

MSc Transport

This document provides a definitive record of the main features of the programme and the learning outcomes that a typical student may reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities provided. This programme specification is intended as a reference point for prospective students, current students, external examiners and academic and support staff involved in delivering the programme and enabling student development and achievement.

Programme Information

Programme Title	Transport		
Award(s)	MSc		
Programme Code	H2UR (1YFT)		
Associateship	Not applicable		
Awarding Institution(s)	Imperial College London	University College London (UCL)	
Teaching Institution(s)	Imperial College London	University College London (UCL)	
Faculty	Faculty of Engineering		
Department	Department of Civil and Environmental Engineering		
Main Location of Study	South Kensington Campus		
Mode and Period of Study	1 academic year, full-time		
Cohort Entry Points	Annually in October		
Relevant QAA Benchmark Statement(s) and/or other external reference points	Master's Degrees in Engineering		
Total Credits	ECTS:	90	ECTS: 180
FHEQ Level	Level 7		
EHEA Level	2 nd cycle		
External Accrerator(s)	The Institution of Structural Engineers (IStructE) Accreditation received: 2002 Accreditation renewal: 2026 Institution of Civil Engineers (ICE) Accreditation received: 2002 Accreditation renewal: 2026 Institute of Highway Engineers (IHIE)		

	Accreditation received: 2016 Accreditation renewal: 2026 The Chartered Institute of Highways & Transportation (CIHT) Accreditation received: 2016 Accreditation renewal: 2026 The Permanent Way Institution (PWI) Accreditation received: 2022 Accreditation renewal: 2026
Specification Details	
Student cohorts covered by specification	2022-23 entry
Person responsible for the specification	Dr Panagiotis Angeloudis MSc Programme Director
Date of introduction of programme	1980
Date of programme specification/revision	August 2022
Programme Overview	
<p>This MSc course is offered jointly with University College London (UCL). The objectives of this course are:</p> <ul style="list-style-type: none"> • To provide a systematic understanding of the causes and motivations of personal travel and good movement and of the means by which movement takes place; • To provide a thorough grounding in techniques for analysing transport problems and developing and implementing policies and measures for resolving such problems; • To develop appreciation of the importance and methods of evaluating transport projects, plans and policies, taking into account the political, social, environmental, commercial and financial issues involved. <p>In pursuit of these objectives, the course places emphasis on road and rail transport in the more industrialised countries, whilst recognising the important roles of other forms of transport and interchange with them, and the different context in which transport problems present themselves in less industrialised countries. Subject to this emphasis, the fundamentals are addressed in ways that are relevant to all means of transport and to every kind of society. The course is designed to equip its graduates for work in transport planning, engineering, operations, management, policy and research. All of our MSc courses are career-orientated and cover both theoretical background and practical design considerations. Lectures are given mainly by full-time staff but important contributions are made by visiting professors and guest lecturers who are eminent industrialists. Many of our students continue their studies to undertake research towards a PhD.</p>	

Learning Outcomes

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College degree programme. The Graduate Attributes are available at: www.imperial.ac.uk/students/academic-support/graduate-attributes

Knowledge and Understanding of:

- A selection of the major topics in the subject, their recognition and underlying fundamental principles.
- Research techniques which might include information retrieval, experimental design and statistics, modelling and safety.
- The essential facts, concepts, principles and theories relevant to the students' chosen areas of research.
- Management and communication skills, including problem definition, project design, decision processes, teamwork, written and oral reports, and scientific publications.

Intellectual/Thinking Skills:

- Analyse and solve problems using a multidisciplinary approach, applying professional judgements to balance costs, benefits, safety and social and environmental impact.
- Integrate and critically evaluate information.
- Formulate and apply appropriate solutions.
- Plan, conduct and write-up a programme of individual research.

Practical Skills:

- Plan and execute safely a series of experiments or computations.
- Use laboratory methods or computer-based tools to generate data.
- Analyse results, determine their strength and validity, and make recommendations.
- Prepare technical and design reports.
- Give technical presentations
- Use the scientific literature effectively.

Transferable Skills:

- Communicate effectively through oral presentations, computer processing and presentations, and written reports.
- Apply knowledge and modelling skills.
- Management skills: decision processes, objective criteria, problem definition, project design and evaluation needs.
- Integrate and evaluate information from a variety of sources.
- Transfer techniques and solutions from one discipline to another.

- Use Information and Communications Technology.
- Manage resources and time.
- Learn independently with open-mindedness and critical enquiry.
- Learn effectively for the purpose of continuing professional development.

Entry Requirements

Academic Requirement	<p>Normally a 2.1 UK Bachelor's Degree with Honours in a relevant subject (particularly in subjects such as Civil Engineering, as well as other branches of Engineering, Natural Sciences, Earth Sciences and other numerate disciplines) (or a comparable qualification recognised by the College).</p> <p>Additionally, an A-level in Mathematics at grade B is required.</p>
Non-academic Requirements	<p>Applicants with relevant industrial and professional experience may also be considered. Special cases, based on relevant experience, may be considered in some circumstances.</p>
English Language Requirement	<p>Standard requirement IELTS 6.5 with a minimum of 6.0 in each element or equivalent.</p>

Applicants may be invited to interview with one or more members of staff, or to undertake additional entry assessments as appropriate.

The programme's competency standards document can be found at:
<http://www.imperial.ac.uk/media/imperial-college/faculty-of-engineering/civil/public/msc/Competency-Standards.pdf>

Learning & Teaching Strategy

Scheduled Learning & Teaching Methods	<ul style="list-style-type: none"> • Lectures • Tutorials • Group Discussions and Group work • Presentation skills • Progress tests • Computer laboratory sessions • Practical work • Individual research project • Seminars and Workshops • Site Visits
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E-learning & Blended Learning Methods	<ul style="list-style-type: none"> • Blackboard Learn (VLE) • Online assignments and coursework • Anonymous feedback evaluations 				
Project Learning Methods	<ul style="list-style-type: none"> • Group coursework • Individual research project • Research Methodology teaching 				
Assessment Strategy					
Assessment Methods	<p>To complete the requirements of the degree, all assessments must be undertaken to the appropriate level and include the following:</p> <ul style="list-style-type: none"> • Individual and group coursework assignments • Written examinations • A research dissertation and 3 Minute Thesis (3MT) video presentation • Group projects and presentations 				
Academic Feedback Policy					
<p>The following are the mechanisms in place for providing prompt feedback to students on their performance in coursework and examinations and processes for monitoring:</p> <ol style="list-style-type: none"> 1. Coursework, marked and annotated by academic staff, is given back to students to a three-week return schedule, sometimes with the assistance of trained GTAs. 2. Academic staff may also provide verbal feedback in class or distribute written overviews. 3. Provisional feedback is given to all students following the July Sub-Board of Examiners meeting. 					
Re-sit Policy					
<p>The College's Policy on Re-sits is available at: http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/</p>					
Mitigating Circumstances Policy					
<p>The College's Policy on Mitigating Circumstances is available at: http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/</p>					
Programme Structure					
Full-time	Pre-session	Term One	Term Two	Term Three	Term Four

Core Modules	0	6	0	0	0
Elective Modules	0	0	4	0	0
Projects	0	0	1		
Assessment Dates & Deadlines					
Written Examinations	April-May				
Coursework Assessments	Continuous				
Project Deadlines	September				
Practical Assessments	Continuous				
Assessment Structure					
Marking Scheme					
<p>The Transport cluster assessments comprises three distinct elements: examinations, coursework and the research project, each of which has to be satisfied separately.</p> <p>The examination and coursework elements are further broken down into assessment for individual modules, known as components.</p> <p>The MSc degree is awarded to any candidate who achieves all the following:</p> <ol style="list-style-type: none"> 1. A mark of not less than 50% separately in all examinations*; AND 2. A mark of not less than 50% in the research project; AND 3. The submission of all set coursework and an aggregate mark of not less than 50% in the coursework element 4. No more than 10 ECTS, relating to elective modules, to be compensated. <p>In line with the policy on assessment of advanced postgraduate courses provided by Imperial College London, and in compliance with the requirements of the Engineering Council (UK) on compensation and condonement:</p> <ul style="list-style-type: none"> - no compensation will be given in assessments in which a candidate has achieved less than 40% in one or more of the individual module assessments. - Compensation of marks in the range 40%-49.5% may be permitted up to a maximum of 10 ECTS (or one module) – this applies only to modules designated as elective. Modules designated as core cannot be compensated. <p>Provided that all the above criteria are satisfied, the MSc degree will be awarded in one of the following classifications:</p> <p>Pass (see above), OR</p> <p>Pass with Merit, A candidate will normally be considered for the award of a degree with Merit if they satisfy the following criteria:</p>					

1. The aggregate examination mark achieved at the first attempt is no less than 60%; AND
2. The research project mark achieved at the first attempt is no less than 60%; AND
3. The aggregate coursework mark achieved at the first attempt is no less than 60%, AND
4. No modules have been compensated.

Pass with Distinction A candidate will normally be considered for the award of a degree with Distinction if they satisfy the following criteria:

1. The aggregate examination mark achieved at the first attempt is no less than 70%; AND
2. The research project mark achieved at the first attempt is no less than 70%; AND
3. The aggregate coursework mark achieved at the first attempt is no less than 70%; AND
4. No modules have been compensated.

A candidate re-entering any part of the examination will normally be credited with a minimum pass mark if successful.

Module Weightings			
Code	Module	Weighting	ECTS
Autumn Term			
CIVE97116	Transport and its Context	6.67%	6
CIVE97117	Quantitative Methods	6.67%	6
CIVE97118	Transport Engineering and Operations	6.67%	6
CIVE97120	Transport Demand and its Modelling	6.67%	6
CIVE97119	Transport Economics	6.67%	6
CIVE97121	Transport Policy	6.67%	6
Spring Term			
CIVE97122	Highway Engineering	6.67%	6
CIVE97123	Road Traffic Theory and its Application	6.67%	6
CIVE97124	Public Transport	6.67%	6
CIVE97125	Quantitative Techniques for Transport Engineering and Planning	6.67%	6
CIVE97126	Advanced Transport Modelling	6.67%	6
CIVE97127	Intelligent Transport Systems	6.67%	6
CIVE97128	Design of Accessible Transport Systems	6.67%	6
CIVE97129	Freight Transport	6.67%	6
CIVE97130	Air Traffic Management	6.67%	6
CIVE97133	Railway Management, Operation and Engineering	6.67%	6
CIVE97134	Transport, Environmental Impacts and Safety	6.67%	6
CIVE97140	Urban Design and Street planning	6.67%	6
Summer Term			
CIVE97132	Research project - Transport	33.33%	30

Note:

- Modules may not be offered in every year.

Pre-requisites, Co-requisites and incompatibilities

Site	ModCode	Module Name	Pre-Requisite	Linked Modules	Incompatibility
Imperial	CIVE97122	Highway Engineering	NA	NA	CIVE97126 - Advanced Transport Modelling
UCL	CIVE97123	Road Traffic Theory and its Application [Capped at 15 students]	CIVE97118 Transport Engineering and Operations	Students who take CIVE97123 must take CIVE97125 either during the same term or during an earlier session	CIVE97128 - Design of Accessible Transport Systems
Imperial	CIVE97125	Quantitative Techniques for Transport Engineering and Planning	CIVE97117 Quantitative Methods	NA	NA
Imperial	CIVE97126	Advanced Transport Modelling	CIVE97120 Transport Demand and its Modelling	Students who take CIVE97126 must take CIVE97125 either during the same term or during an earlier session	CIVE97122 - Highway Engineering
Imperial	CIVE97127	Intelligent Transport Systems	NA	NA	NA
UCL	CIVE97128	Design of Accessible Transport Systems [Capped at 30 students]	NA	NA	CIVE97123 - Road Traffic Theory and its Application
Imperial	CIVE97129	Freight Transport	NA	NA	CIVE97130 - Air Traffic Management
Imperial	CIVE97130	Air Traffic Management	NA	NA	CIVE97129 - Freight Transport
Pre-requisite: is defined as a module which you are required to have undertaken BEFORE the module to which it is linked					
Incompatibility: module is not available to students registered on the modules/programmes listed					

Indicative Module List											
Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place- ment Hours	Total Hours	% Written Exam	% Course- work	% Practical	FHEQ Level	ECTS
(CIVE97116)	Transport and its Context	CORE	30	95	0	155	0%	100%	0%	7	6
(CIVE97117)	Quantitative Methods	CORE	30	95	0	125	67%	33%	0%	7	6
(CIVE97118)	Transport Engineering and Operations	CORE	30	95	0	125	67%	33%	0%	7	6
(CIVE97119)	Transport Economics	CORE	30	95	0	125	67%	33%	0%	7	6
(CIVE97120)	Transport Demand and its Modelling	CORE	36	89	0	125	67%	33%	0%	7	6
(CIVE97121)	Transport Policy	CORE	25	100	0	125	67%	33%	0%	7	6
(CIVE97122)	Highway Engineering	ELECTIVE	30	95	0	125	67%	33%	0%	7	6
(CIVE97123)	Road Traffic Theory and its Application	ELECTIVE	30	95	0	125	67%	33%	0%	7	6
(CIVE97124)	Public Transport	ELECTIVE	40	85	0	125	67%	33%	0%	7	6
(CIVE97125)	Quantitative Techniques for Transport Engineering and Planning	ELECTIVE	28	97	0	125	67%	33%	0%	7	6
(CIVE97126)	Advanced Transport Modelling	ELECTIVE	36	89	0	125	67%	33%	0%	7	6
(CIVE97127)	Intelligent Transport Systems	ELECTIVE	32	95	0	127	67%	33%	0%	7	6
(CIVE97128)	Design of Accessible Transport Systems	ELECTIVE	40	85	0	125	67%	33%	0%	7	6
(CIVE97129)	Freight Transport	ELECTIVE	35	90	0	125	67%	33%	0%	7	6

Indicative Module List											
Code	Title	Core/ Elective	L&T Hours	Ind. Study Hours	Place- ment Hours	Total Hours	% Written Exam	% Course- work	% Practical	FHEQ Level	ECTS
(CIVE97130)	Air Traffic Management	ELECTIVE	30	95	0	125	67%	33%	0%	7	6
(CIVE97133)	Railway Management, Operation and Engineering	ELECTIVE	22	105	0	127	67%	33%	0%	7	6
(CIVE97134)	Transport, Environmental Impacts and Safety	ELECTIVE	30	95	0	125	67%	33%	0%	7	6
(CIVE97140)	Urban Design and Street planning	ELECTIVE	40	85	0	125	67%	33%	0%	7	6
(CIVE97132)	Research Project (Transport)	CORE	0	750	0	750	0%	100%	0%	7	30

Supporting Information

The Programme Handbook is available at: <http://www.imperial.ac.uk/civil-engineering/prospective-students/handbooks/>

The Module Handbook is available at: <http://www.imperial.ac.uk/civil-engineering/prospective-students/handbooks/>

The College's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements

The College's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance

The College's Academic and Examination Regulations can be found at: <https://www.imperial.ac.uk/about/governance/academic-governance/regulations>

Imperial College is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. In 2007 a Supplemental Charter and Statutes was granted by HM Queen Elizabeth II. This Supplemental Charter, which came into force on the date of the College's Centenary, 8th July 2007, established the College as a University with the name and style of "The Imperial College of Science, Technology and Medicine".
<http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/>

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