



# PLANT ENGINEERING & MAINTENANCE ASSOCIATION OF CANADA

*association canadienne en maintenance et ingénierie d'usine*

## MAINTENANCE MANAGEMENT PROFESSIONAL (MMP) PROGRAM



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Our Maintenance Management Professional (MMP) program provides training and accreditation to those aspiring to, or already in, maintenance management or supervisory positions. Certified MMPs are qualified to provide cost effective management of a business' physical assets.

Graduates have the knowledge and skills to drive improvements in business processes, operational productivity, cost reductions, safety, environmental compliance, increased economic life of assets, return on investment and effective communication between departments.

## THE PROGRAM

Developed and authorized by the Plant Engineering and Maintenance Association of Canada the "Maintenance Management Professional (MMP) Education and Certification Program" consists of eight modules.

Modules are structured to progressively help participants understand and embrace the various concepts necessary to be effective as a maintenance and physical asset management professional. While not mandatory, it is recommended that the modules be taken and completed in the order in which they are listed.

### ● MODULE 1

#### **AN INTEGRATED STRATEGY FOR MAINTENANCE MANAGEMENT** (15 Hours)

Based on the course text, Uptime, Module 1 develops the framework for thinking about a strategic approach to maintenance management that is integrated with the business. Drawing on the elements presented in the "Maintenance Excellence Pyramid" of Uptime, participants in Module 1 will learn how strategy, people, basic care, materials management, performance management, work management, support systems, and tools such as RCM (Reliability Centered Maintenance) and RCFA (Root Cause Failure Analysis) can work together to build a culture of excellence.

### ● MODULE 2

#### **PRODUCTION AND OPERATIONS MANAGEMENT FOR THE MAINTENANCE MANAGER** (30 Hours)

This module links maintenance strategies with those of production and operations. By studying production methodologies maintenance managers will be better prepared to apply these techniques to improve the performance of their business unit and align their efforts to support the production goals of the organization.

- Aligning maintenance strategy with corporate strategy.
- Continuous Improvement.
- Implementing quality control.
- Overview of production systems and operations scheduling.
- Lean manufacturing principles and techniques.



### ● MODULE 3

#### **HUMAN RESOURCES MANAGEMENT FOR THE MAINTENANCE MANAGER** (30 Hours)

This module looks at how human resources practices relate to the maintenance environment. Topics covered include the role of human resources in maintenance management, meeting legal requirements, recruitment and selection, orientation training and employee development, proper application of performance appraisals, the union management interface, managing change through effective leadership and managing safety in the workplace.

- Understanding the legal aspects of human resource management.
- Dealing with worker issues within the maintenance environment.
- Human resource planning.
- Compensation management.
- Applying recruitment and selection procedures.
- Conducting performance appraisals.
- Implementing performance management.
- Managing safety within a maintenance environment.

## ● MODULE 4

### FINANCIAL MANAGEMENT FOR THE MAINTENANCE MANAGER (30 Hours)

This module focuses on the application of accounting and finance principles as it pertains to the maintenance management role. The module will give you an understanding of the foundation principles of accounting and cover the four main pillars of accounting knowledge the maintenance manager needs to support a successful maintenance department. These four main pillars are: Project Analysis, Budgeting/ Forecasting, Cost Analysis for Managerial Decisions, and MRO Inventory.

- Basic understanding of accounting principles.
- Understanding how costs flow in an enterprise system.
- Project analysis.
- Budgeting/forecasting.
- Cost analysis for management decisions.
- MRO inventory management.

## ● MODULE 6

### MAINTENANCE WORK MANAGEMENT (30 Hours)

Effective Work Management ensures that the right maintenance work is done on the correct assets, at the right time, using the right resources and the right tools. This module provides a study of the fundamental principles of the work management process in addition to the basics of planning, scheduling and work coordination methods.

Upon completion of this module, participants will have a sound understanding of work management processes, practices and tools, and how to effectively apply them to achieve the goals of improving reliability while minimizing interruptions to production processes and/ or services through:

- Proper prioritization of identified work.
- The effective use of resources.
- Aligning maintenance activities with production or service schedules.
- Integrating proactive maintenance tactics.
- Developing and documenting maintenance strategies.
- Integrating proactive maintenance tactics.

