Fleming College Continuing Education and Corporate Training

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MANUFACTURING OPERATIONS CERTIFICATE

TRAINING OVERVIEW

This certificate has been designed in consultation with leading manufacturing industry partners in response to the changing dynamic of the manufacturing industry in the global marketplace. The program provides relevant, up-to-date and practical training for manufacturing employees in promoting a culture of lean processes and continuous improvement, building more effective work teams, and enhancing individual responsibility for manufacturing processes.

Curriculum Design

The curriculum is delivered in intensive periods, either on-site at a specific manufacturing company or on campus, in a series of interconnecting modules. New concepts are boosted with frequent applied learning activities. Problem-solving, critical thinking, and effective communication are major components throughout the program.

The curriculum is specifically designed to develop skills in:

- Testing, modifying, and suggesting solutions to manufacturing processes to increase productivity and reduce down-time while conforming to all safety and standard operation protocols.
- Taking personal responsibility for ensuring that tasks are carried out with optimal efficiency and production is optimized.
- Analyzing and applying strategies that support continuous improvement (such as Lean, 5-S, Kaizen, Plan-Do-Check-Act).
- Acquiring the skills that contribute to being an effective member of a manufacturing team and/or operation.
- Understanding the Key Performance Indicators (KPI) function within manufacturing to implement strategies to improve KPI results.
- Using basic techniques to plan and conduct a process improvement, including defining and performing basic measures of success.
- Understanding and applying basic techniques for sustaining a process improvement over time.
- Communicating clearly and concisely in both written and oral formats in appropriate formal or informal style.

The flexible delivery of this program allows for company specific on-site delivery for larger groups or a combination of classroom and on-site visits for a mixed group of employees from smaller companies.

TOPICS

Preparing for Manufacturing Operations
You will become familiar with basic theories and overall program expectations in this introductory module, which covers the skills and knowledge required to prepare for the manufacturing operations program.

Manufacturing Realities in the Global Marketplace
Gain an understanding of how Ontario and Canada-based manufacturing functions within the global context. Special focus is on how, with increased competition from overseas manufacturers, local manufacturing can continue to be strong, successful, and efficient.

Complying with Statutory Regulations
Acquire the skills and knowledge required to retrieve and/or apply statutory regulations and organizational safety requirements in accordance with approved procedures.

Analyzing Improvements
Develop the expertise required to analyze the results of inspection and confirm quality of production. We will focus on the application and demonstration of specific data collection practices and processes related to the outcome of evaluation activities.

Contributing to Effective Teamwork
Discover the dynamics that enable working effectively as a team member within a manufacturing environment. Emphasis is placed on understanding behaviours and practices which promote a positive working environment.

Continuous Improvement
Grow your value as team member by incorporating the tools for supporting the continuous improvement of manufacturing operations into your work. You will become familiar with a framework and basic tools for making impactful improvements to processes. This will be based on a standard process improvement methodology such as Plan Do Check Act.

Root Cause Analysis
Gain the strategic skills to use basic tools and process to conduct root cause analysis. Your skills will support decision-making around all parts of the manufacturing process, including preparing, processing, packaging and concluding manufacturing operations. Examples of tools include the Fishbone Diagram and the 5 Whys.

Waste Reduction
Building on the course material of the Process Improvement and Root Cause Analysis modules, we focus specifically on using the data and process improvement tools available to reduce manufacturing waste. You will work through various case studies and/or real workplace examples.

Downtime Analysis
Building on the course material of the Process Improvement and Root Cause Analysis modules, we delve into using the data and process improvement tools available to analyse downtime of the manufacturing line. Results of this analysis can be used to generate project ideas for the final module. Various case studies and/or real workplace examples will give you a greater understanding of the concepts.

Performance Improvement Project
This capstone module integrates the concepts from the previous modules into a single project. You will gain the opportunity to put the concepts learned in the modules of this training into practical experience. The module provides a framework for the application of skills resulting in an identified performance improvement.