

Module Details	
Module Title	Transportation Studies
Module Code	CSE7019-B
Academic Year	2023/4
Credits	20
School	Department of Civil and Structural Engineering
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Directed Study	160
Lectures	10
Tutorials	10
Practical Classes or Workshops	20

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
<p>This module covers the following aims:</p> <ol style="list-style-type: none"> 1. Evaluate the functions of transportation planning, in order to design priority junctions and road links (in terms of capacity and safety). 2. Calculating and assessing environmental impact on wide determining factors related to road transport infrastructure and road noise. 3. Understanding and applying road transport planning (in order to be able to improve existing planning). 4. Critical evaluation of materials (and advanced materials) and specifications for durable and sustainable highways. 5. Critically analyse existing traffic data to use in design.

Outline Syllabus

Week 1. Introduction to course and Transportation Studies.
 Week 2. Cost Benefit Analysis (COBA). COBA objectives and related calculations.
 Week 3. Road Design. Design issues in relation to traffic flow and safety.
 Week 4. Road Design. Design issues with an emphasis on priority and signal-controlled junctions.
 Week 5. Environmental Assessment. Environmental impact assessment and introduction of its framework.
 Week 6. Traffic Noise. Calculation and predicting traffic noise.
 Week 7. Highway Pavement. Design of highway pavement and various consideration criteria.
 Week 8. Transport Issues. The planning of road transportation and various phases of the planning
 Week 9. Future Aspects. Future planning trend for the road transportation.
 Week 10. Future Aspects. Future policy evolvement for the road transportation.
 Week 11. Summary of the module and discussions.
 Week 12 Revision: Examples, questions and answering.

Learning Outcomes

Outcome Number	Description
1	Evaluate and review advanced road and transportation principles and issues, and examine their applications to common engineering fields.
2	Evaluate and propose transportation solutions to problems arising from analysis.
3	Calculate transportation related issues.
4	Design transportation models using available information and traffic data.

Learning, Teaching and Assessment Strategy

Theoretical understanding and problem solving through face-to-face lectures, staff-led tutorial / example class, practical sessions and directed study.

Summative assessments of this module are conducted by one exam, one lab report and one industrial study coursework (both individual assessments for the report and coursework). All assessment feedback will be given through feedback sessions, and question solution development in classes. These assessments will cover all LO's, and they will thoroughly assess students' understanding of this module. Supplementary assessment is as original.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Coursework Report (including Individual technical report on laboratory data and on industrial study)	40%
Summative	Examination - Closed Book	Examination Closed Book (2.5 Hrs)	60%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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