

**Project Management: Five Month Accelerated Course** 

PJMG 6250

#### **Course Outline**

#### **Description:**

Project Management is a profession that is growing rapidly. There are elements of project management in everything that we do. Many people think that project management is just managing. This is not true. Project Management is both science and art, and follows a systematic process. The increasing acceptance of project management indicates that the application of appropriate knowledge, processes, skills, tools, and techniques can have a significant impact on project success.

Nowadays, most of the companies are hiring those professionals who have Project Management Professional designations like PMP®, CAPM® etc. or project management certificate. A Project Management Professional with right communication tools and techniques can reduce the risk of project failure because he/she will implement project management processes and principles to ensure that the project meets stakeholders' criteria, expectations and requirements, comes in under budget, and within the specified time schedule.

This course will teach you how to directly apply project management principles in order to successfully manage and complete projects. This course is consistent with the Project Management Body of Knowledge (*PMBOK*<sup>®</sup> *Guide*) Fifth Edition developed by the Project Management Institute and covers all ten knowledge areas that are included in the PMP<sup>®</sup> and CAPM<sup>®</sup> certification exams. This course is presented using a hands-on case study approach which blends theory with practical application and understanding. Until you take this course, you will not know what you don't know about project management. This course will make you a versatile project manager.

If you are serious about the knowledge of project management and its career potential, then this course is the right place to start. With this course, your career opportunities in the project management community knows no bounds.

#### **Course Goals:**

The primary goal of this course is to provide students a foundation and knowledgebase of project management skills which they can build upon to provide effective project management in the team based project environment.

Please contact Continuing Studies if you require information in an alternate format, or if any arrangements can be made to ensure that this course is accessible to you. If you would like to provide feedback about accessibility-related issues that are specific to your experience with Continuing Studies, you may do so using our comment box (located in the entrance of the office) or you may contact Accessibility at Western (accessibility@uwo.ca or 519-661-2111, extension 85562); the feedback will be forwarded to the appropriate individual or area for follow-up.

#### Other goals include:

- ✓ Provide practical project management experience by completing a customized Total Project Management (TPM) Project using the Project Management Best Practices.
- ✓ Produce an enriched collaborative learning environment through open discussions of case studies that allow students to deduce from the broad and diverse experiences of classmates.
- ✓ Expose the students to current and prevalent project management practices and templates.
- ✓ Develop effective project management skills by using brain teasing exercises.
- ✓ Advance the students in their pursuit of PMP® or CAPM® designation preparation by:
  - Putting them in contact with course materials based on the processes defined in the Project Management Body of Knowledge (PMBOK\* Guide) Fifth Edition's text which also simulates the typical project management environment in the work place.
  - Reviewing plenty of practice questions pertaining to PMP® and CAPM® exam format.
  - PMP<sup>®</sup> or CAPM<sup>®</sup> style online exams.

#### **Course Objectives:**

At the completion of this course, the students will be able to:

- Apply the principles of Project Management to almost every conceivable area, from clinical research to social housing, from business transformation to construction and from oil exploration to product development.
- Perform more effectively in a project environment.
- Demonstrate their expertise in the five process groups and ten knowledge areas.
- Analyze information in a continuously changing managerial environment.
- Appraise and manage a project team in a way that project desired outcomes are produced.
- Write and pass the Project Management Professional (PMP) or Certified Associate in Project Management (CAPM) exam.



#### **Resources:**

Course pack (Class notes, lectures, case studies, projects' examples, exercises, discussions, practice questions, videos, templates, research papers, and other resources) is available in OWL. Plenty of handouts and study aids will also be provided based on forum discussions and requested needs.

#### **Evaluation:**

Class Participation (Interactive Discussions in Class) 10%

Project (Individual or Group): 30%

Project Presentation 10%

Exams (CAPM®/PMP® style ten (10) exams) 50%

Total 100%

#### **Exam Details:**

### <u>Module 1 – Introduction; Project Management Framework; Project Management Processes;</u> and Integration Management

Exam # 1 5%

Module 2 – Scope Management

Exam # 2 5%

Module 3 – Time Management

Exam # 3 5%

Module 4 – Cost Management

Exam # 4 5%

Module 5 - Quality Management

Exam # 5 5%

Module 6 – Human Resources Management

Exam # 6 5%

Module 7 - Communications Management

Exam # 7 5%

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#### Module 8 – Risk Management

Exam # 8 5%

Module 9 – Procurement Management 5%

Exam # 9

Module 10 – Stakeholder Management; and Professional and Social Responsibility 5% Exam # 10

Please Note that the answers of exams will be available upon submission.

#### **Notes on Project Report:**

- Must be academic and professional in style and content
- Must have a clear focus
- Must present ideas in a logical and well thought-out flow
- Arguments, analysis and conclusions must be based on clearly identified research and sources
- Must cite all references from other sources
- Must be 12 font, left aligned, one inch margins on all sides, numbered pages and typewritten
- Must cite all acknowledgments
- Must follow the rubric provided

#### **Policy on Cheating and Academic Misconduct:**

Academic honesty is a cornerstone of conduct at Western University. We cannot have freedom of expression without integrity. Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences; please refer to the section on "Scholastic Offences" in the current University Academic Calendar, or on the web at http://www.westerncalendar.uwo.ca. Such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course any academic work for which credit has previously been obtained or is being sought in another course in this University or elsewhere (without the knowledge and approval of the instructor to whom the work is submitted). Students enrolled in non-degree courses are expected to abide by the University's code of conduct.

#### **Code of Student Conduct:**

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at Western University, provide examples of behavior that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed, and set out the disciplinary procedures that the University will follow. For the complete Code of Student Conduct: http://www.uwo.ca/univsec/pdf/board/code.pdf.

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#### Plagiarism:

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for detecting plagiarism. All papers submitted will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between Western University and Turnitin.com (http://www.turnitin.com).

#### **Course Schedule:**

Module	Lesson Units	Evaluation
(1)	<ul> <li>Introduction</li> <li>What is Project Management?</li> <li>Why study Project Management Professional Exam?</li> <li>Information about the Project Management Professional Exam</li> <li>Professional Exam</li> <li>Project Management Institute (PMI)</li></ul>	• Test # 1
	Project Management Framework  Difference between operational work and project work Programs, Portfolios and Project Management Office (PMO) Projects and Strategic Planning Objectives and Management by Objectives Constraints Organizational Project Management Maturity Model (OPM3) Stakeholder Management Organizational Influences Cultures and Styles Structure (Functional, Projectized, Matrix) Life Cycle Project Life Cycle Project Life Cycle Project Phases	

- Initiating Process Group
  - Project Charter
  - Stakeholders
  - Strategy
  - Progressive Elaboration
  - Project Manager Assigned
  - High Level Planning
  - High Level Risk Identification
  - Order of Magnitude Estimating
  - Business Case
  - Input
  - Output
- Planning Process Group
  - Project Management Plan
  - Project Documents
  - Rolling wave Planning
- Executing Process Group
  - Managing People
  - Following Processes
  - Distributing Information
  - Be Proactive, Manage and Guide
  - Work to the Project Management Plan
  - Executing the Project Management Plan
- Monitoring and Controlling Process Group
  - Measuring the performance
  - Change request
  - Corrective and Preventive Actions and Defect Repair
  - Control Scope, Schedule and Costs
  - Perform Quality Control
  - Report Performance
  - Monitor and Control Risks
  - Administer Procurements
- Closing Process Group
  - Twenty Steps of Project Closure
  - Close Project or Phase
  - Close Procurements

#### **Integration Management**

- Develop Project Charter
  - Business Case
  - Project Selection (Comparative & Mathematical Approach)
  - Economic Models (Present Value; Net Present Value;

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	Internal Rate of Return; Payback Period; Benefit-Cost	
	Ratio)	
	<ul> <li>Important Concepts: Economic Value Added;</li> </ul>	
	Opportunity Costs; Sunk Costs; Law of Diminishing	
	Returns; Working Capital; Depreciation etc	
	<ul><li>Project Statement of Work (SOW)</li></ul>	
	<ul><li>Charters with Work under Contract</li></ul>	
	<ul><li>Enterprise Environmental Factors</li></ul>	
	<ul> <li>Organizational Process Assets</li> </ul>	
	<ul><li>Processes, Procedures, and Policies</li></ul>	
	<ul> <li>Corporate Knowledge Base</li> </ul>	
	<ul><li>Historical Information</li></ul>	
	<ul><li>Lessons Learned</li></ul>	
	Develop Project Management Plan	
	<ul> <li>Project Management Plan</li> </ul>	
	<ul><li>Baseline</li></ul>	
	<ul> <li>Requirements Management Plan</li> </ul>	
	<ul> <li>Change Management Plan</li> </ul>	
	<ul> <li>Change Control System</li> </ul>	
	<ul> <li>Configuration Management Plan</li> </ul>	
	<ul> <li>Configuration Management System</li> </ul>	
	<ul> <li>Process Improvement Plan</li> </ul>	
	<ul> <li>Project Documents</li> </ul>	
	<ul> <li>Project Management Plan Approval</li> </ul>	
	<ul> <li>Kick Off Meeting</li> </ul>	
	Direct and Manage Project Work	
	<ul> <li>Ensuring Common Understanding</li> </ul>	
	<ul><li>Being of Service</li></ul>	
	Monitor and Control Project Work	
	<ul> <li>Work Authorization System</li> </ul>	
	<ul><li>Change Requests</li></ul>	
	■ Corrective Action	
	<ul><li>Preventive Action</li></ul>	
	■ Defect Repair	
	Perform Integrated Change Control	
	■ Change Control Board	
	<ul> <li>Processes for Making Changes</li> </ul>	
	Close Project or Phase	
	■ Inputs	
	<ul> <li>Tools and Techniques</li> </ul>	
	<ul><li>Outputs</li></ul>	
(2)	Scope Management	

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	Product Scope	
	Project Scope	
	Scope Management Plan	<ul><li>Test # 2</li></ul>
	Scope Management Process	
	Plan Scope Management	
	Collect Requirements	
	<ul><li>Interviewing; Focus Groups; facilitated Workshops;</li></ul>	
	Brainstorming; Nominal Group Technique; Delphi	
	Technique; Mind Maps; Affinity Diagrams; Surveys;	
	Observations; Prototypes	
	<ul> <li>Group Decision Making (Dictatorship; Majority;</li> </ul>	
	Plurality; Consensus)	
	<ul> <li>Requirements Documentation</li> </ul>	
	<ul> <li>Balance Stakeholders' Requirements</li> </ul>	
	<ul> <li>Resolving Competing Requirements</li> </ul>	
	<ul> <li>Requirements Management Plan</li> </ul>	
	<ul> <li>Requirements Traceability Matrix</li> </ul>	
	Define Scope	
	<ul> <li>Project Scope Statement</li> </ul>	
	Create Work Breakdown Structure (WBS)	
	<ul><li>Work Packages</li></ul>	
	<ul> <li>WBS Dictionary</li> </ul>	
	<ul> <li>Scope Baseline</li> </ul>	
	Validate Scope	
	<ul> <li>Accepted Deliverables</li> </ul>	
	<ul><li>Change Requests</li></ul>	
	Control Scope	
	<ul> <li>Project and Product Scope Performance</li> </ul>	
	<ul> <li>Scope Baseline Changes</li> </ul>	
		• Test # 3
(3)	Time Management	
	Plan Schedule Management	
	Define Activities	
	<ul> <li>Generate Milestones</li> </ul>	
	Sequence Activities	
	<ul> <li>Methods to Draw Network Diagrams (Precedence</li> </ul>	
	Diagramming Method; Activity-on-Node; Arrow	
	Diagramming Method), Important Concepts: Finish	
	Start; Finish Finish; Start Start; Start Finish	
	<ul> <li>Types of Dependencies</li> </ul>	
	(Mandatory/Discretionary/External	
	Estimate Activity Resources	
	<ul> <li>Resources: Equipment, Materials and People</li> </ul>	

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	<ul> <li>Resource Breakdown Structure</li> <li>Estimate Activity Durations</li> <li>Estimating (One Point; Analogous; Parametric; Heuristics; PERT)</li> <li>Reserve Analysis</li> <li>Develop Schedule</li> <li>Schedule Network Analysis (Critical Path Method; Schedule Compression; What-if Scenario i.e. Monte Carlo; Resource Levelling and Critical Chain Method.</li> <li>Project Schedule Formats: Milestone Charts; Gantt Charts</li> <li>Control Schedule</li> </ul>	
(4)	Cost Management  Plan Cost Management Plan Control Account Control Threshold Life Cycle Costing Value Analysis Cost Risk Estimate Costs Types of Costs (Variable, Fixed, Direct and Indirect) Cost Estimating Resource Cost Rates Reserve Analysis Cost of Quality Accuracy of Estimates  Cost Aggregation Contingency Reserve Management Reserve Management Reserve Cost Baseline Cost Budget Control Costs Progress Reporting (50/50; 20/80; 0/100 Rules) Earned Value Measurements	• Test # 4
(5)	Quality Management	• Test # 5

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- · Definition of Quality
- Definition of Quality Management
- Quality Theorists
- Gold Plating
- Prevention Over Inspection
- Marginal Analysis
- Continuous Improvement (or Kaizen)
- Just in Time (JIT)
- Total Quality Management (TQM)
- Responsibility for Quality
- Impact of Poor Quality
- Grade
- Precision Vs Accuracy
- Costs of Conformance and Non-Conformance
- Plan Quality Management
  - Cost Benefit Analysis
  - Cost of Quality (COQ)
  - Control Charts
  - Benchmarking
  - Design of Experiments (DOE)
  - Statistical Sampling
  - Flow Charting
- Perform Quality Assurance
  - Plan Quality & Perform Quality Control

#### Tools/Techniques

- Quality Audits
- Process Analysis
- Control Quality
  - Mutual Exclusivity
  - Probability
  - Normal Distribution
  - Statistical Independence
  - Standard Deviation (or Sigma)
  - 3 or 6 Sigma
- Basic Tools of Quality
  - Cause and Effect Diagram (Fishbone Diagram, Ishikawa Diagram)
  - Flowchart
  - Histogram
  - Pareto Chart
  - Run Chart
  - Scatter Diagram
  - Control Chart

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(6)	Human Resource Management	• Test # 6
(0)	Roles and Responsibilities	i rest ii o
	<ul> <li>Project Sponsor / Initiator</li> </ul>	
	<ul> <li>Project Team</li> </ul>	
	Stakeholders	
	<ul><li>Functional Manager</li></ul>	
	Portfolio Manager	
	Program Manager	
	<ul> <li>Human Resource Responsibilities</li> </ul>	
	Plan Human Resource Management	
	<ul> <li>Organizational Process Assets</li> </ul>	
	<ul> <li>Organization Charts and Position Descriptions</li> </ul>	
	Responsibility Assignment Matrix	
	RACI Chart	
	Resource Breakdown Structure	
	<ul> <li>Position Descriptions</li> </ul>	
	Human Resource Plan	
	Staffing Management Plan	
	Recognition and Rewards System	
	Acquire Project Team	
	Inputs to Acquire Project Team	
	Pre-assignment	
	Negotiation	
	Virtual Teams	
	Halo Effect	
	Develop Project Team	
	Team Building Activities (Forming, Storming,	
	Norming, Performing, Adjourning)	
	Training	
	Ground Rules	
	Co-Location (War Room)	
	Give out Recognition and Rewards	
	Team Performance Assessment	
	Manage Project Team     Training	
	<ul><li>Training</li><li>Observation and Conversation</li></ul>	
	<ul> <li>Project Performance Appraisals</li> <li>Powers of the Project Manager (Formal Reward)</li> </ul>	
	i owers of the Project Manager (Formal) Newara,	
	Penalty, Expert, Referent)  Management and Leadership Styles	
	Widning Emerit and Leader simp Styles	
	<ul> <li>Conflict Management (Confronting, Compromising,</li> </ul>	

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	Avoidance, Smoothing, Collaborating, Forcing)	
	<ul><li>Problem Solving Method</li></ul>	
	Expectancy Theory	
	<ul> <li>Arbitration</li> </ul>	
	<ul> <li>Perquisites (Perks)</li> </ul>	
	Fringe Benefits	
	Motivation Theories	
	<ul> <li>McGregor's Theory of X and Y</li> </ul>	
	,	
	Maslow's Hierarchy of Needs	
	<ul> <li>David McClelland's Theory of Needs</li> </ul>	
	<ul><li>Herzberg's Theory</li></ul>	
<b>/-</b> >		
(7)	Communications Management	• Test # 7
	<ul> <li>Plan Communications Management</li> </ul>	
	<ul> <li>Occurrence of Communication</li> </ul>	
	<ul><li>Expression of Communication</li></ul>	
	<ul> <li>Communication Models</li> </ul>	
	<ul> <li>Effective Communication</li> </ul>	
	Effective Listening	
	<ul> <li>Communication Technology</li> </ul>	
	Communication Methods	
	<ul> <li>Control of Communications</li> </ul>	
	<ul> <li>Meetings</li> </ul>	
	<ul> <li>Communication Channels</li> </ul>	
	<ul> <li>Communication Management Plan</li> </ul>	
	Manage Communications	
	<ul> <li>Control Communications</li> </ul>	
	<ul> <li>Tools and Techniques</li> </ul>	
	<ul> <li>Status Reports</li> </ul>	
	<ul><li>Progress Reports</li></ul>	
	<ul> <li>Trend Reports</li> </ul>	
	<ul><li>Forecasting Reports</li></ul>	
	<ul> <li>Variance Reports</li> </ul>	
	· ·	
	Larried Value Reports	
	<ul> <li>Lessons Learned Documentation</li> </ul>	
(0)	Diek Managament	• Test # 8
(8)	Risk Management	
	Risk Management	
	Uncertainty	
	Risk Factors	
	Risk Averse	
	<ul> <li>Risk Tolerances and Thresholds</li> </ul>	
	<ul> <li>Plan Risk Management</li> </ul>	

