Module Proforma

Approved, 2022.02

Summary Information

Module Code	5566NCCG
Formal Module Title	Life-cycle Assessment
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Graham Sherwood	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings

Partner Module Team

Contact Name	Applies to all offerings	Offerings

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	48

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	28 Weeks

Aims and Outcomes

Aims	The module aims to explain the Life Cycle Assessment (LCA) methodology, including the work on quantifying impacts on environment and resources availability. The application of LCA to assess impacts in simple cases will be covered. Furthermore, further and wider cases will be assessed via commercial software (e.g.: Simpapro). Moreover, benefitting from this module, students will learn to appreciate systems thinking and linking LCA with circular economy.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Demonstrate the Life Cycle Assessment methodology including quantifying the impact on environment
MLO2	Implement Life Cycle Assessment for simple cases
MLO3	Apply Life Cycle Assessment for further cases using commercial software
MLO4	Appreciate the system thinking and circular economy as linked to Life Cycle Assessment

Module Content

Outline Syllabus
Introduction to LCA methodsLife cycle inventory analysisImpact assessment methodsLie Cycle interpretationLCA for simple cases The use of Simpapro to study LCA for further casesSystem thinking and Circular economy

Module Overview

Additional Information

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	Individual Report	50	0	MLO2, MLO1
Presentation	Group Presentation	50	0	MLO4, MLO3