



Clemson University - Center for Corporate Learning
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Education & Training Plan
Project Management Associate Certificate Program with Externship

Student Full Name: _____

Start Date: _____ End Date: _____

Program includes National Certification & an Externship Opportunity
Mentor Supported

Project Management Associate Certificate Program with Externship

Course Code: CLEM-B-PROJ
Program Duration: 6 Months
Course Contact Hours: 375
Student Tuition: \$3,999

The Project Management Associate

Effective project management skills are important to working professionals in any industry. All professionals working in six sigma or other quality control management process, process engineers, general managers, middle/senior management, as well as product managers can benefit from the skills learned in this course and ensure that their efforts are in line with the most efficient and effective methods available for successful project management. Blending theory with practical examples and case studies, the Project Management Associate program serves as a stepping stone toward becoming a Certified Associate in Project Management (CAPM).

The Project Management Associate Program

The Project Management Associate program offers participants the opportunity to define, plan and execute a project no matter how simple or complex the end goal. Participants will gain the tools and knowledge necessary to deliver successful projects both on time and on budget, while meeting any performance specifications determined from the outset. At a fundamental level, participants will explore the ins and outs of project management and the project life cycle including: project scope management, project time management, project cost management, project communications management, project risk management, project procurement management, project human resource management and project stakeholder management. Students will examine the key skills of a project manager, and learn how to develop and apply those skills for project success. Students will also learn how to create a project schedule, resource plan, and budget, and how to monitor and evaluate a project to manage time, cost, scope, and resources.

Education and National Certifications

- Students should have or be pursuing a high school diploma or GED.
- There are no state approval and/or state requirements associated with this program.
- There is a National Certification exam available to students who successfully complete this program:
 - **Microsoft Office Specialist (MOS) Certification Exam.**

Program Objectives

At the conclusion of this program, students will be able to:

- Project Management Essentials
- Managing Multiple Projects
- Effective Time Management
- Project Risk & Cost Analysis
- Use Microsoft Office

National Certification

Upon successful completion of this Clemson University program, students would be eligible to sit for the Microsoft Office Specialist (MOS) exam. Although there are no state approval, state registration or other state requirements for this program, students who complete this program at Clemson University will be prepared and are eligible to sit for this national certification exam. Students who complete this program are encouraged to complete the externship option with their program. Students who complete this program can and do sit for the MOS national certification exams and are qualified, eligible and prepared to do so. Clemson University works with each student to complete the exam application and register the student to take their national certification exam.

Externship / Hands on Training / Practicum

Although not a requirement, once students complete the program, they have the ability to participate in an externship and/or hands on practicum so as to practice the skills necessary to perform the job requirements of a professional in this field. Students will be assisted with completing a resume and/or other requirements necessary to work in this field. All students who complete this program are eligible to participate in an externship and will be placed with a participating organization near their location. Clemson University works with national organizations and has the ability to place students in externship opportunities nationwide.

Clemson University contact: If students have any questions regarding this program including national certification and externships, **they should call Juanita Durham of Clemson University at 864.656.3984 or via email at jdrhm@clemson.edu.**

Note: No refunds can be issued after the start date published in your Financial Award document.



About Clemson University!

Clemson Online, a unit reporting directly to the Provost, works closely with leadership teams across the University to develop, market, and deliver top-quality courses and programs in blended and online formats. The office provides vision, leadership, coordination, and expertise in support of faculty design, delivery, and evaluation of technology-enhanced, blended, and fully online courses and instructional materials. Dynamic, transformative, and unique eLearning opportunities characterize Clemson's approach to online teaching and learning.

Our Mission: Clemson Online provides strategic leadership for online education, emphasizing innovative teaching and superior learning outcomes to maximize student success in 21st-century academic and professional contexts.

Our Vision: Clemson Online will define the public web-grant university through measurable achievements in online education, research, and service.

The office is committed to pursuing strategic opportunities, providing supportive resources, promoting superior educational quality, and ensuring faculty involvement and responsibility in shaping Clemson's online future.



