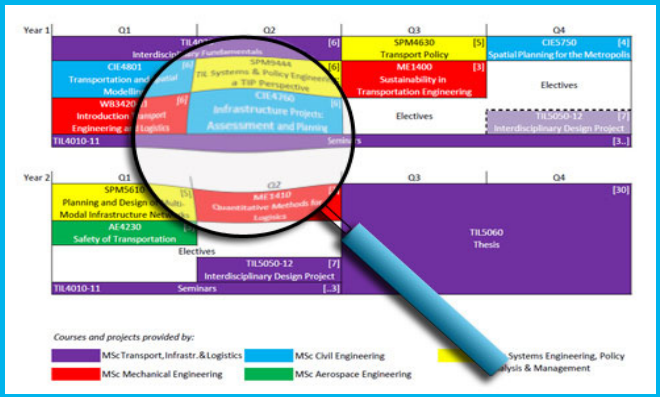
MSc Transport, Infrastructure and Logistics

Programme Navigator 2021



TU Delft Delft University of Technology

Challenge the future

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Student information

Programme til.tudelft.nl	*Student Portal* student.tudelft.nl	*Lecturers* phonebook.tudelft.nl
Courses studyguide.tudelft.nl	*Digital Learning Environment* brightspace.tudelft.nl	*Schedules* mytimetable.tudelft.nl
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Location information

Technische Universiteit Delft

Delft University of Technology

MSc Programme
Transport, Infrastructure and Logistics

is an interfaculty programme of:

Faculty of Civil Engineering and Geosciences	Faculty of Technology, Policy and Management	Faculty of Mechanical, Maritime and Materials Engineering
Building 23 Stevinweg 1 2628 CN Delft	Building 31 Jaffalaan 5 2628 BX Delft	Building 34 Mekelweg 2 2628 CD Delft
Department Transport and Planning	Department Engineering Systems and Services Section Transport and Logistics	Department Maritime and Transport Technology Section Transport Engineering and Logistics
Contact Building 23: HG 4.11 +31 15 27 89129 d.c.dacostaricardo@tudelft.nl	*Contact* Building 31: B3.070 +31 15 27 81144 b.a.vankoppen@tudelft.nl	*Contact* Building 34: B-3-250 +31 15 27 86529 p.bokop-vanderstap@tudelft.nl

Overview

MSc Transport, Infrastructure and Logistics 2021 *(120 EC)*

Courses *(75 EC)*

1 Fundamentals *(23 EC)*

TIL4030-20	TIL Research and Design Methods
CIE4801-18	Transport Modelling
SEN1221	Statistical Analysis of Choice Behaviour
ME44206	Quantitative Methods for Logistics

2 Specialisations *(27 EC) (1 specialisation)*

2.1 Specialisation P - Policy: Infrastructure, Planning and Environment *(27 EC)*

CIE5816	Urban Regions, Transport and Economics
CIE5817	Assessment of Transport Infrastructure and Systems
SEN171a	Advanced Evaluation Methods for Transport Policy Decision-making
TPM004a	Transport Safety
AR0168	People, Movement and Public Space
AR0228	Infrastructure and Environment Method Module

2.2 Specialisation D - Design: Transport Systems and Networks *(27 EC)*

CIE4811-18	Planning and Operations of Public Transport Systems
CIE5803-18	Railway Traffic Management
CIE5826	Railway Operations and Control
SEN1721	Travel Behaviour Research
AE4423-20	Airline Planning and Optimization
AE4426	Airport Operations

2.3 Specialisation O - Operations: Traffic, Technology and Control *(27 EC)*

CIE4825	Traffic Flow Modelling and Control Part 1
CIE5821	Traffic Flow Modelling and Control Part 2
CIE5805-18	Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment
SEN9110	Simulation Master Class
ME44200	Operations and Maintenance
ME44305	System Analysis and Simulation

2.4 Specialisation E - Engineering: Transport, Logistics and Supply Chains *(27 EC)*

CIE5830	Freight Transport Systems: Analysis and Modelling
SEN9720	Logistics and Supply Chain Innovations
TPM028a	Decision Making in Multimodal Transport Systems
ME44101	Dynamics and Interaction of Material and Equipment
ME44300	Multi-Machine Coordination for Logistics
ME44311	Advanced Operations Management

3 Electives *(25 EC)*

3.1 Electives T&P - Transport and Planning *(at least 1 course)*

CIE4811-18	Planning and Operations of Public Transport Systems
CIE4825	Traffic Flow Modelling and Control Part 1
CIE4831-18	Empirical Analysis for Transport and Planning
CIE4845	Emerging Topics for Transport & Planning
CIE5802-18	Advanced Transportation Modelling
CIE5803-18	Railway Traffic Management
CIE5805-18	Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment
CIE5810-19	Traffic Safety
CIE5815	Resilient Transport Systems: Analysis and Interventions
CIE5816	Urban Regions, Transport and Economics
CIE5817	Assessment of Transport Infrastructure and Systems
CIE5821	Traffic Flow Modelling and Control Part 2
CIE5822	Active modes: Traffic and Transport
CIE5825	Advanced Public Transport Modelling and Operations
CIE5826	Railway Operations and Control
CIE5830	Freight Transportation Systems: Analysis and Modelling

3.2 Electives T&L - Transport and Logistics *(at least 1 course)*

SEN115a	Law and Institutions
SEN171a	Advanced Evaluation Methods for Transport Policy Decision-making
SEN1721	Travel Behaviour Research
SEN1741	Innovations in Transport and Logistics
SEN9110	Simulation Master Class
SEN9720	Logistics and Supply Chain Innovations
SEN9725	Supply Chain Gaming
TPM004a	Transport Safety
TPM023a	Cost-Benefit Analysis: Theory and Application
TPM028a	Decision Making in Multimodal Transport Systems
TPM032a	Multi-criteria Decision Analysis

3.3 Electives MME - Multi-Machine Engineering *(at least 1 course)*

ME44101	Dynamics and Interaction of Material and Equipment
ME44106	Structural Design with FEM
ME44110	Integration Project Multi-Machine Systems
ME44115	Discrete Element Method (DEM) Simulation
ME44125	Reliability and Maintenance of Transport Equipment
ME44200	Operations and Maintenance
ME44210	Drive & Energy Systems
ME44300	Multi-Machine Coordination for Logistics
ME44305	System Analysis and Simulation
ME44311	Advanced Operations and Production Management
ME44312	Machine Learning for Transport and Multi-Machine Systems

3.4 External electives *(at least 1 course)*

3.4.1 Electives C&O - Control and Operations

AE4321-15	Air Traffic Management
AE4423-20	Airline Planning and Optimization
AE4446	Airport Operations

3.4.2 Electives U - Urbanism

AR0168	People, Movement and Public Space
AR0228	Infrastructure and Environment Method Module
AR3CS021	Seminar Cross Domain City of the Future
AR8003TU	Legal and Governance

3.4.3 Electives TIL - Other TIL fields

CIE4330	Ports and Waterways 1
CIE4874	Elements of Railway Engineering
CIE5306	Ports and Waterways 2
CME2300	Financial Engineering
ME41106	Intelligent Vehicles 3mE
MT44070	Shipping Management
RO47016	Automotive Human Factors
WI4062TU	Transport, Routing and Scheduling
WM1301TU	Ethics of Transportation

3.5 Free electives *(optional)*

TIL6000	TIL Capita Selecta
TIL6010	TIL Programming
TIL6020	TIL Scientific Assignment
	Free electives

Projects and Thesis *(45 EC)*

4 Projects *(15 EC)*

TIL4020-20	TIL Research Project
TIL5050-20	TIL Design Project

5 Thesis *(30 EC)*

TIL5060	TIL Thesis

0 Programme

Category	*EC*
Courses	*75*
Fundamentals	23
Specialisations	27
Electives	25
Projects and Thesis	*45*
Projects	15
Thesis	30
Total	*120*

0 Programme

Courses	**75**
Fundamentals	**23**
TIL Research and Design Methods	7
Transport Modelling	6
Statistical Analysis of Choice Behaviour	5
Quantitative Methods for Logistics	5

Specialisations							**27**
Policy		*Design*		*Operations*		*Engineering*	
Urban Regions, Transport and Economics	4	Planning and Operations of Public Transport Systems	6	Traffic Flow Modelling and Control Part 1	6	Freight Transport Systems: Analysis and Modelling	5
Assessment of Transport Infrastructure and Systems	4	Railway Traffic Management	4	Traffic Flow Modelling and Control Part 2	4	Logistics and Supply Chain Innovations	5
Adv. Evaluation Methods for Transp.Policy Decisionmaking	5	Railway Operations and Control	4	Intelligent Vehicles for Safe and Efficient Traffic	4	Decision Making in Multi-modal Transport Systems	5
Transport Safety	4	Travel Behaviour Research	5	Simulation Master Class	5	Dynamics and Interaction of Material and Equipment	4
People, Movement and Public Space	5	Airline Planning and Optimization	4	Operations and Maintenance	3	Multi-Machine Coordination for Logistics	3
Infrastructure and Environ-ment Method Module	5	Airport Operations	4	System Analysis and Simulation	5	Advanced Operations and Production Management	5

Electives	**25**	*Transport & Planning*	*Transport & Logistics*	*Multi-Machine Engineering*
Control & Operations		*Urbanism*	*Other TIL fields*	*Free*

Projects and Thesis	**45**
Projects	**15**
TIL Research Project	5
TIL Design Project	10
Thesis	**30**
TIL Thesis	30

Courses and projects provided by:

- MSc Civil Engineering
- MSc CoSEM
- MSc Mechanical Engineering
- MScTIL
- MSc Aerospace Engineering
- MSc Architecture

