

## Transport Engineering and Management

| Transport Planning and Modelling   |         |          | Transport and Logistics  |         |          |
|--|---------|----------|--|---------|----------|
| Profile Courses (minimum 30 EC)  | EC      | Quartile | Profile Courses (minimum 30 EC)  | EC      | Quartile |
| Transport Research Project (mandatory)   | 5       | any      | Transport Research Project (mandatory)   | 5       | any      |
| Planning & Process Management  | 5       | 1        | Simulation (IEM)   | 5       | 1        |
| Modelling Consumer Behaviour   | 5       | 1        | Traffic Operations   | 5       | 1        |
| Rail Transport   | 5       | 2        | Traffic Forecasting & Analysis   | 5       | 2        |
| Choice Modelling   | 5       | 2        | Network Modelling & Forecasting  | 5       | 2        |
| Land Use and Transport Interactions  | 5       | 3        | Mathematical Optimization (DMMP)   | 5       | 3        |
| Public Transport Modelling   | 5       | 3        | Public Transport Modelling   | 5       | 3        |
| Sustainable Transport  | 5       | 4        | Traffic Management   | 5       | 4        |
|  |         |          | Network Equilibrium Analysis   | 5       | 4        |
| <b>Profile Electives</b><br>- Free to choose any of the CEM-courses<br>(pay attention to the required prior knowledge)<br><br>- Below: list of CEM-courses that fit best in this profile (in addition to profile courses)<br><br>- Below: courses from other programmes that fit in this profile<br><br>(If you include courses from other programmes, we recommend you to make a selection, such that the majority of the programme is still formed by CEM-courses) |         |          | <b>Profile Electives</b><br>- Free to choose any of the CEM-courses<br>(pay attention to the required prior knowledge)<br><br>- Below: list of CEM-courses that fit best in this profile (in addition to profile courses)<br><br>- Below: courses from other programmes that fit in this profile<br><br>(If you include courses from other programmes, we recommend you to make a selection, such that the majority of the programme is still formed by CEM-courses) |         |          |
| Legal & Governance Aspects   | 7,5     | 1        | Planning & Process Management  | 5       | 1        |
| Traffic Forecasting & Analysis   | 5       | 2        | Construction Supply Chain and Digitization   | 5       | 1        |
| Network Modelling & Forecasting  | 5       | 2        | Statistics and Probability (IEM) 191506103   | 5       | 1        |
| Data Science (CSC)   | 5       | 2 or 3   | Modelling Consumer Behaviour   | 5       | 1        |
| Data Science Additional Topics (CSC)   | 5       | 3        | Operations Research Techniques (IEM) (2018-2019)   | 5       | 1        |
| Public Governance & Policy Networks (PA)   | 5       | 3        | Rail Transport   | 5       | 2        |
| Infrastructure Asset Management  | 5       | 4        | Choice Modelling   | 5       | 2        |
| Traffic Management   | 5       | 4        | Data Science (CSC)   | 5       | 2 or 3   |
| Network Equilibrium Analysis   | 5       | 4        | Land Use and Transport Interactions  | 5       | 3        |
| Geospatial Modelling (2019-2020)   |         |          | Supply Chain Finance (IEM)   | 5       | 3        |
| Smart City Engineering (2019-2020)   |         |          | Data Science Additional Topics (CSC)   | 5       | 3        |
| Transport in Smart Cities (2019-2020)  |         |          | Transportation and Logistics (IEM)   | 5       | 3        |
|  |         |          | Sustainable Transport  | 5       | 4        |
|  |         |          | Infrastructure Asset Management  | 5       | 4        |
|  |         |          | Operations Research Techniques 2 (IEM)   | 5       | 4        |
|  |         |          | Planning and Scheduling (IEM)  | 5       | 4        |
|  |         |          | Warehousing (IEM)  | 5       | 4        |
|  |         |          | Smart City Engineering (2019-2020)   |         |          |
|  |         |          | Transport in Smart Cities (2019-2020)  |         |          |
| Policy Instr and Evaluation in Environm+Sust. (PA) 194106100   | 5       | 3        | Discrete Optimization (AM) 191581100   | 6       | 1 or 2   |
| Policy Analysis in Public & Technol.Domains (PA) 201100077   | 5       | 1        | Cognition and Technical Systems (PSY)  | 5       | 1 or 3   |
| Methods of Sustainability Assessment (PA) 201100073  | 5       | 1        | Optimization Modelling (AM) 191581420  | 5       | 3        |
| Statistics and probability (IEM) 191506103   | 5       | 1        | Scientific Computing (AM) 191551200  | 6       | 3 or 4   |
| Simulation (IEM; follow-up of Module 8 CiT/TBK) 191820210  | 5       | 1        | Human Computer Interaction (PSY)   | 5       | 3        |
| Cognition and Technical Systems (PSY)  | 5       | 1 or 3   | Stochastic Models (part of module 8, BSc-TW) 201400434   | ± 6     | 4        |
| Electric Vehicle System Design (IDE) 201500009   | 5       | 2        | Markov Chains & Stoch.Sim. (part mod 8, BSc-TW) 201400434  | ± 6     | 4        |
| Public Governance & Policy Networks (PA) 194111240   | 5       | 3        |  |         |          |
| Energy, Sustainability and Society (SET)   | 5       | 3        |  |         |          |
| Human Computer Interaction (PSY)   | 5       | 3        |  |         |          |
| <b>Free Electives (max 15 EC)</b>  |         |          | <b>Free Electives (max 15 EC)</b>  |         |          |
| Any course from UT or approved other university*   |         |          | Any course from UT or approved other university*   |         |          |
| <b>Thesis **</b>   |         |          | <b>Thesis **</b>   |         |          |
| Preparation Master Thesis  | 5 or 10 |          | Preparation Master Thesis  | 5 or 10 |          |
| Master Thesis Traffic  | 30      |          | Master Thesis Traffic  | 30      |          |

### PLANNING AND CONSULTATION FOR THE MASTER PROFILES

Track-coordinator: prof. dr. ir. Eric van Berkum  
 Coordinator Master Theses: prof. dr. ir. Eric van Berkum