

# PROJECT MANAGEMENT (PM)

## PM 800 Introduction to Project Management (3 Credits)

This is a survey course introducing project management as a profession and an academic field of study. It provides the foundation for more advanced project management courses. It is a prerequisite to other courses in the degree program unless permission is granted. The student is introduced to the Project Management Body of Knowledge, (PMBOK® Guide), as well as other international standards. Students will examine key tools and methodologies in use to manage large, complex projects and explore how these tools and techniques can be used to assess the project's overall status, its variance from the project plan and evaluate alternative recovery scenarios. Students will be introduced to the roles of project and program managers in today's enterprise and the tradeoffs they make among triple constraints of scope, time and cost.

## PM 803 Cost and Budget Management (3 Credits)

Cost and Budget Management will examine current cost estimating techniques and commonly used tools that can be applied to evaluate project alternatives: break-even, life cycle costing, net present value and others. Students will learn to apply the earned value methodology to describe a project status for both schedule and cost in terms of the dollar value of work performed. Students will also investigate how financial elements such as cost categorization, depreciation, net present value and project duration can impact the project decision making process. PREREQUISITE: PM 801 Project Planning and Scheduling and PM 802 Risk Management.

## PM 811 Project Chartering and Planning (3 Credits)

Studies have shown that nearly 75% of commercial projects are deemed to have not met the expectations of their funding sponsors. As professionals committed to effective project management, how do we change this paradigm? In this course, students start by learning how a project charter refines a project idea in a more concrete project narrative. Students develop a project's work breakdown structure and establish a realistic project schedule and budget. Students conduct project risk identification and assessment sessions to evaluate the overall risk posture of the project. Students will define the communications and change control plans.

**Prerequisite(s):** PM 800 Introduction to Project Management.

## PM 813 Delivering Business Value (3 Credits)

This course provides students insight into the techniques and tools that can be applied to evaluate a project and the project's true status. Students will apply the earned value methodology to determine a project's true status for both schedule and cost in terms of the dollar value of work performed. Students will explore risk management and other techniques used to ensure project success. Within this course, students will have the opportunity to apply the various methods and tools used in a successful project to classroom assignments, in preparation for doing the same within their capstone projects. Students consider how projects can be accomplished within an agile or adaptive project management methodology.

**Prerequisite(s):** PM 811 Project Chartering and Planning.

## PM 815 Negotiation, Contracting and Procurement (3 Credits)

Outsourcing is becoming more and more critical in today's economic environment making it essential that a project manager in the multi-national marketplace have a firm understanding of the negotiating, contracting and procurement environment and potential pitfalls. This course will address the interdependence of the make-or-buy decision-making process and the success of many projects in terms of risk management as well as achieving acceptable financial goals. Students will explore contracting pitfalls by addressing and proving an understanding of the key factors, regulations, and vocabulary which are critical for the project manager to be able to employ in their business dealings with contracting and legal departments.

**Prerequisite(s):** PM 800 Introduction to Project Management.

## PM 817 Managing Project Portfolios (3 Credits)

This course addresses the processes and techniques used in the strategic management of project portfolios. Students examine the decision-making tools, techniques, and rationale used to reach consensus for funding specific programs and projects and to bring them into the tactical layer for execution. Students will study various objective methodologies, benefit measurement techniques as well as market analytics, competitive analysis, and market driven approaches. Strategic planning and management, and its link to Project Portfolio Management, will also be discussed during this course. Students identify their capstone project and create the associated Proposal/Business Case and Project Charter.

**Prerequisite(s):** PM 813 Delivering Business Value.

## PM 819 Total Quality Management (3 Credits)

A sound quality management strategy and plan are critical in today's complex business organizations and projects. Students in this course will review the history of quality efforts from Deming, Juran and Crosby in the setting of the original quality efforts, international competition, and the concept of Six-Sigma as initiated by the Motorola Corporation in response to that competition. The use of the Baldrige Excellence Framework for designing, implementing, and improving project and organizational practices that influence quality will be explored. Students will examine multiple specific process improvement approaches they could apply within their organizational / project quality plans, approaches such as preventions over Inspection and continuous Improvement of processes.

## PM 820 Introduction to Lean Practices (1 Credit)

A knowledge of lean management and how it enhances business operations is required for today's project managers and operational managers. In this introductory course, students will explore the concepts and principles associated with lean management approaches. Through the study of actual lean implementations, students will develop an understanding of the relationship between lean management and agile management.

## PM 821 Introduction to Theory of Constraints (2 Credits)

In this 2-credit introductory course, students will develop an understanding of the concepts and principles associated with the Theory of Constraints and Critical Chain thinking. We will explore the proposition that project managers should focus on those activities that are resource-constrained as opposed to the project's critical path when monitoring project progress. We will analyse case studies that test and extend these ideas in real-world scenarios. Through the review of these case studies, students will develop an understanding of the principles associated with the theory of constraints, critical chain approaches, and how they might be used within project management.

**PM 850 Project Management Capstone (3 Credits)**

This integrative capstone is the final course in the Master of Science in Project Management program. All other required coursework must have been completed prior to receiving approval to register for this course. Students in this course will have the opportunity to apply the principles learned to the entire program of study and will demonstrate competence by integrating and applying those skills to a real-world scenario. Students will apply knowledge in a group case study setting while documenting the decision-making process, and will analyze methodologies and rationale for selecting those methodologies in a project log including templates designed and used, case study analytical results, and decision outcome analysis/results. PREREQUISITE: All required coursework must be completed.