PROGRAMME SPECIFICATION	

1 Awarding Institution	Newcastle University
2 Teaching Institution	Newcastle University
3 Final Award	MSc
4 Programme Title	Transport Planning and … a. Engineering b. Business Management c. Environment d. ITS e. Modelling Postgraduate Diploma in Transport MSc Transport Engineering, Planning and Management
5 Programme Code(s)	a. TP& Engineering: 5039F/P; 5277F/P, 5293P b. TP& Business Management: 5047F/P; 5278F/P c. TP& Environment: 5167F/P; 5279F/P d. TP& ITS: 5187F/P; 5280F/P e. TP& Modelling: 5367F/P; 5368F/P Postgraduate Diploma in Transport 3432F/P MSc Transport Engineering, Planning and Management 5439 F and 5440F
6 Programme Accreditation	CILT, JBM (ICE, IStructE, CIHT, IHIE), TPPQ MSc Transport Engineering, Planning and Management 5439 F and 5440F TBC
7 QAA Subject Benchmark(s)	Engineering
8 FHEQ Level	7
9 Last updated	May 2022

10 Programme Aims
The programme aims: 1) To produce postgraduates who have a systematic understanding of Transport Planning and a specialism and a critical awareness of current problems in those fields, informed by the latest research carried out at the University and elsewhere. 2) To give postgraduates a comprehensive understanding of appropriate techniques to the planning, management and operation of transport systems with an awareness of their responsibilities to society and the environment; 3) To encourage students to use their conceptual understanding to evaluate the latest research and methodologies, or to develop their own; 4) To convert good honours graduates in associated disciplines into marketable postgraduates with transferable skills who should be able to pursue a career in transportation in either the private or public sector; 5) To provide opportunities for candidates to develop subject-specific skills, cognitive skills, a range of transferable skills and practical skills; 6) To offer experience in the planning and execution of an extended research project in the form of a dissertation; and 7) To provide a qualification which meets the designated learning outcomes at level 7 of the FHEQ.

8) To provide a programme that meets the accreditation requirements of the Joint Board of Moderators (JBM www.jbm.org.uk) for Further Learning for a Chartered Engineer (CEng) for candidates who have already acquired an Accredited CEng (Partial) BEng(Hons) or an Accredited IEng (Full) BEng/BSc (Hons) undergraduate first degree.
9) To provide a programme that meets the accreditation requirements for the Transport Planning Professional (TPP) qualification, administered by the Chartered Institution of Highways and Transportation (CIHT) on behalf of the CIHT and the Transport Planning Society (TPS).
10) To provide a programme that meets the accreditation requirements for the Transport Planning Professional (TPP) qualification, administered by the Chartered Institution of Highways and Transportation (CIHT) on behalf of the CIHT and the Transport Planning Society (TPS).
11) To provide a programme designed to meets the standards set by the Engineering Council's Accreditation of Higher Education Programmes (AHEP3, May 2014). http://www.engc.org.uk/engcdocuments/internet/Website/Accreditation%20of%20Higher%20Education%20Programmes%20third%20edition%20(1).pdf
12) To provide a programme that develops the skills, attributes and values defined in the University's Graduate Skills Framework.

11 Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas. The programme outcomes have references to the benchmark statements for Engineering (E).

Knowledge and Understanding

On completing the programme students should be able to demonstrate knowledge and understanding of:
A1. The advanced theoretical concepts, analytical tools and associated empirical methods of transport planning and the chosen specialism.
A2. The transport issues that confront modern society and of the global and national policy context in which transport activities take place.
A3. Appropriate research techniques that provide:
(i) a basic understanding of statistical analysis ;
(ii) a working knowledge of appropriate spread-sheet software; and
(iii) the basic skills needed to prepare a research dissertation.
A4. Selected areas of specialist knowledge and understanding related to the specialism of the selected degree option.
A5. A transport-related subject through a supervised period of extended study, providing a deeper understanding than that made possible by following a taught programme of study.
A6. Undertaking research, analysis or design processes given an appropriate level of supervision.
A7. Applications of IT to the selected fields of study.
A8. Management principles including professional, ethical and safety responsibilities .

Teaching and Learning Methods

Acquisition of A1 and A2 is through a combination of lectures, seminars, tutorials, demonstrations, computer laboratory activities and visiting lecturers from industry. Outcome A3 is achieved by lectures, computer practicals and preparation and oral presentation of a research brief. A4 is achieved through a combination of lectures, seminars, tutorials, demonstrations, computer laboratory activities and visiting lecturers from industry for specialist areas of study. Acquisition of A5 and A6 is through literature reviews, data acquisition, analysis and interpretation and the preparation of a research dissertation. Outcome A7 is achieved by lectures, tutorials and where appropriate, hands-on computer exercises. Lectures, course notes and research studies teach the broader professional outcomes A8.

Assessment Strategy

Formative assessment occurs through tutorial examples and coursework. The primary means of assessing factual knowledge is the closed book unseen examination. This is supported by assessed coursework and case studies, which involve both written and oral

presentations. In-depth individual learning frequently forms part of the project, which is assessed by dissertation.

