Transport, Infrastructure and Logistics

Tune the motor of modern day society

- **Diploma**: MSc Transport, Infrastructure and Logistics
- **Credits**: 120 ECTS, 24 months
- **Starts in**: September
- **Language of instruction**: English

In life, there is almost nothing that we do that is not in some way dependent upon transport, infrastructure and logistics. Everything is connected to everything, and good logistics is key to figuratively make the world go round and round. Without transport systems, our complex economies, cities and societies are simply inconceivable. Every day, we use public transport or drive our cars, and we buy products that have been produced a half a world away and shipped by air, land or sea. Transport is everywhere and logistics is the motor behind it, 24/7, 365 days of the year. It influences heavily how we plan our environment and our economy, how politicians determine policies and how everyone make choices about where we live, where we work, which activities we undertake and how we spend our lives.

If there is one engineering discipline which by nature is multi and interdisciplinary, it's TIL. This master offers a comprehensive programme, which aims to provide you with the broad knowledge and skills to understand all phases of the life cycle of transport and logistics systems. From spatial planning and the making of transport policy, through the design of transport systems, supply chains and infrastructure networks, to the operation, management and control of these systems. Throughout the programme you will work on modern day cases in interdisciplinary projects and courses, with students who have different backgrounds and specialisations. Just like in the real world.
Courses constitute a major part of the programme, and some involve projects. There are three types of courses in the programme: fundamentals, specialisations and electives.

**Fundamentals**
All fundamental course is a basic component of the programme that provides broad and systematic insight into the design and analysis of TIL facilities, TIL systems, TILarenas and their environment.

**Specialisations**
Specialisations are packages of courses with a common theme or application domain. Students must choose one out of four specialisations, according to their own interests:
- Specialisation Policy, focusing on the development, policy and assessment of transport, spatial and environmental policy, as well as on infrastructure and spatial planning.
- Specialisation Design, focusing on the design of transport service and infrastructure networks in the context of urban design, spatial planning and regional economy.
- Specialisation Operations, focusing on the operational management and control of traffic in transport systems, as well as on the technologies and methodologies in vehicles that facilitate these processes.
- Specialisation Engineering, focusing on the control and optimisation of transportation and production systems, as well as on the supply chains to which they belong.

**Electives**
The electives are separate courses that students can choose in order to satisfy their specific knowledge needs. The remainder of the programme consists of full projects, including a research project, a design project and thesis.

**Projects and Thesis**

**Courses**

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<th>Operations</th>
<th>Engineering</th>
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<td>• Assessment of Transport Infrastructure and Systems</td>
<td>Advanced Transportation Modelling</td>
<td>Traffic Flow Theory and Simulation</td>
<td>Freight Transportation Systems, Analysis and Modelling</td>
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<td>• Transport &amp; Spatial Planning for Lifelong Mobility</td>
<td>Planning and Operations of Public Transport Systems</td>
<td>Innovations in Dynamic Traffic Management</td>
<td>Logistics and Supply Chain Innovations</td>
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<td>• Designing Transport Policies</td>
<td>Travel Behaviour Research</td>
<td>Real-time Co-ordination for Operational Logistics</td>
<td>Freight Transport Policy</td>
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<td>• Environment Method Module</td>
<td>Airsman Planning &amp; Optimisation</td>
<td>Soft Systems and Simulation Approach</td>
<td>Freight Transport Policy</td>
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<tr>
<td>• People, Movement and Public Space</td>
<td>Airport Operations</td>
<td>Automated Driving, Autonomous Human Factors &amp; Safety</td>
<td>Freight Transport Policy</td>
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**Projects**

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**Thesis**

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**Courses and projects provided by:**

- MSc TIL
- MSc Civil Engineering
- MSc Mechanical Engineering
- MSc Aerospace Engineering
- MSc Architecture

**Projects**

- Use of drones in parcel services.
- Increasing customer satisfaction with public transport.
- Long-term spatial impacts of commuting tax policies.
- Improving Heineken’s export transport modalities.
- Planning safe pedestrian mass events.
- The impact of 3D printing on the world’s spatial economy.

**Career prospects**
After graduating you are capable of designing new road, rail, air and water transportation services for passengers and freight; efficiently managing transportation networks, and designing and controlling complex supply chains. You will find opportunities to work in design, planning, management and control in the field. With added experience on the job you should be able to move into management positions. Most often in public or private organisations such as ministries, consultancy firms, research organizations, and in businesses such as public transportation companies, real estate development firms, large engineering of construction firms, and TIL-related industries. Others choose to broaden their expertise by pursuing advanced academic studies, including doctoral studies in programmes such as those offered at the TRAIL Research School, a Dutch institute for transport, infrastructure and logistics that is operated jointly by several Dutch universities.

**Thesis projects**
Some examples of thesis projects:
- The impact of 3D printing on the world container transport. Design of the inner Schiphol Transport.
- Flows with an optional central pickup and drop-off point.
- Improving Heineken’s export transport modality choices.
- Planning safe pedestrian mass events.
- Long-term spatial impacts of commuting tax policies.
- Increasing customer satisfaction with public transport.
- Use of drones in parcel services.

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“TIL is designed a bit differently than most other studies at TU Delft. Its multidisciplinary approach attracts a variety of students with different study backgrounds, interests and schedules — as you choose many of your own courses. For me personally, I decided to study TIL from an interest in urban planning and mobility. During my bachelor’s in Architecture, I was particularly interested in these aspects, but longed for more technical and analytical thinking and concrete knowledge. After studying TIL for a bit over a year now, I am glad to say it has been a great choice. The courses are inspiring and diverse and my professors are both knowledgeable and welcoming. To indicate the diversity: last semester I worked on a report about Poland’s infrastructure, optimised supply chains, built a traffic model and studied in Bristol, UK for a few months to gain research experience in the field of bicycle sharing systems.”

―Alumna Aafke den Hollander, The Netherlands

“The choice for TIL is a choice for technical education with significant social impact. Among other skills, you will learn how to analyse traffic in order to improve traffic flow and safety on the roads. The necessity is evident. The density of the Dutch motorway network, for instance, is one of the highest in Europe and we spend approximately €2 million hours a year in traffic jams. So, there is enough room for improvement. Even during your study you are involved in current situations and you get plenty of chances to contribute in finding the right road to the best solution for complex traffic situations. Just think of challenging projects like coming up with a solution for improving traffic flows in a metropolitan like Amsterdam, around large events or massive construction projects like the ‘Schiporonzon’ in Delft. Are you more interested in optimizing the logistics of large organizations? That is possible too. There is a wide variety of fields you can specialise in. Together with the electives the specialisations provide a great opportunity to personalise. If you are moved by the world of Transport, Infrastructure and Logistics, then help us keep society in motion!”
Admission requirements and application procedure

**Dutch BSc degree**

If you hold a Dutch BSc degree in Civil Engineering, Electrical Engineering, Aerospace Engineering, Maritime Technology, Systems Engineering, Policy Analysis & Management, Computer Science, Applied Physics, Applied Mathematics and Mechanical Engineering you can be admitted directly.

If you hold a Dutch BSc degree in Architecture, Urbanism & Building Sciences, Industrial Design Engineering, Spatial Planning and Design or Human Geography & Urban and Regional Planning, you can be admitted, but you have to complete a deficiency programme that will be part of your Master’s degree programme.

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 may be submitted 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 by taking a bridging programme after completing your HBO diploma. Entrance requirements for mathematics and English language (some exceptions) apply to both the bridging minor and the bridging programme.

See www.hbodoorstroom.tudelft.nl.

**International applicants**

To be considered for admission to an MSc programme, you will need to meet TU Delft’s general admission requirements:

- 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 for which you are applying, with good grades on the key courses.
- A Bachelor Cumulative Grade Point Average (CGPA) of at least 75% of the scale maximum.
- 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).

For international students, the application period starts on 1 October and closes on 1 April. To apply for an MSc programme, please complete the online application and pay the refundable application fee of €100. You will then receive an email containing a link to upload the required documents.

For more information about the application procedure and studying at TU Delft in general, visit 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 familiarise yourself with the TU Delft campus. After this fun and interesting week, you will be introduced to our three faculties. You will receive helpful information about the Dutch education system and meet fellow students from your programme through a variety of social and educational activities.

For further information

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

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