

Liverpool John Moores University

Title: Highways and Transport
Status: Definitive
Code: **7061BEPG** (119778)
Version Start Date: 01-08-2016

Owning School/Faculty: Built Environment
Teaching School/Faculty: Computer Science

Team	Leader
Yue Huang	Y

Academic Level: FHEQ7
Credit Value: 10
Total Delivered Hours: 26
Total Learning Hours: 100
Private Study: 74

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12
Seminar	12

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	closed book exam	60	2
Report	AS2	2000 word report	40	

Aims

To develop critical assessment of highway and road pavement design, including maintenance and sustainability considerations.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically analyse the key elements in highway geometric design, its constraints and the balance between safety, cost and environment
- 2 Critically evaluate current developments in road pavement design, materials and performance evaluation
- 3 Carry out Life Cycle Analysis, Carbon Assessment and Whole Life Analysis of road engineering operations, showing due regard for sustainability issues.
- 4 Propose, with justification, improvements to highways

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

closed book exam	1	2	3
2000 word report	4		

Outline Syllabus

Evaluation of road alignment, design speed, capacity assessment and junction design

Use of sustainable pavement materials

Advances in pavement design

Road pavement maintenance and performance evaluation

Sustainable construction in road environment

Road materials recycling and life cycle analysis

Transport modelling and traffic assessment

Learning Activities

lectures and seminars

Notes

A critical evaluation of sustainable road transport infrastructure.