DOE's acquisition management system
- How to leverage capital assets for strategic outcomes using tools and resources at the FPD's disposal
- Capital planning as a structured process
- DOE Order 413.3B CD process for acquiring capital assets as it aligns to capital planning
- Use of project information to support the project data sheet and OMB Exhibit 300 reporting requirements

# Advanced Concepts in Project Management

## Course Description:

Advanced Concepts in Project Management is a “hybrid” learning environment course – a combination of traditional lecture, an intense on-site workshop, classroom discussions at regional sites, case studies, and video-tele conferences (VTCs). A key element to this course is a small group research project that culminates with a presentation at the onsite workshop.

This course covers the concepts of project management at an advanced level of expertise and expands upon best practices in project management from DOE, other Federal agencies, and the private sector. It introduces a variety of selected topics pertaining to project management processes including: quality management, technology readiness assessments, project definition rating, project execution, and financial management.

## Course Objectives:

- Explain the process of conducting design reviews (conceptual, preliminary, critical, system, etc.)
- Know the importance of up-front project definition in developing project scope
- Describe stakeholder alignment techniques
- Practice making formal presentations to senior management
- List techniques for communicating with diverse audiences including multiple types of stakeholders of varying ability levels
- Understand how to make persuasive communications with well-founded convincing arguments

## Topics addressed in this 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

## Course Information

Level 2 Core Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:

Blended Learning, 5 weeks (eight 2-hour video-tele conferences, one 3-day onsite)

CEUs: 50

CHRIS Code: 001023

PMI Number (PDUs): REP #2241-PM0012 (50 PDUs)



## Course Notes

1. This course is required for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of all sessions. Attendance at the full three-day onsite is mandatory. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Advanced Concepts in Project Management (continued)

### More topics addressed in this course:

- Configuration management from a systems engineering perspective
- 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

# Scope Management/Baseline Development

## Course Description:

Scope Management Baseline Development is a classroom course which is designed to enhance the DOE Federal Project Directors' ability to clearly define requirements and scope, to develop a defensible baseline, and to manage conformance to the baseline throughout the project life-cycle.

Participants learn how to conduct effective requirements planning sessions and to be able to control scope and configuration changes throughout the life cycle of the project. The course emphasizes Work Breakdown Structure (WBS) development. Some topic areas include baseline development techniques, identifying risk and constraints for requirements, prioritizing requirements, trade-off analysis, iterative requirements management, and scope.

## Course Objectives:

- Conducting effective requirements identification and validation
- Prioritizing requirements, conduct trade-off analyses, and determine whether requirements are functional or non-functional, discretionary or non-discretionary
- Using a systems engineering approach to manage requirements throughout the project life-cycle
- Identifying project risks and requirements constraints, and to assess their impact on the project baseline
- Assessing and select among technical, contractual and procurement alternatives the approach that is mostly likely to meet technical, stakeholder, legal, cost, and schedule requirements
- Developing and use Work Breakdown Structures to support scope management
- Preparing the technical element of a project baseline
- Recognizing and control scope and configuration changes throughout the project lifecycle

## Course Information

Level 2 Core Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001036

PMI Number (PDUs): REP #2241-  
PM0014 (21 PDUs)

## Course Notes

1. This course is required for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Scope Management/Baseline Development (continued)

### Topics addressed in this course:

- Using baseline development techniques
- Developing and decomposing a WBS
- Identifying requirements as functional or non-functional and discretionary or nondiscretionary
- Prioritizing requirements
- Recognizing and controlling scope changes



Savannah River Site

# Cost and Schedule Estimation and Analysis

## Course Description:

Cost and Schedule Estimation and Analysis is a classroom course that provides participants with a high-level overview of cost and schedule estimation techniques necessary for successful project management in accordance with DOE O 413.3B and GAO processes.

The course builds on techniques introduced in the Level 1 PMCDP Curriculum to give participants tools to allow them to review, analyze, and assess project cost estimate and schedules developed by contractors. These include application of life-cycle costing techniques, estimating, and resource leveling.