Intellectual Skills

On completing the programme students should be able to:
B1. Select and apply appropriate analytical tools for modelling and assessing relevant problems.
B2. Use engineering and operational principles in the development of solutions to practical problems.
B3. Select and apply appropriate computer-based methods for modelling and analysing problems in transport.
B4. Set clear objectives, assemble, process and analyse information relevant to a specialist subject, interpret and form judgements from the collected evidence and express reasoned conclusions which make a contribution to the subject.
B5. Collect and analyse field data using basic statistical techniques and interpretation together with appropriate software.
B6. Produce solutions to problems through the application of engineering knowledge and understanding.
B7. Undertake technical risk evaluation.

Teaching and Learning Methods

Where appropriate B.1-B.2 are reinforced in lectures, but learning is principally in tutorials and assignments. Outcome B.3 is initially encountered in compulsory lectures and practical classes, but is developed principally during specialist modules and research dissertations. The acquisition of B.4 and B.5 occurs through the compulsory research dissertation and Research Methods courses, but also occurs in specialist modules. B.6 is introduced in lectures and developed through tutorials, seminars, case studies and the research dissertation. Outcome B.7 is included in some specialist lectures but is primarily taught on an individual basis as part of the dissertation supervision.

Assessment Strategy

Unseen and open-book examinations are used to assess intellectual abilities. Assessed coursework provides further opportunities to demonstrate intellect and ability. The project, which is assessed by dissertation, and provides evidence of the ability to carry out a research project.

Practical Skills

On completing the programme students should be able to:
C1. Use relevant test and measurement equipment.
C2. Carry out Computing Laboratory work.
C3. Plan, execute and report a research project.
C4. Use transport engineering IT tools.
C5. Search and retrieve information and develop ideas further.
C6. Present and defend economic and social arguments on issues of topical interest.
C7. Interpret and critically evaluate the results of empirical research in transport.

Teaching and Learning Methods

Outcomes C.1-C.3 are acquired principally through the research dissertation but are also taught in the Research Methods and specialist modules. Acquisition of C.4 is initially through lectures, developed through hand-on exercises and assignments. C.5 is introduced through the Research Methods module but the research dissertation is the principal vehicle for acquisition. C.6 and C.7 are taught through lectures, seminars, tutorials, oral presentations, and hands-on computer experience gained through the compulsory and specialist modules.

Assessment Strategy

Outcomes C.1-C.7 are not explicitly assessed, but are necessary to successfully complete coursework and project requirements. Participants also carry out a significant level of self-assessment, which is encouraged during tutorials, seminars, etc. Summative assessment is through individual and group assignments, presentations and examinations.

Transferable/Key Skills

On completing the programme students should be able to:
D1. Manipulate and present relevant primary and secondary data in a variety of ways.
D2. Use scientific evidence-based methods in the solution of problems.

D3. Create and innovate in the solution of problems.
D4. Effectively communicate with specialist and non-specialist audiences.
D5. Work independently and in teams in a range of situations, preparing for life-long learning.
D6 Efficiently use general IT skills
D7 Manage time and resources, plan laboratory-based programmes, assess hazards and risks and work safely
D8 Exercise initiative and personal responsibility
D9. Support a self-motivated learning style.
D10. Support a self-awareness to the extent of recognising his or her own limitations and knowing when to seek help.

Teaching and Learning Methods

Outcomes D.1-D.10 permeate through all teaching and learning activities. D.1, D.3, D.8-D.10 are particularly relevant to the research dissertation.

Assessment Strategy

Skills D.1-D.10 are essential to complete examination and assignments to a satisfactory standard. Outcomes D.1-D.4, D.9 and D.10 are essential to complete the dissertation satisfactorily.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

Every M.Sc. student studies 180 credits over the academic year. The taught courses, comprising 120 credits, are taught in Semesters 1 and 2, and the 60 credits associated with the dissertation are notionally allocated to part of the second semester and the summer period.

Key features of the programme (including what makes the programme distinctive)

The M.Sc. year occupies the full 12-month period, with the summer period (June-August) available for students to use for the research dissertation element of the degree. Alternative arrangements can be made for part-time study usually over two years. The programme also allows students to start in the second semester.
The taught modules are delivered generally in a blocked format. A week of study is usually followed by a week of private study allowing time for assimilation, reflective learning and completion of formative coursework.
After completion of the other taught material, students undertake a field trip to France and Germany (or elsewhere as circumstances allow), to see how transport systems operate in less familiar environments, to visit major transport projects operating and under construction and to hear lectures and presentations on transport research and practice in a contrasting context.
Students are expected to commence planning their dissertation early in the academic year, preparing their research brief early in the second semester. This encourages good progress and once fulltime work on the dissertation commences after the field trip, deeper research can be undertaken.
The degree programme is supplemented by research seminars, site visits and engagement with local industry and practitioners through professional institutions.

