

Lean Six Sigma

Module Information

2022.01, Approved

Summary Information

Module Code	6557SLIBM
Formal Module Title	Lean Six Sigma
Owning School	Business and Management
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Sri Lanka Institute of Information Technology

Learning Methods

Learning Method Type	Hours
Lecture	11
Seminar	11
Workshop	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	28 Weeks

Aims and Outcomes

Aims	This module aims to equip students with the skills necessary to embark on a Lean Six Sigma project. Successful learners will receive certificates in Yellow and Green Belt level.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Apply Lean principles to a selected project;
MLO2	2	Apply the DMAIC methodology and its associated Six Sigma tools to a selected project;
MLO3	3	Identify, analyse and evaluate business process problems independently, make reasonable judgments, draw valid conclusions and make practical recommendations as to process improvement.

Module Content

Outline Syllabus	1. The business case for Lean and Six Sigma;2. Understanding processes and their role in business performance;3. What is Six Sigma and Six Sigma performance;4. Introduction to the DMAIC methodology;5. Introduction to Lean Thinking;6. Lean versus Six Sigma - Differences and Similarities;7. An introduction to Lean Metrics – Takt Time, Cycle Time and OEE (Overall Equipment Effectiveness);8. Tools and Techniques for continuous improvement and their use within the SixSigma DMAIC;9. An introduction to Six Sigma metrics – costs of quality, defects per millionopportunities (DPMO), Sigma Quality Level (SQL) and Yield;10. Six Sigma project selection;11. The DMAIC methodology in detail;12. Variation and Statistical Process Control (SPC);13. Critical Success Factors for Lean Six Sigma.
Module Overview	
Additional Information	Lean and Six Sigma methodologies both individually and combined are proven methodologies to identify and eliminate defects, waste, rework and other failures that results in financial savings and improved customer satisfaction for manufacturing and service industries including Healthcare and Financial Services. Qualified /Certificated Six Sigma practitioners are highly employable and command high salaries in the organizations for which they work. This module is designed to give you the necessary understanding and tools and techniques equivalent to Lean SixSigma Yellow Belt certification. All students who achieve more than 60% in the examination element of the assignment will receive a Lean Six Sigma Yellow / Green Belt Certificate of performance.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Green Belt Open Book MC	50	1	MLO1, MLO2, MLO3
Report	Case Study DMAIC application	50	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Jackie Douglas	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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