## Course Objectives:

- Identify when cost and schedule estimates are developed and/or modified during the DOE O 413.3B project life-cycle
- Use the project scope as the basis for the project's cost and schedule estimates
- Use each of the seven basic estimating methods to develop cost and schedule estimates
- Use available data sets and group analysis techniques to make cost and schedule estimates
- Develop a base cost estimate and cost and schedule contingency estimates
- Develop a critical path schedule for a project
- Apply crashing and fast-tracking methods to project schedules
- Evaluate the impact of crashing and fast-tracking on project cost and project risk
- Understand the relationship between budget authorization (BA) and budget outlay (BO) schedules, project estimates, and the project funding profile
- Apply GAO's 12-step process for developing cost estimate
- Apply GAO's nine best practices for project scheduling

## Course Information

Level 2 Core Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
5-day Instructor-led Classroom

CEUs: 35

CHRIS Code: 001044

PMI Number (PDUs): REP #2241-  
PM0015 (35 PDUs)

## Course Notes

1. This course is required for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Cost and Schedule Estimation and Analysis (continued)

### Topics addressed in this 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



# Project Leadership

## Course Description:

Project Leadership is a classroom course that provides participants with knowledge of leadership principles, supervision and motivation techniques, conflict resolution techniques; and integrated project teambuilding skills in a project environment.

The course is designed to stimulate long-term project management leadership growth, through understanding leadership principles and styles; identifying individual strengths and weaknesses; developing supervision and motivation techniques; building integrated project teams; and organizing and motivating team members. Course topics include: strengths and weaknesses of different leadership styles; ethical and unethical leader behavior; motivational strategies; IPTs; project goals and vision; achieving consensus; and developing confidence and trust within the project team.

## Course Objectives:

- Evaluate strengths and weaknesses of different leadership styles
- Determine optimal motivational strategies
- Determine the proper composition of IPTs
- Assess IPT performance
- Identify strategies for improving project team performance
- Develop and communicate clear project goals and vision
- Develop and implement project team operating procedures and systems
- Achieve consensus within the project team
- Develop confidence and trust within the project team

## Course Information

Level 2 Core Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001045

PMI Number (PDUs): REP #2241-  
PM0011 (22.5 PDUs)

## Course Notes

1. This course is required for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Project Leadership (continued)

### Topics addressed in this course:

- Problem solving and conflict resolution
- Facilitation techniques and facilitating discussions/meetings
- 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
- Using motivational techniques
- Assigning and evaluating work
- Identifying individual team members' strengths and weaknesses
- 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

# Effective Program and Project Communication

## Course Description:

Effective Program and Project Communication is a classroom course that provides participants a review of and chance to practice critical communication skills for program and project success. This includes presenting issues effectively, listening and acting on feedback, and fostering harmony among team members.

This course will include lectures, in-class exercises, presentations, video-taping elements, and peer reviews. Federal Project Directors (FPDs) will learn to choose the right mechanism and/or medium for their messages and practice communicating effectively.

## Course Objectives:

- Describe the sender-receiver model and its importance to project and program communications
- Describe the difference in purpose and content for upward, downward, and lateral communications
- Identify one or more "best" media for communicating messages to specific audiences and for specific purposes
- Describe at least one advantage and one disadvantage to each of the most common media used for project and program communications
- Select the right presentation styles for a specific message and audience
- Describe the activities from planning through closure, that contribute to an effective oral presentation

## Topics addressed in this course:

- Making formal presentations to senior management
- Communicating with diverse audiences
- Making persuasive communications with well-founded convincing arguments
- Communicating with multiple types of stakeholders

## Course Information

Level 2 Core Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001045

PMI Number (PDUs): REP #2241-  
PM0011 (22.5 PDUs)

## Course Notes

1. This course is required for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course pre-work, exams, peer reviews, and presentations.

## Course Information

Level 2 Core Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:

5-day Instructor-led Classroom with computer-based simulation

CEUs: 35

CHRIS Code: 001029

PMI Number (PDUs): N/A

## Course Notes

1. This course is required for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

# Project Management Simulation

## Course Description:

Project Management Simulation is a classroom course that that uses a computer-based case study project simulation. The course enables participants to exercise and integrate a wide variety of project management skills including developing defensible project plans, applying PM tools and techniques to plan, track and control projects, improving project team performance, analyzing project information, identifying complex project tradeoff decisions, and recognizing when to focus on task and when to focus on process.