Clemson University and Pearson Education

The Clemson University's Office of Professional and Continuing Education eLearning programs were developed in partnership with Pearson Education to produce the highest quality, best-in-class content and delivery necessary to enhance the overall student learning experience, boost understanding and ensure retention. Pearson Education is the premier content and learning company in North America offering solutions to the higher education and career training divisions of colleges and universities across the country aimed at driving quality education programs to ensure student success. Please visit us at www.pearson.com.

About Pearson Education

Welcome to Pearson. We have a simple mission: to help people make more of their lives through learning. We are the world's leading learning company, with 40,000 employees in more than 80 countries helping people of all ages to make measurable progress in their lives. We provide a range of education products and services to institutions, governments and direct to individual learners, that help people everywhere aim higher and fulfil their true potential. Our commitment to them requires a holistic approach to education. It begins by using research to understand what sort of learning works best, it continues by bringing together people and organizations to develop ideas, and it comes back round by measuring the outcomes of our products.

Project Management Associate Program Detailed Student Objectives:

EFFECTIVE PROJECT MANAGEMENT

- Identify the differences between functional and project management
- Name the major organizational structures and explain the advantages and disadvantages of each
- Identify the phases of an effective project management system
- Define the roles of the project manager and the project team members
- List the five key skills of a project manager
- Explain the balance needed in responsibility, accountability, and authority
- Define the roles of project sponsor, customer, and other stakeholders

ESTIMATES AND CONTRACTS

- State the problems or opportunities that a project will address
- Define a project's cost, time, and scope in SMART objectives
- Identify the types of project reviews that may be conducted
- Create a work breakdown structure for a project
- Estimate the time and cost needed to complete each of the activities in a project
- Describe various estimating methods
- Describe the three basic types of contracts and explain when to use each

PLANNING AND PREPARING A PROJECT

- Create a network diagram
- Determine the critical path
- Create a project schedule
- Prepare a project resource plan
- Prepare a project budget plan
- Describe the risk management processes of identifying, analyzing, and responding to project risk

MANAGING AND EVALUATING PROJECTS

- Explain how to get approvals and compile a comprehensive project plan
- Explain how to set up a monitoring and management process you can use throughout the life of the project
- Describe how to use project plans and status information to manage time, cost, scope, and resources
- Identify key components of a change control process
- Explain the types of project evaluations that may be conducted
- Describe issues to consider as you prepare project reports
- Explain the basic goals in closing a project

PREPARING FOR MULTIPLE PROJECTS

- Explain why individual multiple-project management situations differ so greatly
- Identify key risks and issues that provide challenges to managers of multiple projects
- Assess whether your issues are primarily in the field of project management or time management
- Describe the steps in the project initiation process
- Identify factors that create project management complexity and difficulty in your environment
- Analyze the triple constraints on a new project and develop a hierarchy of constraints for decision making
- Prepare a project charter
- Analyze and manage tradeoffs among projects

HOW TO HANDLE MULTIPLE PROJECTS

- Describe the project management processes involved in preparing a project management plan
- Identify different strategies for preparing a work breakdown structure
- Develop a work breakdown structure using both the organizational chart and outline formats
- Identify the critical path and available float from a network diagram
- Use a Gantt chart to determine required resources for any given project time period
- Identify how to use leveling techniques to balance schedule and resources, and to compress a schedule
- Apply all techniques to both single and multiple projects

PLANNING YOUR PROJECTS

- Determine which of the seven most common priority-setting algorithms for multiple projects best fits your multiple project environment
- Apply the five-step process of least resource scheduling to optimize multiple-project management
- Define risk, risk management, residual and secondary risk, business and insurance risk, opportunity and threat, and the steps in a risk management process
- Apply the concept of risk tolerance to both level of risk and category of risk
- Develop risk response solutions using eight different techniques
- Prepare a cost estimate for a project at rough order of magnitude, budgetary, and definitive levels
- Define quality standards on the project through requirements management
- Build a resource assignment matrix
- Identify procurement and contracting issues that require planning

EXECUTING PROJECTS

- Develop a staffing and teamwork plan for single and multiple projects
- Strategize influence management and motivation using the POWER model
- Identify key issues in scope, change, and quality that might affect your projects
- Determine when it is necessary and appropriate to create a new baseline and plan your project
- Define the key terms and concepts in earned value project management
- Explain the reasons why closing out projects and phases is a valuable and necessary part of the management of single and multiple projects
- Describe the elements of a closing process in the areas of transition, administrative closure, and salvage
- Recognize and avoid typical problems in closing a project
- Develop a closeout checklist for single and multiple projects
- Identify opportunities for standardization in managing multiple projects

