

ES3G6-15 Transport Engineering

27/28

Department

School of Engineering

Level

Undergraduate Level 2

Module leader

Cate Anthony

Credit value

15

Module duration

24 weeks

Assessment

30% coursework, 70% exam

Study location

University of Warwick main campus, Coventry

Description

Introductory description

ES3G6-15 - Transport Engineering

[Module web page](#)

Module aims

This module introduces students to the principles and current practice of Highway and Transportation Engineering for roads in the UK. The aim is to gain advanced knowledge and understanding of this topic and to develop appropriate analysis and design skills through undertaking a road junction design, supported with commercial software used widely by practitioners.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

Introduction, scope and need for traffic and transport management

Traffic management and information on inter-urban highways * Traffic management and

information in urban networks

Demand management, including access control, road pricing and congestion charging

Public transport management

Environmental traffic management

Parking management and control

Speed management and traffic calming

In-vehicle management systems for driver support, control, safety and information

Evaluation of applications, including the use of macroscopic, mesoscopic and microscopic network modeling

Options and opportunities for Intelligent Transport Systems (ITS)

Case studies

Learning outcomes

By the end of the module, students should be able to:

- Understand and apply knowledge of the principles behind the formation of UK transport policy, and how this affects transport engineering decisions. [C4(M), C15(M)]
- Select and design transport solutions (including roads, junctions, rails and stations) according to requirements/specifications. [C4(M), C5(M)]
- Critique key issues in Highway and Transportation Engineering, including transport law and its application to civil engineering. [C4(M), C15(M)]
- Propose and critically analyse alternative designs and options for transport engineering projects considering sustainability and societal needs. [C4(M), C5(M), C11(M)]
- Demonstrate critical awareness of traffic management and safety. [C15(M)]
- Identify and apply the appropriate design standards for inclusive engineering in transport design. [C4(M), C5(M), C11(M)]
- Select and apply the appropriate modelling techniques for transport systems, appreciating the limitations of these techniques [C3(M), C5(M)]

Indicative reading list

[Reading lists can be found in Talis](#)

Subject specific skills

No subject specific skills defined for this module.

Transferable skills

No transferable skills defined for this module.

Study

Study time

Type	Required
Lectures	20 sessions of 1 hour (13%)
Other activity	19 hours (13%)
Private study	111 hours (74%)
Total	150 hours

Private study description

111 hours of guided independent learning (including VLE use and support from Employer)

Other activity description

7 hours of example classes

2 hours of revision classes

10 hours of webinars

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group D2

	Weighting	Study time	Eligible for self-certification
Assessment component			
Case Study	30%		Yes (extension)
Case Study (6 pages max)			

Reassessment component is the same

Assessment component		
Online Examination	70%	No

~Platforms - AEP

- Online examination: No Answerbook required
- Students may use a calculator
- Graph paper

Reassessment component is the same

Feedback on assessment

Model solutions of questions for exam preparation.
Cohort level feedback on the online examination.
Individual feedback on the online Moodle quiz.

[Past exam papers for ES3G6](#)

Availability

Pre-requisites

1 (Core)

Courses

This module is Core for:

- DESA-H221 Undergraduate Civil and Infrastructure Engineering (Non-integrated Degree Apprenticeship)
 - Year 4 of H221 Civil and Infrastructure Engineering (Degree Apprenticeship)
 - Year 4 of H221 Civil and Infrastructure Engineering (Degree Apprenticeship)