## Course Objectives:

- Apply project management methods in a complex setting
- Allocate resources and manage simulated risk and unknowns
- Practice reporting and project control methods
- Discuss challenges in tradeoffs and decision making at the project level

## Topics addressed in this 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
- The use of automated scheduling tools
- The use of schedule analysis, crashing, and resource-leveling

# Value Management

## Course Description:

Value Management is a classroom course that focuses on the value management (VM) process. The course provides participants with a means for re-examining projects to identify ways of reducing total project costs. It focuses on the basics of what a product or service should offer while addressing a critical appraisal of the sales, cost, use, and esteem value of a product or service through analyzing the embedded functions. The course applies modern practices in the field of Value Engineering and Value Management which emphasize good communications and effective leadership of the people involved.

This course addresses building and leading VM teams; understanding the six-step VM job plan; VM definitions, principles, and concepts; contractual aspects of VM; VM and the project life cycle; and function analysis in the VM process. Special attention is paid to VM and the CD process. Please note: Value Management is not Earned Value Management; this is not a course on Earned Value Management Systems (EVMS).

## Course Objectives:

- Know the legal and regulatory drivers of Value Management
- Describe VM tools and techniques for improving DOE project and program cost and schedule results, especially ROI
- Retain key VE/VM concepts, principles, and definitions
- Understand and apply VE/VM practices, tools and techniques
- Know how to organize a VM effort, structure a job plan, and analyze the functions of systems, equipment, facilities and supplies to achieve the lowest life-cycle costs while maintaining the essential values of safety, performance, reliability and quality

## Course Information

Level 2 Elective Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001037

PMI Number (PDUs): REP #2241-  
PM0010 (21 PDUs)

## Course Notes

1. This course is an elective for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Value Management (continued)

### Topics addressed in this 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/value 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



# Federal Budget Process in DOE

## Course Description:

Federal Budget Process in DOE is a classroom course which provides participants with an overview of the major phases and participation in the federal budget process in order to accomplish the Department's budgeting and accounting processes. It emphasizes program managers' and Federal Project Directors' effective use of these financial systems and processes to accomplish DOE's mission.

Participants will learn how the federal budget process can impact the role of the project director and how to best deal with the impacts through contingency planning. Participants will gain an understanding, at the macro level, of how the budget is formulated; recognize the impact of the Government Performance and Results Act (GPRA); and major phases and timing in the budget process. The course emphasizes program and project managers' effective use of these financial systems and processes to accomplish DOE's mission.

## Course Objectives:

- Describe the Department of Energy's financial management processes for preparing, reviewing, presenting, and defending budget submissions
- Know how to manage DOE's authorized funding through its financial accounting and reporting systems
- List ways to establish measurable financial success criteria for programs and projects
- Identify and begin to apply the foundation skills required to successfully manage a DOE project through its financial life cycle
- Know the FPD role for effectively participating in the DOE budget process
- Describe how to manage the flow of funds to your programs and projects

## Course Information

Level 2 Elective Course

Target Audience: Prospective Level 2

Federal Project Directors; integrated project team members

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
4-day Instructor-led Classroom

CEUs: 28

CHRIS Code: 001034

PMI Number (PDUs): REP #2241-  
PM0003 (28 PDUs)

## Course Notes

1. This course is an elective for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Federal Budget Process in DOE (continued)

### Topics addressed in this 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.



Forrestal Building

# Real Property Asset Management (RPAM)

## Course Description:

Real Property Asset Management is a classroom course that focuses on the requirements of DOE Order 430.1B. Participants acquire a systematic, integrated approach to the management of federal real property, order requirements, reporting mechanisms, and roles and responsibilities for RPAM.

The course addresses real property planning and management, 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. Also included in the course are the requirements contained in the February 2004 Executive Order 13327, Federal Real Property Asset Management and the January 2007 Executive Order 13423 Strengthening Federal Environmental, Energy, and Transportation Management.

## Course Objectives:

- Understand requirements for implementing DOE planning, acquisition, sustainability, sustainment, recapitalization, disposition and long-term stewardship, value management and performance management practices of DOE O 430.1B, *Real Property Asset Management*
- Understand and know how to monitor contractor requirements of 430.1B
- List and define the roles and responsibilities for real property management
- Disposition planning
- Compare RPAM requirements to requirements for nuclear facilities maintenance, integrated safety management and environmental management

## Course Information

Level 2 Elective Course

Target Audience: Prospective Level 2 Federal Project Directors; other DOE personnel involved with the management of real property assets (either nuclear or non-nuclear) within DOE.