## ● MODULE 8

### CAPSTONE COURSE (30 Hours)

Through the application of the key learning elements from the previous seven MMP modules participants apply the principles, latest concepts and techniques to a final project. Working in small groups or teams, participants will select a project that will audit, assess and improve their current maintenance departments or develop a new maintenance strategy

in their company or resolve a significant maintenance issue within their departments. There is also the option of developing a “Greenfield” maintenance strategy and program upon approval from the instructor. The assessment of the Capstone projects is intended to qualify participants for their MMP certification and designation.

**Recommended Pre-requisite: Modules 1, 2, 3, 4, 5, 6 & 7**

## ● MODULE 5

### DEVELOPING AND IMPLEMENTING MAINTENANCE TACTICS (30 Hours)

This module focuses on maintenance efforts to ensure that physical assets safely, capably, reliably and repeatedly perform to their designed specifications. The focus is on techniques to develop maintenance tactics that will address how the assets are used, how they are likely to fail, the consequence of failure, and identifying maintenance tactics that are both feasible and worth doing. After developing tactics, the module will focus on how tactics need to be implemented and their effectiveness tracked.

- Understanding the “Operating Context”.
- Defining asset function and functional failures.
- Failure Mode and Effect Analysis, FMEA.
- Planning maintenance tasks.
- Decision diagram.
- Understanding consequences and the application of the RCM.
- Maintenance task identification.
- Implementing preventive maintenance.
- Introducing condition based monitoring (CBM) into the maintenance equation.

## ● MODULE 7

### COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEMS (CMMS) (30 Hours)

This module focuses on maintenance efforts to ensure that physical assets safely, capably, reliably and repeatedly perform to their designed specifications. The focus is on techniques to develop maintenance tactics that will address how the assets are used, how they are likely to fail, the consequence of failure, and identifying maintenance tactics that are both feasible and worth doing. After developing tactics, the module will focus on how tactics need to be implemented and their effectiveness tracked.

- Integrating use of CMMS with other departments.
- Project planning and organization.
- Implementing team development.
- Assigning team roles and responsibilities.
- Integrating the CMMS activities:
  - Financial.
  - Work/job planning.
  - Data collection.
  - Preventive & predictive Maintenance.



"The support of leadership within my organization had a tremendous impact on how successful I was in the MMP program. Their investment and encouragement in my education has delivered improvements to both my team and the overall organization. I continue to share the knowledge that I gained from the program, instructors, and other participants from around the world in my role as a manager."

**Hassan Sadiq, MMP**  
*Supervisor Materials Management*  
*Canadian Natural Resources Ltd.*  
Edmonton, AB



## MAINTENANCE MANAGEMENT PROFESSIONAL (MMP) EDUCATION AND CERTIFICATION PROGRAM

### How to enroll

MMP is offered at selected colleges, technical institutes and universities across Canada in both official languages. The courses are typically offered at a pace that enables working professionals to achieve certification in just over two years.

**[www.pemac.org/education](http://www.pemac.org/education)**

### Certification Completion Requirements

Individuals who successfully complete all 8 Modules and are members of the Plant Engineering and Maintenance Association of Canada can apply for the "Maintenance Management Professional" (MMP) designation from PEMAC.

### Program Recognition

MMP completion qualifies Journeymen Tradespeople for Blue Seal Certification of business competencies through Alberta Apprenticeship and Industry Training.

"Continuing Education Unit Credits" for Alberta and Ontario Water/Waste Water Operators.

PEMAC is recognized by the Society for Maintenance and Reliability Professionals (SMRP) as an "Approved Education Provider". Consider studying MMP if you are seeking to achieve -or- maintain your CMRP certification.

Course completion qualifies for Continuing Education Units for Engineers and Engineering Technologists. Consult your provincial engineering or CET association for more information.

For a list of employers who have mentioned MMP Certification in their job postings see the "MMP Certification" page.

# FOR MORE INFORMATION CONTACT:



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