

Article 11 - Free electives

1. The examination programme includes free elective courses whose amount varies between 19 and 21 credits, based on the chosen specialization. The student can choose elective courses from a list of electives available in the degree programme. The elective list is specified in Section 2. Choices outside this list requires approval from the Board of Examiners after consultation with and approval by the program coordinator.

2. Electives list

An amount of at least **19 credits** for specialization TN, **20 credits** for specializations TO and TG, and **21 credits** for the specialization LS, should be selected from the list below. Choices outside this list must be approved by the BoE.

Course code	Course title	E C
CoSEM-TPM		
SEN115b	Law and institutions	5
SEN171a	Advanced evaluation methods for transport policy decision-making	5
SEN1721	Travel behaviour research	5
SEN1741	Innovations in transport and logistics	5
SEN9110	Simulation master class	5
SEN9720	Logistics and supply chain innovations	5
SEN9725	Supply chain gaming	5
TPM004a	Transport safety	4
TPM023a	Cost-benefit analysis: theory and application	4
TPM028a	Decision making in multimodal transport systems	5
TPM032a	Multi-criteria decision analysis	5
MME-Mechanical Engineering		
ME44101	Dynamics and Interaction of Material and Equipment	4
ME44106	Structural design with FEM	4
ME44110	Integration project large-scale equipment	5
ME44115	Discrete element method (DEM) simulation	4
ME44125	Reliability and maintenance of transport equipment	3
ME44200	Operations and maintenance	3
ME44210	Drive and energy systems	3
ME44300	Multi-machine coordination for logistics	3
ME44305	System analysis and simulation	5
ME44311	Advanced operations and production management	5
Civil Engineering		
CIEQ6231	Public Transport System and Supply Planning and Operations	5
CIEQ6003	Traffic Flow Modelling and Control Part 1	5
CIEQ6211	Advanced Transport Modelling	3
CIEQ6212	Urban Regions, Transport and Economics	4
CIEQ6223	Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment	4
CIEQ6222	Traffic safety	4
CIEQ6224	Traffic Flow Modelling and Control Part 2	3
CIEQ6221	Active modes: traffic and transport	5
CIEQ6233	Railway operations and control	5
CIEQ6213	Analysis and Modelling of Freight and Logistics Systems	4
CIEQ6232	Public Transport Demand and Network Planning and Operations	5
CIEM6303	Emerging topics for transport & planning	4
CIEM6301	Railway traffic management	5

Course code	Course title	E C
Aerospace - Control and Operations		
AE4321-15	Air traffic management	4
AE4423-20	Airline planning & optimisation	4
AE4446 A	Airport operations	4
Architecture		
AR0168	People, movement and public space	5
AR0228	Infrastructure and environment method module	5
AR3CS021	Seminar cross domain city of the future	5
AR8003TU	Legal and governance	5
Other courses		
TIL6020	TIL scientific assignment	7
CME2300	Financial engineering	4
RO47016	Automotive human factors	5
ME41106	Intelligent vehicles 3mE	5
MT44070	Shipping management	5
WI4062TU	Transport, routing and scheduling	3
WM1301TU	Ethics of transportation	3

- a. As free elective courses, the student can also choose the following courses, subject to approval from the BoE:
- ⚡ all courses offered at master level at Delft University of technology
 - ⚡ all courses offered at master level at another Dutch university
- b. As free elective courses the student admitted on the basis of [TER Article 3a, Section 1, under d](#) must choose:
- ⚡ convergence courses mentioned in Article 16.

- c. As free elective courses the student may not choose:
- ⚡ course from the list as given below:

Course code	Course title	E C
AE4441-16	Operations optimisation	4
AR0167	Architecture and urban design	15
AR0227	Infrastructure and environment design	10
AR1U131	Sustainable urban engineering of territory	5
CIEQ6112	Transport engineering and optimisation	4
CIEAESM4010	Research project	10
EPA2934	Preparation master thesis	5
ME54015	ME-MME research assignment	15
MOT2004	Preparation for master thesis	5
SEN173a	Analysis and design of freight and logistic systems	5
SEN2321	Master thesis preparation	5
WI4051TU	Introduction to operation research	6

- ⚡ all courses that have significant overlap with any other course in the examination programme
- ⚡ courses offered by TU Delft Graduate School
- ⚡ courses offered by TRAIL Research School
- ⚡ courses focusing on the development of skills
- ⚡ language courses
- ⚡ massive open online courses (MOOCs).

- d. If the student notwithstanding the forgoing mentioned under c chooses:
- ⚡ courses focussing on the development of skills
 - ⚡ language courses
 - ⚡ massive open online courses (MOOCs),

these choices will be considered within the examination programme as extra-curricular.