BECOMING A PROBLEM SOLVER

- List at least three reasons why problem-solving skills are essential to the success of American businesses and workers
- Define what *problem* means in the business setting
- List the characteristics bosses seek in problem solvers
- List the six attributes of a successful problem solver
- Identify six real-life successful problem solvers and their strengths
- List the key problem-solving skills of a fictional problem solver in a business setting

FINDING THE PROBLEM

- Name and describe the two stages of problem identification
- Distinguish between problems and distractions
- Use the problem-solving tree to solve your own work-related problem
- List the four key work situations and their typical work-related problems
- Use the "Do You Really Have a Problem?" checklist to determine whether you have a work-related problem
- List the two steps of the problem-solving process
- Identify the Ws and use them in problem solving
- List the two questions you can use to test whether you are defining a problem or proposing a solution

SETTING UP YOUR PROJECT

- Identify two methods of information gathering
- List two occasions when information gathering is not appropriate
- Identify two requirements for effective questions during the information-gathering process
- Name the two major elements of a project
- Ask yourself the critical Qs—critical questions to organize the information you've collected about your problem and to identify additional information you may need
- List the key problem-solving skills of a fictional problem solver in a business setting

MANAGING YOUR PROJECT

- List the reasons for developing a work plan to manage your problem-solving activities
- List four indicators of when you really need a work plan
- Identify the critical elements of a work plan
- List the basic goals of project management
- Identify two different methods for displaying your work plan graphically
- State three different ways you can use a work plan to monitor and manage the progress of your project

RISK AND COST FUNDAMENTALS

- Define the terms *risk* and *risk management*, *upside* and *downside risk*, and *pure* and *business risk*
- Describe the fundamental formula for pricing a risk
- Identify the two ways to manage pure risk and the four ways to manage business risk
- Describe the process of risk identification on projects
- Create and populate a risk register
- Examine project requirements, goals, conditions, and circumstances to identify risks
- Determine whether a particular risk belongs to the project or is being sufficiently managed elsewhere
- Write a statement of risk in the *condition and consequence* format
- Apply a variety of tools and techniques to identify and reduce project risk systemically, including document review, standard and negative brainstorming, cause-and-effect diagramming and SWOT (strengths, weaknesses, opportunities, and threats) analysis, and checklists

RISK ANALYSIS

- Define common terms and concepts in risk analysis, including qualitative risk analysis, quantitative risk analysis, risk triage, and filtering
- Identify appropriate risk categories to organize identified risks for further action

- Use a filtering process to perform risk triage, sorting risks according to priority, urgency, ownership, and solvability
- Identify research needs and strategies for qualitative risk analysis
- Implement qualitative risk analysis tools to define the level of current knowledge available to determine probability and impact, establish range scales for risk probability and impact, and define risk thresholds for different categories of risk
- Establish a risk scoring system using either words or numbers, and rank risks according to either
- Measure overall project risk for a project using three different techniques
- Update risk register data showing disposition of all identified risks, and prepare a risk information sheet for significant project risks
- Define the Law of Large Numbers and the concepts of statistics and probability that derive from it
- Explain the difference between probability and odds, and understand the roles each plays in risk decision making
- Apply basic rules of probability, including joint probability and union
- Prepare a distribution of outcomes and recognize types of normal distributions (wide, narrow) and when a distribution is not normal
- Define the three measures of central tendency (mean, median, and mode) and calculate the standard deviation of a normal distribution
- Estimate the probability of a given outcome based on its distance from the mean as measured in standard deviations
- Recognize that a range of distributions may apply to a given risk analysis situation

COST ANALYSIS AND ANALYSIS TOOLS

- Apply the fundamental risk formula of $R = P \times I$ to an actual risk situation
- Define the risk cost analysis, contingency allowance and reserve, and risk premium
- Identify whether a given risk has a high or low degree of variation, and apply the appropriate strategy in preparing to manage it
- Conduct a risk cost analysis and extrapolate the effect of different risk outcomes using concepts of standard deviation, secondary risk, residual risk, and black swan events
- Apply exclusion, capping, and reinsurance as strategies for managing black swan risk and extreme risk fluctuations
- Identify whether a particular cost is deterministic or probabilistic
- Perform a cost-benefit analysis including both deterministic and probabilistic costs
- Calculate an expected monetary value for two or more states of nature
- Prepare and interpret a decision tree analysis
- Perform a sensitivity analysis
- Apply sensitivity analysis to project schedule issues
- Use the tools of network diagramming and critical path analysis to construct a network diagram from a list of tasks, perform a forward and backward pass on a network diagram, identify the critical path in a network diagram, and calculate total float and free float in noncritical activities
- Describe the three types of schedule risk
- Create a three-point estimate for a work package with uncertain duration
- Calculate a program evaluation and review technique time using a three-point estimate, and determine the standard deviation for a work package and for path using the program evaluation and review technique method
- Establish a confidence level for achieving a given finish date given a program evaluation and review technique analysis

- Describe the process used by a Monte Carlo simulation program for project risk management

PREPARING FOR RISK

- Establish a process to conduct risk response planning for your project or organization
- Analyze a proposed risk response for residual and secondary risk considerations
- Determine when multistage risk responses are desirable or appropriate
- Define three strategies for managing threat risk
- Define three strategies for managing opportunity risk
- Define two strategies for risk acceptance
- Develop action steps for a risk response and place them in the project plan or in other project documentation
- Define key elements in a risk management plan and a risk management policy
- Implement a variety of project risk monitoring and control tools, including monitoring and control metrics; early warning indicators; common concepts of earned value project management, including planned value, earned value, and actual cost; and schedule and cost performance indices based on earned value metrics
- Identify the elements in a change management system
- Explain why risk identification and risk analysis must continue throughout the project life cycle
- Assess risk management effectiveness during project lessons learned

Note: This program can be completed in 6 months. However, students will have online access to this program for a 24-month period.

MICROSOFT OFFICE Module

- Use an integrated software package, specifically the applications included in the Microsoft Office suite
- Demonstrate marketable skills for enhanced employment opportunities
- Describe proper computer techniques for designing and producing various types of documents
- Demonstrate the common commands & techniques used in Windows desktop
- List the meaning of basic PC acronyms like MHz, MB, KB, HD and RAM
- Use WordPad and MSWord to create various types of documents
- Create headings and titles with Word Art
- Create and format spreadsheets, including the use of mathematical formulas
- Demonstrate a working knowledge of computer database functions, including putting, processing, querying and outputting data
- Define computer terminology in definition matching quizzes
- Use the Windows Paint program to alter graphics
- Use a presentation application to create a presentation with both text and graphics
- Copy data from one MS Office application to another application in the suite
- Use e-mail and the Internet to send Word and Excel file attachments
- Demonstrate how to use the Windows Taskbar and Windows Tooltips
- Explain how copyright laws pertain to data and graphics posted on the Internet
- Take the college computer competency test after course completion
- Follow oral and written directions and complete assignments when working under time limitations

Note: Although the Microsoft Office Module is not required to successfully complete this program, students interested in pursuing free Microsoft MOS certification may want to consider completing this Microsoft Office Module at no additional cost.

System Requirements:

Windows Users:

- Windows 8, 7, XP or Vista
- 56K modem or higher
- Soundcard & Speakers
- Firefox, Chrome or Microsoft Internet Explorer

Mac OS User:

- Mac OS X or higher (in classic mode)
- 56K modem or higher
- Soundcard & Speakers
- Apple Safari

iPad Users:

- Due to Flash limitations, eLearning programs are NOT compatible with iPads

Screen Resolution:

- We recommend setting your screen resolution to 1024 x 768 pixels.

Browser Requirements:

- System will support the two latest releases of each browser. When using older versions of a browser, users risk running into problems with the course software.
- Windows Users: Mozilla Firefox, Google Chrome, Microsoft Internet Explorer
- Mac OS Users: Safari, Google Chrome, Mozilla Firefox

Suggested Plug-ins:

- Flash Player
- Real Player
- Adobe Reader
- Java