

Civil Engineering Transport & Planning

MSc Programme



In densely populated regions traffic jams, accidents and delayed public transport are well-known phenomena. New developments as automated driving, Mobility as a Service or advanced rail technologies offer opportunities and raise new challenges. The MSc-track Transport & Planning shapes people to play a pivotal role in solving traffic-related societal problems. Join us to solve these challenges, which are high on the political agenda and often in the news.

Degree	Master of Science
Starts	September
Type	full-time
Credits	120 ECTS, 24 months
Language	English
Application deadline	1 April: International students 1 July: Dutch degree
Tuition fee	€ 18.750 (non EU) € 2.168 (EU)
Scholarships	scholarships.tudelft.nl

Programme

The focus of the MSc-track Transport & Planning is the design, assessment and management of road and railway transport systems and related networks. Core competences of Transport & Planning are Modelling, Design and Empirical research. Empirical data analysis, mathematical modelling and simulation are important methods that are used to study the transport system. This broad programme enables you to build up expertise across all main private and public transport modes for people and goods, ranging from the strategic planning and tactical design to the

operational monitoring and control. You will gain experience through 'learning-by-doing' in the different courses' assignments. Furthermore, the material is directly linked to state-of-the-art research conducted at Transport & Planning. As a student of T&P you will be shaped to become the professional of the future by means of practical assignments performed in close cooperation with industry. You have the freedom to compose a programme according to your interest by choosing from three specialisations and a selection of electives, preceded by a solid basis in the fundamentals of each specialisation as well as in engineering and research skills.

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FIRST YEAR			SECOND YEAR		
CORE COURSES (36 EC) TRANSPORT MODELLING PLANNING AND OPERATIONS OF PUBLIC TRANSPORT SYSTEMS TRANSPORT ENGINEERING AND OPTIMISATION			SPECIAL SUBJECTS (CHOOSE ONE) • ADDITIONAL GRADUATION WORK, RESEARCH PROJECT (10 EC) • ELECTIVE COURSES (10 EC) • INTERNSHIP (10 EC) • MULTIDISCIPLINARY PROJECT, CIVIL ENGINEERING CONSULTANCY PROJECT (10 EC)		
TRACK-RELATED ELECTIVE COURSES (8 EC OR MORE)			ELECTIVE COURSES (10 EC)		
SPECIALISATION COMPULSORY COURSES: TRANSPORT NETWORKS (16 EC) ADVANCED TRANSPORT MODELLING ASSESSMENT OF TRANSPORT INFRASTRUCTURE AND SYSTEMS RESILIENT TRANSPORT URBAN REGIONS, TRANSPORT AND ECONOMICS			MSC THESIS (40EC)		
SPECIALISATION COMPULSORY COURSES: ROAD TRAFFIC SYSTEMS (16 EC) TRAFFIC SAFETY TRAFFIC FLOW MODELLING AND CONTROL PART 2 ACTIVE MODES INTELLIGENT VEHICLES FOR SAFE AND EFFICIENT TRAFFIC: DESIGN AND ASSESSMENT					
SPECIALISATION COMPULSORY COURSES: PUBLIC TRANSPORT AND RAILWAY SYS.(16 EC) ADVANCED TRANSPORT MODELLING RAILWAY OPERATIONS AND CONTROL ADVANCED PUBLIC TRANSPORT OPERATIONS AND MODELLING RAILWAY TRAFFIC MANAGEMENT					

Specialisations

The three specialisations consist of four courses each, and cover different domains in the field of Transport & Planning:

- **Transport Networks**, focussing on analysis and assessment for a broad range of urban and regional transport systems and multimodal networks in terms of mobility, accessibility, reliability, robustness and emissions and so on.
- **Road Traffic Systems**, focussing on operations and management of private traffic flows, i.e. cars, trucks and active modes as cycling and pedestrians, in regular and irregular conditions.
- **Public Transport and Railway Systems**, focussing on design, operations and management of urban and interurban/national passenger transport services, including railway traffic operations and management.

Graduation examples

- Design of robust road networks for climate change
- Spatial impacts of automated vehicles on urban form

- Control strategies for fixed and flexible public transport services
- Design of flexible timetables for resilient railway operations
- Green wave for cyclists based on speed advice and traffic signal optimisation
- Estimating queue lengths using traffic data fusion on urban arterials

Career prospects

Graduates of the Transport & Planning track find a wide range of rewarding public and private sector opportunities in various fields, including research, technology and systems development, policymaking, consultancy, management and education. Given the university's connection to important industries our graduates have good access to job opportunities in the Netherlands and abroad. Furthermore, the world needs specialists in the domain of infrastructure, transport and traffic in order to deal with the challenges we are facing. Therefore, the career prospects of Transport & Planning students are, and will be, excellent.



4th
in Shanghai subject ranking
Transport Science and
Technology 2020



26
first year students in 2020



54%
international students



direct connection with top
research and research facilities



programme with strong broad
engineering perspective and
specialisations



active student association



international orientation of staff,
students and education