Programme regulations (link to on-line version)

-R5440F-5439F.pdf (ncl.ac.uk)

13 Support for Student Learning

The Student Services portal provides links to key services and other information and is available at: *https://my.ncl.ac.uk/students/*

Induction
During the first week of the first semester students attend an induction programme. New students will be given a general introduction to University life and the University's principal support services and general information about the School and their programme, as described in the Degree Programme Handbook. New and continuing students will be given

detailed programme information and the timetable of lectures/practicals/labs/ tutorials/etc. All new students must attend a Health and Safety Induction Course. Additional Health and Safety briefings are given for specific activities as required. The International Office offers an additional induction programme for overseas students.

Study skills support
Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification. Some of this material, e.g. time management is covered in the appropriate Induction Programme. Students are explicitly tutored on their approach to both group and individual projects.

Numeracy support is available through Maths Aid and help with academic writing is available from the Writing Development Centre (further information is available from the Robinson Library).

Academic and Pastoral support
Each undergraduate and taught postgraduate student will be assigned a personal tutor.* A personal tutor is one part of a wider network of advice and guidance available to students to support their personal and general academic development. The module leader acts as the first point of contact for subject-specific academic advice. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Student-Staff Committee, and/or at the Board of Studies. Within the academic unit, students may also receive additional academic and pastoral advice from a range of other student-facing staff including degree programme directors, dissertation/project supervisors, and administrative support staff.
*Arrangements may vary for students taking special types of provision.

The University also offers a wide range of institutional services and support upon which students can call, such as the Writing Development Centre, Careers Service and Student Wellbeing Service. This includes one-to-one counselling and guidance or group sessions / workshops on a range of topics, such as emotional issues e.g. stress and anxiety, student finance and budgeting, disability matters etc. There is specialist support available for students with dyslexia and mental health issues. Furthermore, the Student Union operates a Student Advice Centre, which can provide advocacy and support to students on a range of topics including housing, debt, legal issues etc.

Support for students with disabilities
The University's Disability Support team provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their studies.

Learning resources
The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and the University's IT Service (NUIT), which supports campus-wide computing facilities.

All new students whose first language is not English are required to take an English Language Proficiency Test. This is administered by INTO Newcastle University Centre on behalf of Newcastle University. Where appropriate, in-sessional language training can be provided. The INTO Newcastle University Centre houses a range of resources which may be particularly appropriate for those interested in an Erasmus exchange.

14 Methods for evaluating and improving the quality and standards of teaching and learning

Module reviews
All modules are subject to review by questionnaires which are considered by the Board of Studies. Changes to, or the introduction of new, modules are considered at the Board of

Studies. Student opinion is sought at the Student-Staff Committee and/or the Board of Studies. The introduction of new modules and major changes to existing modules are subject to approval by the Faculty Learning, Teaching and Student Experience Committee (FLTSEC).

Programme reviews
The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to FLTSEC. The FLTSEC takes an overview of all programmes within the Faculty and reports any Faculty or institutional issues to the Taught Programmes Sub-Committee.

External Examiner reports
External Examiner reports are considered by the Board of Studies. External Examiner reports and the response to the External Examiner from the Board of Studies are shared with institutional student representatives, through the Student-Staff Committee.

Student evaluations
All modules, and the degree programme, are subject to review through online questionnaires. Informal student evaluation is also obtained at the Student-Staff Committee, and the Board of Studies. The results from student surveys are considered as part of the Annual Monitoring and Review of the programme and any arising actions are captured at programme and School / institutional level and reported to the appropriate body.

Mechanisms for gaining student feedback
Feedback is channelled via the Student-Staff Committee and the Board of Studies.

Faculty and University Review Mechanisms
Every six years degree programmes in each subject area undergo Learning and Teaching Review. This involves both the detailed consideration of a range of documentation, and a review visit by a review team (normally one day in duration) which includes an external subject specialist and a student representative. Following the review a report is produced, which forms the basis for a decision by University Learning, Teaching and Student Experience Committee on whether the programmes reviewed should be re-approved for a further six year period.

Accreditation reports
The degrees* are accredited by the Joint Board of Moderators (Institution of Civil Engineers, Institution of Structural Engineers, Chartered Institution of Highways and Transportation, and the Institute of Highway Incorporated Engineers) as meeting the requirements for Further Learning for a Chartered Engineer (CEng) for candidates who have already acquired an Accredited CEng (Partial) BEng (Hons) or an Accredited IEng (Full) BEng/BSc (Hons) undergraduate first degree, until 2016. See www.jbm.org.uk for further information.

The degrees* are also recognised as an Approved Masters Degree for candidates seeking the Transport Planning Professional Qualification (up to and including the 2017 intake).

* Approval to be confirmed for Transport Planning & Modelling.

Additional mechanisms

15 Regulation of assessment

Generic information regarding University provision is available at the following link.

https://www.ncl.ac.uk/regulations/programme/2019-2020/documents/gsh_progspec_generic_info.pdf

In addition, information relating to the programme is provided in:
The University Prospectus: http://www.ncl.ac.uk/postgraduate/courses/ Degree Programme and University Regulations: http://www.ncl.ac.uk/regulations/docs/

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided.