Leading the way in the world of transport

<table>
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<tr>
<th>Diploma</th>
<th>Master of Science Civil Engineering Track: Transport &amp; Planning</th>
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<tr>
<td>Credits</td>
<td>120 ECTS, 24 months</td>
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<td>Starts in</td>
<td>September</td>
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<tr>
<td>Language of instruction</td>
<td>English</td>
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<tr>
<td>% International students</td>
<td>20%</td>
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The world, with its ever growing population, faces some major challenges. The demand for transport has grown rapidly in the past decades and is still growing, especially in urbanised regions, while the capacities of the available infrastructure and transport services appear to be stretched to their limits. Moreover, the increasing costs of congestion, poor road safety and environmental pollution are central issues in politics and in everyday life. Simply building new roads might not be the best solution and might not even be feasible. So what are the alternatives? Public transport, traffic management, road pricing? Or would new systems such as automated vehicles or various kinds of Information technology innovations enable new transport concepts that might contribute to sustainable transport? If you are interested in these topics, then perhaps you should choose a Master’s degree in Transport & Planning (T&P).

Programme
In densely populated regions such as the Netherlands, kilometres of traffic gridlock, air pollution, traffic accidents and delayed public transport are all part of the daily fare. The MSc track Transport & Planning trains people to play a pivotal role in resolving such problems. T&P engineers come up with clever ideas to manage traffic flows and develop resilient public transport systems and infrastructural plans. A characteristic of the topics on which they work is that these are often in the news and are high on the political agenda. Within this track, quantitative approaches to infrastructural planning play are paramount. Empirical data analysis and mathematical modelling and simulation are important methods that are used to study the systems for people and goods transport and for road and rail traffic. The programme offers a challenging combination of professional practice and state of the art research.
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 industry figures, our graduates have good access to job opportunities in the Netherlands and abroad. Furthermore, the world needs specialists in the domains of infrastructure, transport and traffic in order to deal with the challenges we face. Therefore, the career prospects of Transport & Planning students are, and will be, excellent for the coming years.

Prof.dr.ir. Bart van Arem

The Transport & Planning track at the TU Delft provides you with all the knowledge and skills you need to contribute to a sustainable transport system, both in practice and in research. This broad programme enables you to build up expertise across all main private and public modes of person and goods transport, and ranging from the strategic planning and design to the operational monitoring and control of transport systems. The courses contain assignments allowing you to gain experience by doing. Furthermore, the material is directly linked to state-of-the-art research conducted at one of the worldwide top 10 research institutes on transport and traffic engineering. At the same time, education is frequently connected with practical applications, where T&P students undertake projects within industry.

Curriculum Transport & Planning

Programme specialisations
The Transport & Planning track has no pre-set specialisations. Next to the compulsory core, students select courses from the pool of electives. They choose their MSc graduation project and can contribute to the research activities of the Transport & Planning section or help industrial partners in one of the many challenges they face.

In brief, Transport & Planning MSc students develop an expertise in three main areas:

- Modelling of transport systems, focusing on the-dynamic interaction between transport supply and demand, looking in particular at the impacts of ICT.
- The design of intermodal transport networks, including the associated node and link infrastructures, mobility services, and transfer facilities.
- Traffic operation and management, with a focus on monitoring and control systems, empirical research into traffic flows, and optimisation.

Examples of graduation projects

- Development and application of a method to design a demand-responsive service operated by fully automated vehicles
- Modelling reliability in public transport demand models
- Integrated rail terminal design for freight-transportation
- Green wave for cyclists based on speed advice and traffic signal optimization
- Estimating queue lengths using traffic data fusion on urban arterials

Those who sometimes wonder how we will move around in the future or how traffic jams originate, should choose the course Transport & Planning. The love of transport sometimes arises at an early age. What young boy did not play with toy cars and trains, right? That traditional world has become much more dynamic in recent years. For example, now that we are using Big Data to make public transportation smarter and more effective, the development of the autonomous car starts to rear its head. The technology has been developed, but how do we ensure a smooth transition to this reality of the near future? In the track Transport & Planning you will get a broad view on the world of transportation and you will learn to come up with creative solutions to these challenges. In almost every course, time is spent on simulations and modeling, which allows you to be able to build a model for every situation. As a T&P student, you will become more conscious of the world that surrounds you. All of a sudden, you will see your theoretical knowledge applied in practice. Every day!
Admission requirements and application procedure

Dutch BSc degree
If you hold a Dutch BSc degree that is closely related to the Master’s programme, you will be admitted directly. However, if your undergraduate programme is not closely related to the Master’s programme you will be required to take additional courses in what is called a bridging programme. This may be a standard programme or it may be tailored to your specific situation.

To see which Master’s programmes are open to you on completion of your Bachelor’s degree at a Dutch university, go to www.doorstroommatrix.nl.

Applications through Studielink:
www.tudelft.studielink.nl.

Dutch HBO degree
An HBO Bachelor’s degree does not qualify you for direct admission to a TU Delft Master’s programme. You will first need to complete a supplementary programme in order to bring your knowledge to the required level. You can do this during your HBO programme by completing a bridging minor, or by means of a bridging programme after completing your HBO diploma.

Entrance requirements for Mathematics and English (some exceptions) apply for both the bridging minor and the bridging programme. See www.hbodoorstroom.tudelft.nl for detailed information. Applications through Studielink: www.tudelft.studielink.nl.

International applicants
To be considered for admission to an MSc programme you will need to meet TU Delft’s general admission requirements.

1. A University Bachelor’s degree (or proof that you have nearly completed a Bachelor’s programme) in a main subject closely related to the MSc programme to which you are applying, with good grades on the key courses.
2. A BSc Cumulative Grade Point Average (CGPA) of at least 75% of the scale maximum.
3. Proof of English language proficiency: A score of at least 90 on the TOEFL or an overall Band score of at least 6.5 on the IELTS (academic version).
   • A TOEFL (Test of English as a Foreign Language) with an overall Band score of at least 90 and a minimum score of 21 for each section. Please note that we only accept the TOEFL Internet-based test.
   • or an IELTS (academic version) with an overall Band score of at least 6.5 and a minimum of 6.0 for each section.
   • or proof that you have passed the University of Cambridge ‘Certificate of Proficiency in English’ or the University of Cambridge ‘Certificate in Advanced English’ with a minimum grade B.

For international students, the application period starts October 1 and closes on April 1. To start up an MSc application, please complete the online application and pay the refundable application fee of €100. Then you will receive an email with the link to upload the required documents.

For more information about the application procedure and studying at TU Delft in general, go to www.admissions.tudelft.nl.

Introduction week
All international students will be welcomed with the award winning introduction programme. The introduction consists of a variety of workshops and projects, during which you will get to know other international students, visit the highlights of Delft and learn the ins and outs of the TU Delft campus. After this very interesting and fun week, you will be introduced to the CEG faculty. You will receive helpful information about the Dutch education system and meet the fellow students from your programme during a variety of social and educational activities.

Further information
Please visit the webpage for all details, complete requirements, deadlines and contact information: www.cive.msc.tudelft.nl.

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February 2018