Transportation and Infrastructure

Module Information

2022.01, Approved

Summary Information

Module Code	6507CVQR
Formal Module Title	Transportation and Infrastructure
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Oryx Universal College WLL

Learning Methods

Learning Method Type	Hours
Lecture	22
Tutorial	11

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-PAR	PAR	September	12 Weeks

Aims and Outcomes

Aims	To develop an understanding of pavement and drainage design to DMRB, traffic flow and junction design, track bed design, switch and crossing layouts, Climate Resilience, SuDS The module will study recent developments within the field of infrastructure, and students will develop an understanding of innovation and entrepreneurship through consideration of case studies.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Implement traffic flow calculations.
MLO2	2	Critically evaluate highway pavement design, track bed and drainage systems.
MLO3	3	Appraise Switch and Crossing layouts and highway junctions.
MLO4	4	Understand infrastructure as an interdependent system, and appreciate the importance of resilience, particularly in relation to Climate Change.

Module Content

Outline Syllabus	Traffic flow theoryTraffic AssessmentDesign for new pavement foundationsDesign of new pavement constructionThe design of road drainageTrackbed designJunction designSwitch and Crossing layoutsThe interdependence of infrastructureClimate ResilienceSustainable Drainage Systems (SuDS)
Module Overview	
Additional Information	The module develops the students' understanding of how the different infrastructure sectors are connected, and how that can reduce their resilience to extreme events, particularly in relation to Climate Change. It builds on the highway design taught at level 5 and develops their awareness and their ability to evaluate innovation within Civil Engineering.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Examination	100	1.5	MLO1, MLO2, MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Stephen Wylie	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings