

Maintenance Engineering

Module Information

2022.01, Approved

Summary Information

Module Code	4510NCCG
Formal Module Title	Maintenance Engineering
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Nelson and Colne College Group

Learning Methods

Learning Method Type	Hours
Lecture	60

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks
SEP-PAR	PAR	September	12 Weeks

SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks
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Aims and Outcomes

Aims	This module introduces students to the importance of equipment maintenance programmes, the benefits that well-maintained equipment brings to an organisation and the risk factors it faces if maintenance programmes and processes are not considered or implemented. Topics included in this module are: statutory regulations, organisational safety requirements, maintenance strategies, safe working and maintenance techniques. On successful completion of this module students will be able to explain the importance of compliance with statutory regulations associated with asset maintenance, illustrate maintenance techniques adopted by the industry, work safely whilst performing maintenance tasks in an industrial environment and identify inspection and maintenance techniques.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Analyse the impact of relevant statutory regulations and organisational safety requirements on the industrial workplace.
MLO2	2	Differentiate between the merits and use of different types of maintenance strategies in an industrial workplace.
MLO3	3	Illustrate competence in working safely by correctly identifying the hazards and risks associated with maintenance techniques.
MLO4	4	Apply effective inspection and maintenance techniques relative to a particular specialisation e.g. mechanical or electrical.

Module Content

Outline Syllabus	Statutory regulations Maintenance strategies: component failure, bathtub curve, design life, periodic maintenance; reactive, preventive, predictive and reliability centred maintenance Safety concerns: rules for employee safety, development and implementation of safe schemes of work, lone working, permit to work (PTW), emergency procedures, hazard identification and assessment of risk associated with identified hazard, use of control measures, production of a Risk Assessment & Method Statement for a maintenance procedure Maintenance techniques: isolation and making safe, adherence to PTW process and shift changeover procedures, in-service (live) preventative maintenance Compliance with manufacturer's recommended inspection and maintenance procedures, using manufacturer's data as case studies Measurements: electrical and mechanical, mechanical operations test, functional tests e.g. exercise switching mechanisms, recording data and maintenance records
Module Overview	
Additional Information	

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Case Study Analysis	50	0	MLO1, MLO2
Essay	Assignment	50	0	MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Christian Matthews	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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