

LOG351e Lean Six Sigma for Supply Chains

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

E-Learning: BLENDED - Learning is done MAINLY online using interactive study materials in Canvas. Students receive guidance and support from online instructors via discussion forums and emails. This is supplemented with SOME face-to-face sessions. If the course has an exam component, this will be administered on-campus.

Synopsis:

This course brings together the key aspects of Lean manufacturing and Six Sigma management principles into a structured approach to improve supply chain performance. Lean Six Sigma combines the effects of both Lean which balances the flow of the process, and Six Sigma which reduces process variation, to balance and focus the process. This course aims to provide students with an overview of the Lean Six Sigma framework, and the tools and techniques that are frequently used in Lean Six Sigma applications to improve supply chain performance. It also highlights several critical success factors that can guide an organisation to successful Lean Six Sigma deployment.

Topics:

- Understanding Lean Six Sigma
- A Walk Through DMAIC: Define, Measure, Analyse, Improve, Control
- Toolkit for Define Phase
- Toolkit for Measure Phase
- Toolkit for Analyse Phase
- Toolkit for Improve Phase
- Toolkit for Control Phase
- Basic Financial Concepts
- Financial Ratio Analysis
- Supply Chain Strategies
- Lean Supply Chains
- Lean Six Sigma Applications
- Pitfalls in Lean Six Sigma Deployment
- Managing Success in Lean Six Sigma

Textbooks:

Martin, J.W: Lean Six Sigma for Supply Chain Management: The 10-Step Solution Process
MCGRAW
ISBN-13: 9781307268454-AA

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Learning Outcome:

- Show the importance of Lean Six Sigma to improve supply chain performance.
- Examine the key attributes of the tools and techniques in the Define, Measure and Analyse phases of DMAIC.
- Propose suitable tools and techniques to complete activities in the Define, Measure and Analyse phases of DMAIC.
- Discuss the key attributes of the tools and techniques in the Improve and Control phases of DMAIC.
- Plan suitable tools and techniques to complete activities in the Improve and Control phases of DMAIC.
- Analyse financial metrics in Lean Six Sigma projects.
- Appraise Lean Six Sigma projects to improve supply chain operations.
- Indicate the conditions for successful Lean Six Sigma deployment.
- Recommend key performance metrics that can be employed to manage supply chain performance.
- Relate the strategies and techniques in Lean Six Sigma to the work environment.
- Develop the essential knowledge and interpersonal skills to work effectively in a team.
- Demonstrate written proficiency.

| Continuous Assessment Component | Weightage (%) |
|--|----------------------|
| PRE-COURSE QUIZ | 2 |
| PRE-COURSE QUIZ | 2 |
| PRE-COURSE QUIZ | 2 |
| PARTICIPATION | 6 |
| GROUP BASED ASSIGNMENT | 38 |
| Sub-Total | 50 |

| Examinable Component | Weightage (%) |
|-----------------------------|----------------------|
| Written Exam | 50 |
| Sub-Total | 50 |

Weightage Total **100**