MS IN LEAN MANUFACTURING

Home Department: School of Management

Available: Only available through Kettering University Online (https://online.kettering.edu/?schoolsrc=42786).

Program Advisor/Contact:
Contact Kettering University Online
kuonline@kettering.edu
810.762.9827

Program Overview
The Master of Science in Lean Manufacturing (https://online.kettering.edu/programs/masters/lean-manufacturing-masters-online/?schoolsrc=42786) program concentrates on the key elements of lean agile manufacturing operations. Students in this program can expect to complete in-depth studies of systems, processes and practices in manufacturing facilities. This discipline gives students exposure to many elements of manufacturing including lean production systems, work analysis, materials handling, quality systems, manufacturing and management metrics, as well as cutting-edge practices such as lean and agile manufacturing. The degree aims to enhance the student’s technical skills with lean methodology and analysis techniques as well as management skills to complement their technical ability, enabling the student to take a broader perspective on the manufacturing industry as a whole.

Program Educational Objective
- Develop and implement lean and competitive manufacturing facilities
- Apply appropriate quality systems tools
- Implement and evaluate suitable production control systems
- Identify and implement the requirements of a successful supply chain
- Develop a skill set to identify and manage ‘change’ effectively

Program Outcomes
The program is intended for individuals in manufacturing who aspire to have a more comprehensive knowledge in lean and agile manufacturing operations and practices. Graduates of this program can expect to possess a thorough understanding of manufacturing methods, analytical methods to make decisions within a manufacturing facility, and innovation skills to adapt to changes within the global/cross-cultural environment. This program does not require a thesis.

Prerequisite
An undergraduate course in statistics is required as a prerequisite to taking courses in the Master of Science in Lean Manufacturing program. For those students who do not have an undergraduate course in statistics, MGMT-522 Business Statistics is offered online to provide foundational understanding. The foundation in statistics is intended to prepare students to effectively participate and succeed in the coursework involved in this program.

Program Curriculum Requirements
Completion of 40 credits as follows:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credit</th>
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<tbody>
<tr>
<td>MFGO-601 Globally Integrated Manufacturing Company</td>
<td>4</td>
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<tr>
<td>MFGO-619 Six Sigma for Manufacturing</td>
<td>4</td>
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<td>MFGO-633 Lean Production Systems</td>
<td>4</td>
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<td>MFGO-635 Work Analysis for Lean Production Application</td>
<td>4</td>
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<tr>
<td>MFGO-639 Quality Assurance and Reliability</td>
<td>4</td>
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<td>MFGO-649 Metrics for Lean Production Improvement</td>
<td>4</td>
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<tr>
<td>MFGO-659 Integrative Capstone Project</td>
<td>4</td>
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Certificate
Select three 4-credit courses in one of the Certificates listed below.

Total Credit Hours
40

Global Leadership Certificate
- BUSN-689 Organizational Behavior | 4 |
- MGMT-649 Ethics and Leadership | 4 |
- MGMT-679 Leadership | 4 |

Total Credit Hours
12

Operations Management Certificate
- IME-676 Lean Six Sigma | 4 |
- MGMT-609 Technology Management | 4 |
- MGMT-619 Project and Change Management | 4 |

Total Credit Hours
12

Supply Chain and ERP Certificate
- IME-652 Designing Value in the Supply Chain | 4 |
- IME-654 Enterprise Resource Planning | 4 |
- MGMT-669 Supply Chain Operations | 4 |

Total Credit Hours
12

Healthcare Management Certificate
- IME-656 Engineering for Healthcare Systems | 4 |
- IME-676 Lean Six Sigma | 4 |
- or MGMT-669 Supply Chain Operations | 4 |
- HMGT-609 Healthcare Management | 4 |

Total Credit Hours
12