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001183

PMI Number (PDUs): REP #2241-PM0025 (21 PDUs)

## Course Notes

1. This course is an elective for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Real Property Asset Management (RPAM) (continued)

### Topics addressed in this 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

# Environmental Laws and Regulations

## Course Description:

Environmental Laws and Regulations is a classroom course intended to give participants interested in the implications of environmental laws and regulations an overview and basic knowledge of pertinent environmental laws and regulations to include key DOE directives (especially DOE O 450.1A, DOE O 413.3B and DOE O 430.2B) and applicable Federal regulations and executive orders.

The course introduces the wide range of environmental requirements with which the Department must comply as well as the appropriate resources to assist DOE staff and managers in the event they are asked to support or manage a project with potential environmental impacts. This course will also serve to inform DOE employees of their roles in helping the Department to achieve its environmental sustainability goals, including reducing energy use, enhancing pollution prevention, and conserving water. This course is not meant to be an instruction manual for environmental topics at the department; rather, it aims to educate participants as to when to ask questions and to whom they should be directed.

## Course Objectives:

- Describe the purpose and general contents of major Federal environmental laws, Executive Orders, and regulations relevant to project management at DOE
- Understand the detailed processes involved in implementation of major environmental requirements by the Department of Energy
- Be familiar with responsibilities of the FPD and other stakeholders for environmental protection and compliance
- Know what offices in DOE can assist in carrying out environmental regulation responsibilities

## Course Information

Level 2 Elective Course

Target Audience: Prospective Level 2 Federal Project Directors; integrated project team members; DOE employees with an interest in a basic introduction to environmental requirements as they apply to DOE's project lifecycle

Pre-requisite: PMCDP Level 1 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001046

PMI Number (PDUs): N/A

## Course Notes

1. This course is an elective for Level 2 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Environmental Laws and Regulations (continued)

### Topics addressed in this course:

- Current DOE environmental policies and implementing guides, as well as federal environmental regulations to include:
  - National Environmental Policy Act (NEPA)
  - Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
  - Resource Conservation and Recovery Act (RCRA)
  - Clean Water Act (CWA)
  - Clean Air Act (CAA)
  - Toxic Substances Control Act (TSCA)
  - Occupational Safety and Health Act (OSHA)



Yucca Mountain



# Advanced Risk Management

## Course Description:

Advanced Risk Management is a classroom course that provides participants with more advanced treatment of risk management principles and concepts introduced in Project Risk Analysis and Management. The course reviews topics that are appropriate for Level 3 and 4 Federal Project Directors to assist the FPD and the Integrated Project Team (IPT) members in implementing RM on their projects.

The topics include overviews of DOE Orders and Guides for developing and implementing a compliant and effective RM program, evaluating RM effectiveness, preparing lessons learned, and systematically applying RM methods to project activities.

## Course Objectives:

- Apply risk management on a larger, more complicated project
- Identify, assess and communicate risks at all points of the project life cycle, in particular to support CD-0, CD-1 and CD-2
- Determine effectiveness of risk management program over life of project
- Capture important lessons learned for sharing throughout DOE
- Develop baselines with appropriate confidence levels, including necessary allowances for DOE contingency and evaluation of contractor management reserve
- Assess reasonableness and adequacy of DOE contingency (cost and schedule) allowances throughout project life
- Assess reasonableness and adequacy of contractor management reserve allowances throughout project life
- Understand where an actual DOE project had successes and problems with its risk management

## Course Information

### Level 3 Core Course

Target Audience: Prospective Level 3 Federal Project Directors; integrated project team members; Level 3 and 4 Federal Project Directors.

Pre-requisite: PMCDP Level 2 certified (Participants must have taken Project Risk Analysis and Management before signing up for this course)

Course Delivery method and Length: 3.5-day Instructor-led Classroom

CEUs: 25

CHRIS Code: 001042

PMI Number (PDUs): REP #2241-PM0030 (25 PDUs)

## Course Notes

1. This course is required for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Advanced Risk Management (continued)

### Topics addressed in this course:

- Identifying critical issues and risks
- Conducting root cause analyses
- Applying risk categorization principles
- Using advanced techniques for project risk identification, quantification, and analysis
- Using modeling tools and techniques in managing risk
- Using simulations in risk analysis
- Developing complex risk management plans
- Applying lessons-learned from accident/incident investigations



# Program Management and Portfolio Analysis

## Course Description:

Program Management and Portfolio Analysis is a classroom course that is based on a computer simulation case study. The course gives participants hands-on experience in planning, implementing, and coordinating multiple projects across a matrixed organization. This includes group collaboration, defending resources, and creative compromise. The case study encourages participants to develop a strategic view of projects, manage priorities between multiple projects, and coordinate information needs of multiple projects across the organization.

## Course Objectives:

- Allocate and manage resources across a project organization
- Prepare project staff to meet future technical and managerial needs
- Balance project and functional management responsibilities
- Apply project management methods in a complex setting

## Topics addressed in this course:

- Strategic planning and strategic goal establishment
- Information gathering and analysis for multiple projects
- Resource allocation between multiple (competing) projects
- Project portfolio analysis

## Course Information

Level 3 Core Course

Target Audience: Prospective Level 3 Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
5-day Instructor-led Classroom

CEUs: 35

CHRIS Code: 001025

PMI Number (PDUs): N/A

## Course Notes

1. This course is required for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Course Information

Level 3 Core Course

Target Audience: Prospective Level 3  
Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001031

PMI Number (PDUs): N/A

## Executive Communications

### Course Description:

Executive Communications is a classroom course designed to provide DOE participants with high-level communication skills to address issues/activities of specific importance to internal, public, media and congressional audiences. During this training program, two Executive Communication Coaches offer key techniques through interactive modules and video practice to help DOE students deliver successful presentations, media interviews, and congressional testimony or briefings. DOE participants are encouraged to share their experiences as senior-level managers who have been involved in the project management process. The objective of this course is to help each DOE participant enhance their current communication knowledge to effectively communicate powerful, positive messages to target audiences.

### Course Objectives:

- Actively engage key audiences by better understanding their needs and interests
- Understand the power of language of leadership with words that command rather than detract from the message
- Improve delivery skills including body language, facial expressions and gestures
- Avoid negative buzzwords and other common interview traps
- Learn how to transition with key phrases to positive and powerful messages
- Learn how to cope with the nuances of different interview formats from print to TV
- Gain knowledge of preparation techniques to prepare one's own "agenda"
- Learn about the nuances of presenting to congressional staffers
- Sharpen delivery skills, particularly for press conferences
- Understand how to communicate effectively as a team in a panel format

## Executive Communications (continued)

Topics addressed in this course:

- Representing DOE across agencies
- Managing interaction with reporters
- Understanding roles and responsibilities of the Public Affairs Office
- Using public speaking techniques
- Conducting new conferences/briefings/public hearings
- Communicating/interfacing with external stakeholder groups
- Communicating lessons-learned
- Using active listening techniques



EERE, Utah Clean Energy 2012, Salt Lake City, UT

### Course Notes

1. This course is required for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments, participate in group and video-taping exercises, and submit requested pre-work.

## Course Information

Level 3 Elective Course (Technical)

Target Audience: Prospective Level 3  
Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001039

PMI Number (PDUs): REP #2241-  
PM0020 (21 PDUs)

## Project Execution and Readiness Reviews

### Course Description:

Project Execution and Readiness Reviews is a classroom course aimed at conveying the skills necessary for successfully managing engineering and design, construction, acceptance and transition, and project closeout.

Techniques are taught for organizing, managing, and reviewing project design and documentation, and for overseeing contractor performance during construction. Participants will learn the skills needed to identify potential problems and how to plan to avoid them. Extensive practice is provided in cost and schedule monitoring, including earned-value analysis, trend analysis and forecasting, managing baselines through performance monitoring and change control.

### Course Objectives:

- Use the approved Performance Baseline to kick off Execution Phase successfully
- Obtain fiscal-year budget authorization
- Define and implement all requirements for Execution Phase and Readiness Reviews
- Control execution work through contractor oversight, acceptance testing, and EVA
- Validate and test for safety and functional performance
- Manage project budget to satisfy Department and Congressional requirements
- Integrate project with Department and field-level strategic goals
- Attain CD-4 after successful Operational Readiness Review, Readiness Assessment, or Readiness to Operate
- Close out the project and all contract documents and issues
- Complete all documents required for compliance with Standard 1189-2008, culminating in Document Safety Analysis (DSA) and Safety Evaluation Report (SER).



# Project Execution and Readiness Reviews (continued)

## Topics addressed in this course:

- The steps in the ORR process
- The DOE role in the ORR process
- Contractor requirements for ORRs
- Safety analysis report development
- Safety systems use at DOE facilities
- Hazards analysis results interpretation
- ORR team members selection
- The orientation and training requirements for ORRs

## Course Notes

1. This course is an elective for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Course Information

Level 3 Elective Course (Technical)

Target Audience: Prospective Level 3  
Federal Project Directors; inte-  
grated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001049

PMI Number (PDUs): N/A

## Systems Engineering

### Course Description:

Systems Engineering is a classroom course which focuses on how implementation of the Systems Engineering (SE) process, from project initiation through the entire life-cycle, can decrease the likelihood of cost overruns, schedule delays and compromises in program and project technical performance.

This course will show how the Systems Engineering process is an interdependent (and iterative) approach to technical management, acquisition and supply, system design, product realization, and technical evaluation at each level of the system, beginning at the top (the system level) and propagating those processes through a series of steps which eventually lead to a preferred system solution. SE is not advocated as a universal solution to all program problems. Rather, this training attempts to describe the purpose and value of specific SE process steps. Step directions, along with exercises, will help course participants determine when each step is complete.

### Course Objectives:

- Recognize the steps of the SE process
- Understand how to apply the basic SE process to large systems (e.g., programs/projects)
- Identify key participants for performing the SE process
- Establish a problem and/or mission need statement
- Identify functions and requirements and interfaces with other systems
- Understand how to validate requirements
- Identify and evaluate alternatives or options
- Apply risk and opportunity management to SE
- Verify solutions to meet requirements

# Systems Engineering (continued)

## Topics addressed in this course:

- The systems engineering process
- The project requirements development process
- The system architecture development
- Tradeoff analyses
- Life-cycle cost analyses
- Systems integration
- Scope of work and functional design criteria development
- Functional requirements decomposition

## Course Notes

1. This course is an elective for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.



East River, New York, NY  
Image Credit: Kris Unger/Verdant Power, Inc.

## Course Information

Level 3 Elective Course (Technical)

Target Audience: Prospective Level 3  
Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001043

PMI Number (PDUs): N/A

## Strategic Planning

### Course Description:

Strategic Planning is a classroom course that provides participants with an introduction to making better strategic decisions and the skills needed to develop effective strategic plans for organizations, programs and projects. This is achieved through review of theories and techniques for improving productivity, as well as how to formulate and implement a planning process. Participants will be shown how to make decisions based on strategic plans that give specific direction yet remain flexible enough to respond to changing conditions.

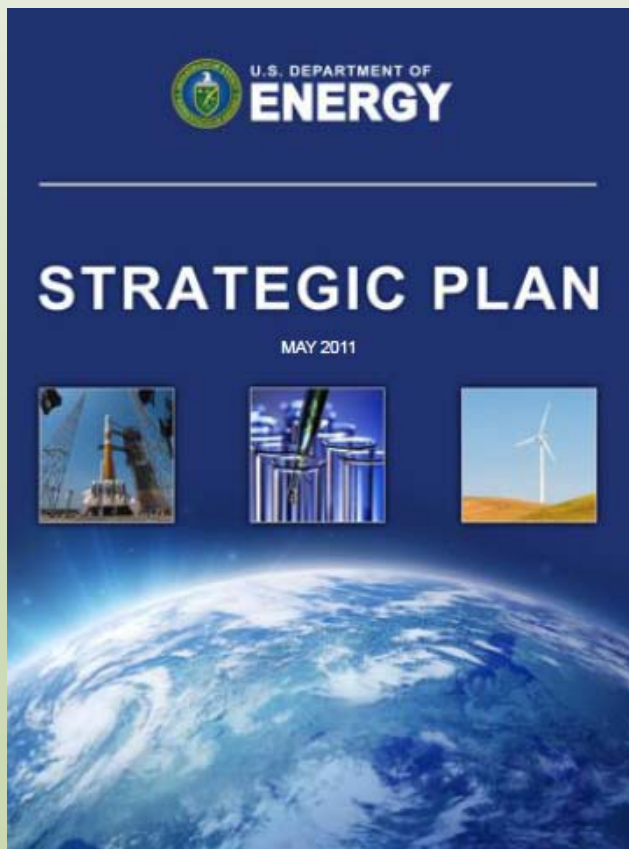
### Course Objectives:

- Review the major steps of the strategic planning process
- Develop mission and vision statements and values
- Describe how to formulate effective strategies and approaches
- Understand how to develop strategic goals, objectives, expectations and measures
- Assure successful strategic plan implementation

## Strategic Planning (continued)

### Topics addressed in this course:

- Managing the strategic planning process
- Establishing organizational mission and vision
- Conducting situational analyses
- Conducting competitive analyses
- Conducting environmental scanning
- Identifying strategic issues
- Establishing critical success factors and core competencies
- Establishing strategic goals and strategic objectives
- Writing a strategic plan
- Developing quantitative performance measures
- Operationalizing the strategic plan
- Distinguishing between mission and mandates



### Course Notes

1. This course is an elective for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Course Information

Level 3 Elective Course

(Communication)

Target Audience: Prospective Level 3 Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001047

PMI Number (PDUs): N/A

## Course Notes

1. This course is an elective for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

# Negotiation Strategies and Techniques

## Course Description:

Negotiation Strategies and Techniques is a classroom course that provides participants with methods and strategies to improve performance in negotiating agreements. The course addresses collaborative and competitive negotiations, negotiation strategy and planning, negotiations within and between teams, identifying key stakeholder interests in negotiations determining best alternatives to negotiated agreements, responding to conflict, and creating trust as well as ethics in negotiations.

## Course Objectives:

- Describe processes and tools of influencing and negotiating.
- Know how to gauge an organization's approach to negotiating
- List steps to prepare for a successful negotiation
- Describe how to avoid common traps in negotiating
- Catalogue personal skills for negotiating
- Apply interest-based negotiating
- Develop BATNAs for one negotiations

## Topics addressed in this course:

- Negotiations theory
- The steps of the negotiations process
- Negotiation strategy and plan development
- Ethics in negotiations
- Competitive negotiation and collaborative negotiation use
- Strategies for negotiating cost and schedule



# Labor Management Relations

## Course Description:

Labor Management Relations is a classroom course that enables participants to gain knowledge of techniques and tools for building good labor management practices. Participants will gain knowledge of labor management relations through study of labor law, bargaining practices, and dispute resolution methods. Procedures for labor contract administration and prevention of unfair labor practices will be discussed.

## Course Objectives:

- Understand how the Federal labor relations program works
- Recognize the roles and rights of employees, unions and management
- Deal with unionized employees in communications situations
- Carry out their responsibilities in change situations
- Avoid unfair labor practices
- Deal effectively with union representatives
- Understand how to represent the Agency in grievances
- Apply correct principles of contract administration and interpretation

## Topics addressed in this course:

- The basic rights of employees and labor organizations
- Union proposals, labor agreements, and negotiation tactics
- Strategies for dealing with labor unions regarding working conditions
- Unfair labor practice prevention
- Techniques and procedures of labor contract administration

## Course Information

Level 3 Elective Course  
(Communication)

Target Audience: Prospective Level 3 Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001038

PMI Number (PDUs): N/A

## Course Notes

1. This course is an elective for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

## Course Information

Level 3 Elective Course

(Communication)

Target Audience: Prospective Level 3 Federal Project Directors; integrated project team members;

Pre-requisite: PMCDP Level 2 certified

Course Delivery method and Length:  
3-day Instructor-led Classroom

CEUs: 21

CHRIS Code: 001047

PMI Number (PDUs): N/A

## Course Notes

1. This course is an elective for Level 3 certification in the Project Management Career Development Program (PMCDP).
2. To earn course credit, participants must attend ninety-percent of the course. Participants must also complete all course assignments including successful completion of course exams with a minimum score of seventy-percent.

# Facilitating Conflict Resolution

## Course Description:

Facilitating Conflict Resolution is a classroom course that covers a variety of topics specific to the issues of facilitation of conflict resolution. Areas discussed include: recognizing potential conflict situations and neutralizing them before they escalate; using problem-solving and decision-making techniques to meet the needs of everyone affected; negotiating "win-win" solutions for all parties involved; minimizing or resolving conflict in groups and between employees using appropriate interpersonal strategies; and understanding and successfully implementing organizational change. The course includes a significant emphasis on the use of facilitation techniques within the conflict resolution process.

## Course Objectives:

- Define Conflict
- Identify win-win solutions to conflict
- Examine conflict style
- Determine effective use of five conflict styles

## Topics addressed in this course:

- Recognizing potential conflict situations
- Neutralizing conflict situations
- Negotiating "win-win" solutions
- Conducting negotiating sessions
- Using interpersonal strategies to resolve/minimize conflict in groups and between employees
- Resolving conflicts using facilitation techniques
- Responding to conflict
- Understanding communications theory and communication styles
- Using active listening techniques
- Using mediation to settle differences