- Risk Management Plan
- Risk categories
- Types of Risks
- Identify Risks
  - Documentation Reviews
  - Information gathering Techniques
  - Root Cause Analysis
  - Delphi Technique
  - SWOT Analysis
  - Checklist Analysis
  - Assumptions Analysis
  - Diagramming Techniques
  - Cause and Effect Diagrams
  - Influence Diagrams
  - Risk Register
- Perform Qualitative Risk Analysis
  - Probability and Impact Matrix
  - Risk Data Quality Assessment
  - Risk Categorization
  - Risk Urgency Assessment
  - Probability and Impact Assessment
- Perform Quantitative Risk Analysis
  - Determining Quantitative Probability and Impact
  - Expected Monetary Value Analysis
  - Monte Carlo Analysis
  - Decision Tree
  - Sensitivity Analysis (Tornado Diagram)
- Plan Risk Responses
  - Risk Mitigation Strategies
  - Threats (Avoid, Mitigate, Transfer)
  - Opportunities (Exploit, Enhance, Share)
  - Passive Acceptance
  - Active Acceptance
- Control Risks
  - Workarounds
  - Risk Assessments
  - Risk Audits
  - Reserve Analysis
  - Status Meetings
  - Closing of Risks
  - Variance and Trend Analysis
  - Common Risk Management Errors
  - Technical Performance Measurement

# Western Continuing Studies

(9)	Procurement Management  Buyer and Seller Project Manager's Role Centralized and De-centralized Contracting Plan Procurements  Make or Buy Decision Procurement Management Plan Procurement Statement of Work (Functional, Performance, Design) Contract Types Siperior Fixed Price (FPIF, FPAF, FPEPA, FFP, LS, Purchase Order) Similar Cost Reimbursable (CC, CPF, CPPC, CPFF, CPIF, CPAF) Important Concepts: Incentives, Payments, Trade-offs, Risk and Contract Type, Price, Profit, Fee, Cost, Target Price, Sharing ration, Ceiling Price, Point of Total Assumption, Non-disclosure Agreement, Joint Venture, Special Provisions, Terms and Conditions, Breach/Default, Force Majeure, Indemnification, Material Breach, Retainage, Time is of the essence, Work for Hire, Letter of Intent, Privity, Non-competitive Procurement Procurement Procurement Documents (RFP, RFI, IFB, RFB, RFQ) Source Selection Criteria (Single Source, Sole Source) Conduct Procurements Advertising Prequalification Bidder Conferences Price Quote or Bid Proposal Review Weighting System Independent Estimates Screening System	• Test#9
	<ul><li>Past Performance History</li><li>Presentations</li></ul>	
	<ul><li>Negotiations</li></ul>	

- Contract
- Control Procurements
  - Constructive Change
  - Conflict
  - Contract Change Control System
  - Procurement Performance Review
  - Claims Administration
  - Records Management System
  - Contract Interpretation (Analysis of the Intent)
  - Termination
- Close Procurements
  - Administrative Closure
  - Procurement Closure
  - Formal Acceptance and Closure

#### (10) Stakeholder Management

- Identify Stakeholders
  - Stakeholder Analysis
  - Stakeholder Register
  - Stakeholder Management Strategy
- Plan Stakeholder Management
- Manage Stakeholder Expectations
  - Expectations are Beliefs
  - Communication Blockers
- Control Stakeholder Engagement

#### **Professional and Social Responsibility**

- Vision and Purpose
- Ethical Application of Project Management
- PMI-isms in Professional and Social Responsibility
- Categories of Professional and Social Responsibility
- Aspirational and Mandatory Conduct
- Responsibility
- Respect
- Fairness
- Honesty

• Test # 10