1 2 3 Courses

Course type	*EC*
Fundamentals	23
Specialisations	27
Electives	25
Total	*75*

1 2 3 Courses

Fundamentals	23
TIL Research and Design Methods	7
Transport Modelling	6
Statistical Analysis of Choice Behaviour	5
Quantitative Methods for Logistics	5

Specialisations							27
Policy		*Design*		*Operations*		*Engineering*	
Urban Regions, Transport and Economics	4	Planning and Operations of Public Transport Systems	6	Traffic Flow Modelling and Control Part 1	6	Freight Transport Systems: Analysis and Modelling	5
Assessment of Transport Infrastructure and Systems	4	Railway Traffic Management	4	Traffic Flow Modelling and Control Part 2	4	Logistics and Supply Chain Innovations	5
Adv. Evaluation Methods for Transp.Policy Decisionmaking	5	Railway Operations and Control	4	Intelligent Vehicles for Safe and Efficient Traffic	4	Decision Making in Multi-modal Transport Systems	5
Transport Safety	4	Travel Behaviour Research	5	Simulation Master Class	5	Dynamics and Interaction of Material and Equipment	4
People, Movement and Public Space	5	Airline Planning and Optimization	4	Operations and Maintenance	3	Multi-Machine Coordination for Logistics	3
Infrastructure and Environ-ment Method Module	3	Airport Operations	4	System Analysis and Simulation	5	Advanced Operations and Production Management	5

Electives								25
Transport & Planning	≥ 1 course	*Transport & Logistics*	≥ 1 course	*Multi-Machine Engineering*	≥ 1 course	*External*		≥ 1 course
						Control & Operations		
						Urbanism		
						Other TIL fields		
Free	optional							

Courses provided by:

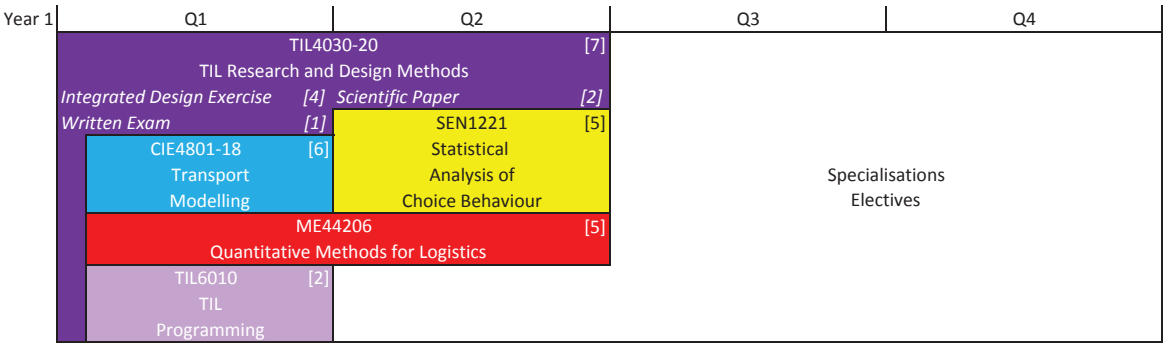
- MSc TIL
- MSc Civil Engineering
- MSc CoSEM
- MSc Mechanical Engineering
- MSc Aerospace Engineering
- MSc Architecture

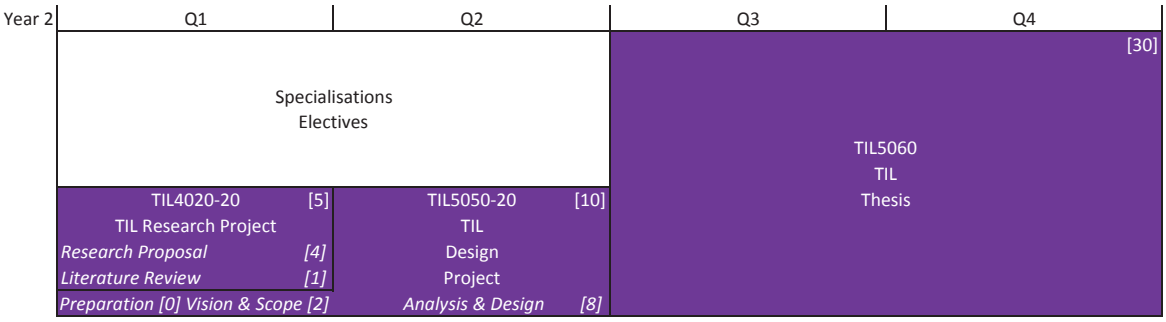
1 Fundamentals

	Course		*EC*
TIL4030-20	TIL Research and Design Methods		7
TIL4030-20 P1	*Integrated Design Exercise*	*4*	
TIL4030-20 P2	*Written Exam*	*1*	
TIL4030-20 P3	*Scientific Paper*	*2*	
CIE4801-18	Transport Modelling		6
SEN1221	Statistical Analysis of Choice Behaviour		5
ME44206	Quantitative Methods for Logistics		5
	Total		*23*

Compulsory

1 Fundamentals





Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences

2 Specialisations

Specialisation P - Policy: Infrastructure, Planning and Environment *(27 EC)*
Specialisation D - Design: Transport Systems and Networks *(27 EC)*
Specialisation O - Operations: Traffic, Technology and Control *(27 EC)*
Specialisation E - Engineering: Transport, Logistics and Supply Chains *(27 EC)*

Choose 1 specialisation

2 Specialisations

Policy		*Design*		*Operations*		*Engineering*	
Urban Regions, Transport and Economics	4	Planning and Operations of Public Transport Systems	6	Traffic Flow Modelling and Control Part 1	6	Freight Transport Systems: Analysis and Modelling	5
Assessment of Transport Infrastructure and Systems	4	Railway Traffic Management	4	Traffic Flow Modelling and Control Part 2	4	Logistics and Supply Chain Innovations	5
Adv. Evaluation Methods for Transp.Policy Decisionmaking	5	Railway Operations and Control	4	Intelligent Vehicles for Safe and Efficient Traffic	4	Decision Making in Multi-modal Transport Systems	5
Transport Safety	4	Travel Behaviour Research	5	Simulation Master Class	5	Dynamics and Interaction of Material and Equipment	4
People, Movement and Public Space	5	Airline Planning and Optimization	4	Operations and Maintenance	3	Multi-Machine Coordination for Logistics	3
Infrastructure and Environ-ment Method Module	5	Airport Operations	4	System Analysis and Simulation	5	Advanced Operations and Production Management	5

Courses provided by:

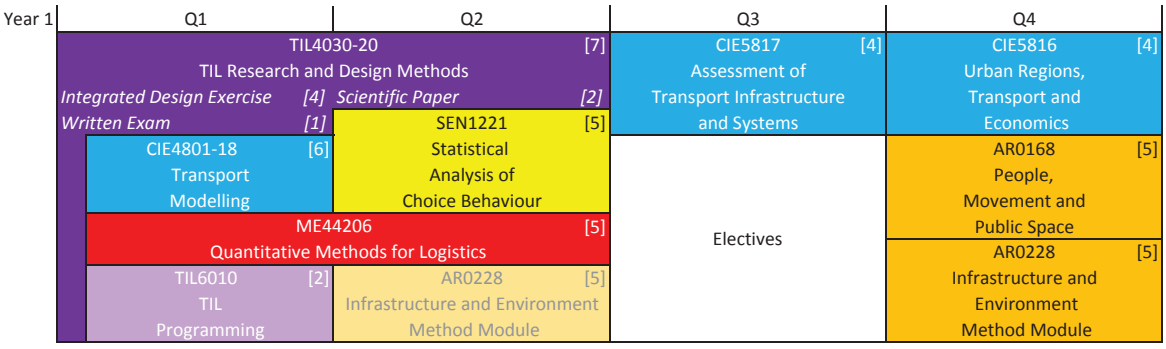
- MSc Civil Engineering
- MSc Complex Systems Engineering & Management
- MSc Mechanical Engineering
- MSc Aerospace Engineering
- MSc Architecture, Urbanism & Building Sciences

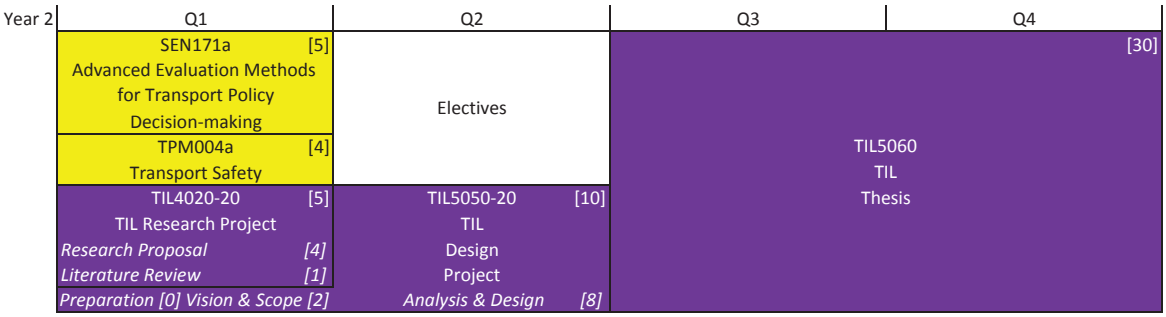
2.1 Specialisation P - Policy: Infrastructure, Planning & Environment

	Course	*EC*
CIE5816	Urban Regions, Transport and Economics	4
CIE5817	Assessment of Transport Infrastructure and Systems	4
SEN171a	Advanced Evaluation Methods for Transport Policy Decision-making	5
TPM004a	Transport Safety	4
AR0168	People, Movement and Public Space	5
AR0228	Infrastructure and Environment Method Module	5
	Total	*27*

In a chosen specialisation all courses are compulsory

2.1 Specialisation P - Policy: Infrastructure, Planning & Environment





Courses and projects provided by:

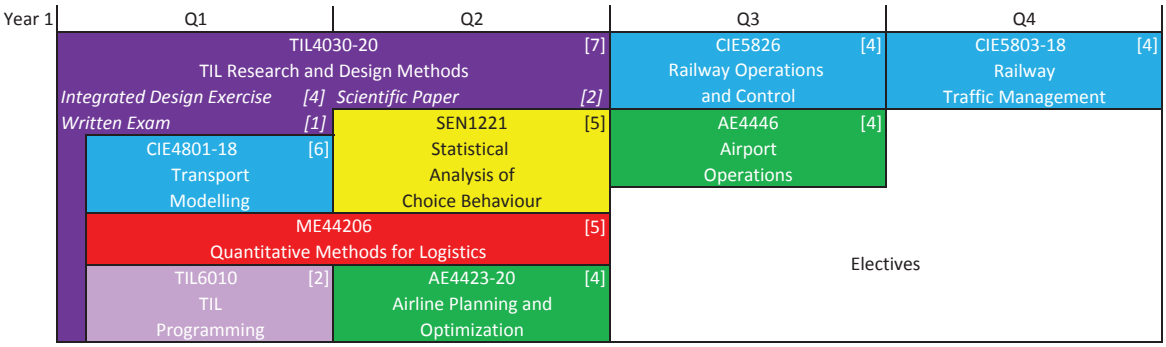
TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences

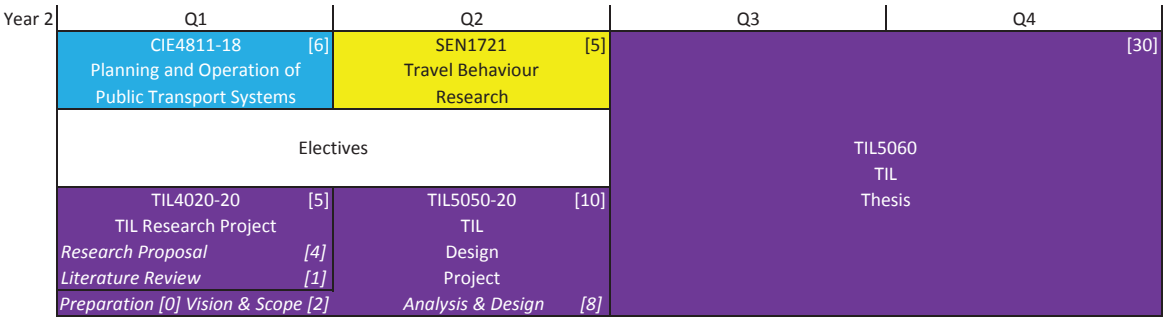
2.2 Specialisation D - Design: Transport Systems & Networks

	Course	*EC*
CIE4811-18	Planning and Operations of Public Transport Systems	6
CIE5803-18	Railway Traffic Management	4
CIE5826	Railway Operations and Control	4
SEN1721	Travel Behaviour Research	5
AE4423-20	Airline Planning and Optimization	4
AE4426	Airport Operations	4
	Total	*27*

In a chosen specialisation all courses are compulsory

2.2 Specialisation D - Design: Transport Systems & Networks





Courses and projects provided by:

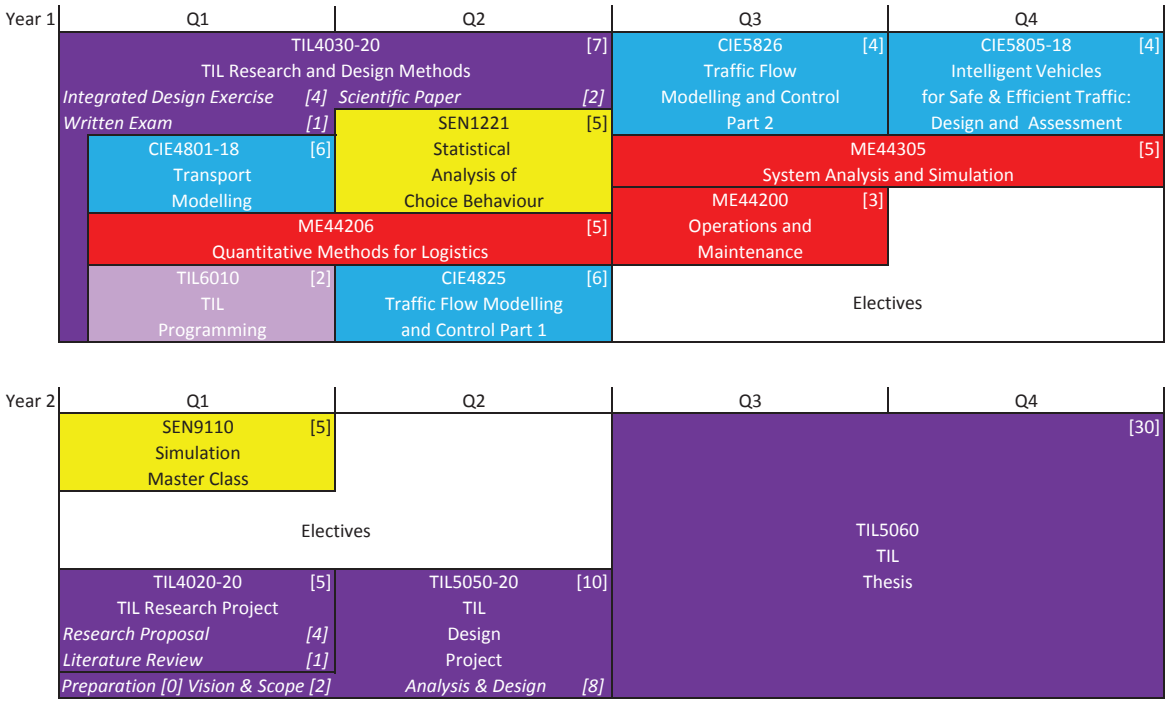
TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences

2.3 Specialisation O - Operations: Traffic, Technology & Control

	Course	*EC*
CIE4825	Traffic Flow Modelling and Control Part 1	6
CIE5821	Traffic Flow Modelling and Control Part 2	4
CIE5805-18	Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment	4
SEN9110	Simulation Master Class	5
ME44200	Operations and Maintenance	3
ME44305	System Analysis and Simulation	5
	Total	*27*

In a chosen specialisation all courses are compulsory

2.3 Specialisation O - Operations: Traffic, Technology & Control



Courses and projects provided by:

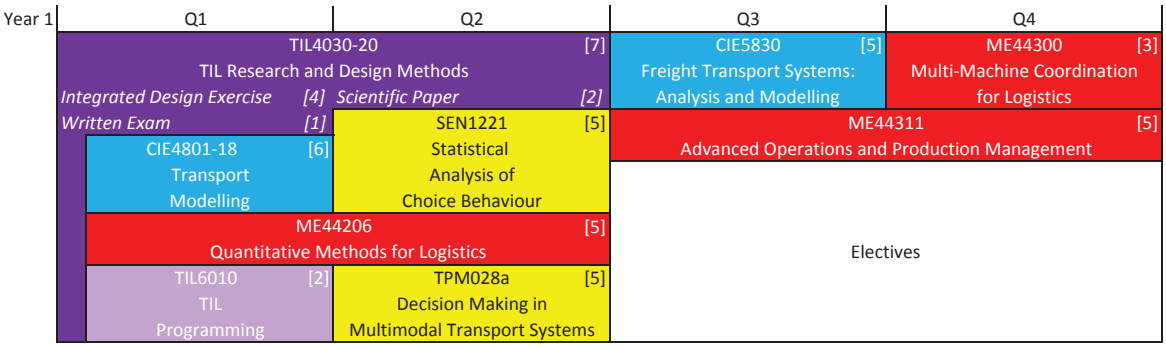
TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences

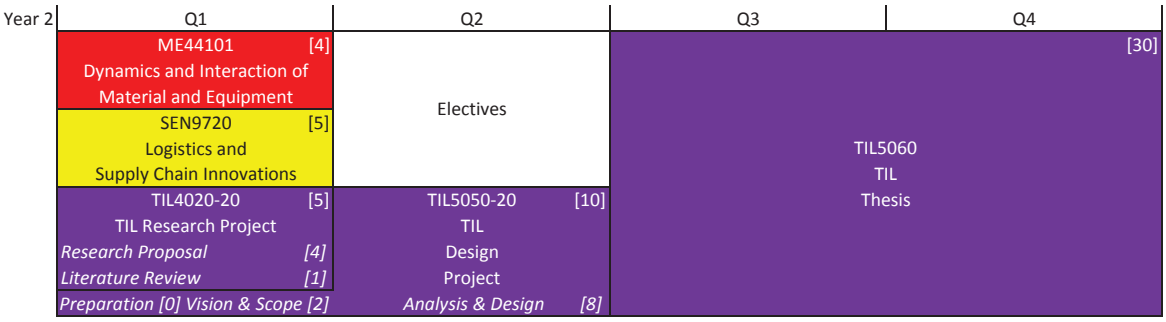
2.4 Specialisation E - Engineering: Transport, Logistics & Supply Chains

	Course	*EC*
CIE5830	Freight Transport Systems: Analysis and Modelling	5
SEN9720	Logistics and Supply Chain Innovations	5
TPM028a	Decision Making in Multimodal Transport Systems	5
ME44101	Dynamics and Interaction of Material and Equipment	4
ME44300	Multi-Machine Coordination for Logistics	3
ME44311	Advanced Operations and Production Management	5
	Total	*27*

In a chosen specialisation all courses are compulsory

2.4 Specialisation E - Engineering: Transport, Logistics & Supply Chains





Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences

3 Electives

Electives T&P - Transport and Planning *(at least 1 course)*
Electives T&L - Transport and Logistics *(at least 1 course)*
Electives MME - Multi-Machine Engineering *(at least 1 course)*
External electives *(at least 1 course)*
- Electives C&O - Control and Operations
- Electives U - Urbanism
- Electives TIL - Other TIL fields

Free electives *(optional)*

3 Electives

Transport & Planning		*Transport & Logistics*		*Multi-Machine Engineering*			*External*		*Free*	
Planning and Operations of Public Transport Systems	6	Law and Institutions	5	Dynamics and Interaction of Material and Equipment	4	*Control & Operations*	Airline Planning and Optimization	4	TIL Capita Selecta	1
Traffic Flow Modelling and Control Part 1	6	Advanced Evaluation Methods for Transport	5	Structural Design with FEM	4	*Control & Operations*	Airport Operations	4	TIL Programming	2
Empirical Analysis for Transport and Planning	6	Travel Behaviour Research	5	Integration Project Multi-Machine Systems	5	*Control & Operations*	Air Traffic Management	4	TIL Scientific Assignment	7
Emerging Topics for Transport and Planning	4	Innovations in Transport and Logistics	5	Discrete Element Method (DEM) Simulation	4	*Urbanism*	People, Movement and Public Space	5	Free electives	
Advanced Transport Modelling	4	Simulation Master Class	5	Reliability and Maintenance of Transport Equipment	3	*Urbanism*	Infrastructure & Environ-ment Method Module	5		
Railway Traffic Management	4	Logistics and Supply Chain Innovations	5	Operations and Maintenance	3	*Urbanism*	Seminar Cross Domain City of the Future	5		
Intelligent Vehicles for Safe & Efficient Traffic	4	Supply Chain Gaming	5	Drive and Energy Systems	3	*Urbanism*	Legal and Governance	5		
Traffic Safety	4	Transport Safety	4	Multi-Machine Coordination for Logistics	3	*Other TIL fields*	Ports and Waterways 1	4		
Resilient Transport Systems	4	Cost-Benefit Analysis: Theory and Application	4	System Analysis and Simulation	5	*Other TIL fields*	Ports and Waterways 2	4		
Urban Regions, Transport and Economics	4	Decision Making in Multi-modal Transport Systems	5	Advanced Operations and Production Management	5	*Other TIL fields*	Elements of Railway Engineering	4		
Assessment of Transport Infrastructure and Systems	4	Multi-criteria Decision Analysis	5	Machine Learning for Transp. and Multi-Machine Systems	3	*Other TIL fields*	Financial Engineering	4		
Traffic Flow Modelling and Control Part 2	4					*Other TIL fields*	Intelligent Vehicles 3mE	5		
Active modes: Traffic and Transport	4					*Other TIL fields*	Automotive Human Factors	5		
Advanced Public Transport Modelling and Operations	4					*Other TIL fields*	Shipping Management	5		
Railway Operations and Control	4					*Other TIL fields*	Transport, Routing and Scheduling	3		
Freight Transport Systems: Analysis and Modelling	5					*Other TIL fields*	Ethics of Transportation	3		

Courses provided by: MSc TIL, MSc Civil Engineering, MSc CoSEM, MSc Mechanical Engineering, MSc Aerospace Engineering, MSc Architecture, Interfaculty Education

3.1 Electives T&P - Transport and Planning

	Course	*EC*
CIE4811-18	Planning and Operations of Public Transport Systems	6
CIE4825	Traffic Flow Modelling and Control Part 1	6
CIE4831-18	Empirical Analysis for Transport and Planning	6
CIE4845	Emerging Topics for Transport & Planning	4
CIE5802-18	Advanced Transportation Modelling	4
CIE5803-18	Railway Traffic Management	4
CIE5805-18	Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment	4
CIE5810-19	Traffic Safety	4
CIE5815	Resilient Transport Systems: Analysis and Interventions	4
CIE5816	Urban Regions, Transport and Economics	4
CIE5817	Assessment of Transport Infrastructure and Systems	4
CIE5821	Traffic Flow Modelling and Control Part 2	4
CIE5822	Active modes: Traffic and Transport	4
CIE5825	Advanced Public Transport Modelling and Operations	4
CIE5826	Railway Operations and Control	4
CIE5830	Freight Transportation Systems: Analysis and Modelling	5

Choose at least 1 course, not already chosen as part of specialisation

3.1 Electives T&P - Transport and Planning

Q1	Q2	Q3	Q4
(D) CIE4811-18 [6] Design and Control of Public Transport Systems	(O) CIE4825 [6] Traffic Flow Modelling and Control Part 1	CIE5815 [4] Resilient Transport Systems: Analysis and Interventions	CIE4845 [4] Emerging Topics for Transport and Planning
	CIE4831-18 [6] Empirical Analysis for Transport and Planning	(P) CIE5817 [4] Assessment of Transport Infrastructure and Systems	(D) CIE5803-18 [4] Railway Traffic Management
	CIE5802-18 [4] Advanced Transport Modelling	(O) CIE5821 [4] Traffic Flow Modelling and Control Part 2	(O) CIE5805-18 [4] Intelligent Vehicles for Safe & Efficient Traffic
	CIE5810-19 [4] Traffic Safety	CIE5822 [4] Active Modes: Traffic and Transport	(P) CIE5816 [4] Urban Regions, Transport and Economics
		CIE5825 [4] Advanced Public Transport Operations and Modelling	
		(D) CIE5826 [4] Railway Operations and Control	
		(E) CIE5830 [5] Freight Transport Systems: Analysis and Modelling	

Courses provided by:

CIE MSc Civil Engineering
Track Transport & Planning

(P) Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D) Course is part of Specialisation D - Design: Transport Systems and Networks
(O) Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E) Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

Course in Q1 available in 2021-2022 and 2022-2023
Courses in Q2, Q3 and Q4 available in 2021-2022 only

3.2 Electives T&L - Transport and Logistics

	Course	*EC*
SEN115a	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

Choose at least 1 course, not already chosen as part of specialisation

3.2 Electives T&L - Transport and Logistics

Q1	Q2	Q3	Q4
(P) SEN171a [5] Advanced Evaluation Methods for Transport Decision-making	(D) SEN1721 [5] Travel Behaviour Research	SEN115a [5] Law and Institutions	SEN1741 [5] Innovations in Transport and Logistics
(O) SEN9110 [5] Simulation Master Class	SEN9725 [5] Supply Chain Gaming		
(E) SEN9720 [5] Logistics and Supply Chain Innovations	(E) TPM028a [5] Decision Making in Multimodal Transport Systems		
(P) TPM004a [4] Transport Safety			
TPM023a [4] Cost-Benefit Analysis: Theory and Application			
TPM032a [5] Multi-criteria Decision Analysis			

Courses provided by:

SEN MSc Systems Engineering, Policy Analysis and Management
Track Transport & Logistics

(P) Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D) Course is part of Specialisation D - Design: Transport Systems and Networks
(O) Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E) Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

3.3 Electives MME - Multi-Machine Engineering

	Course	*EC*
ME44101	Dynamics and Interaction of Material and Equipment	4
ME44106	Structural Design with FEM	4
ME44110	Integration Project Multi-Machine Systems	5
ME44115	Discrete Element Method (DEM) Simulation	4
ME44125	Reliability and Maintenance of Transport Equipment	3
ME44200	Operations and Maintenance	3
ME44210	Drive & Energy Systems	3
ME44300	Multi-Machine Coordination for Logistics	3
ME44305	System Analysis and Simulation	5
ME44311	Advanced Operations and Production Management	5
ME44312	Machine Learning for Transport and Multi-Machine Systems	3

Choose at least 1 course, not already chosen as part of specialisation

3.3 Electives MME - Multi-Machine Engineering

Q1	Q2	Q3	Q4
(E) ME44101 [4] Dynamics and Interaction of Material and Equipment	ME44106 [4] Structural Design with FEM	ME44110 [5] Integration Project Multi-Machine Systems	
ME44210 [3] Drive & Energy Systems		ME44115 [4] Discrete Element Method (DEM) Simulation	(E) ME44300 [3] Multi-Machine Coordination for Logistics
		ME44125 [3] Reliability and Maintenance of Transport Equipment	ME44312 [3] Machine Learning for Transport and Multi-Machine Systems
		(O) ME44305 [5] System Analysis and Simulation	
		(E) ME44311 [5] Advanced Operations and Production Management	
		(O) ME44200 [3] Operations and Maintenance	

Courses provided by:

ME MSc Mechanical Engineering
Track Multi-Machine Engineering

(P) Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D) Course is part of Specialisation D - Design: Transport Systems and Networks
(O) Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E) Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

3.4 External electives

Electives C&O - Control and Operations
Electives U - Urbanism
Electives TIL - Other TIL fields

Choose at least 1 course, not already chosen as part of specialisation

3.4 External electives

Q1	Q2	Q3	Q4
AR3CS021 [5] Seminar Cross Domain City of the Future		WM1301TU [3] Ethics of Transportation	(P) AR0168 [5] People, Movement and Public Space
AR8003TU [5] Legal and Governance	(P) AR0228 [5] Infrastructure and Environment Method Module	WI4062TU [3] Transport, Routing and Scheduling	(P) AR0228 [5] Infrastructure and Environment Method Module
CIE4330 [4] Ports and Waterways 1	(D) AE4423-20 [4] Airline Planning and Optimisation	(D) AE4446 [4] Airport Operations	CIE5306 [4] Ports and Waterways 2
CME2300 [4] Financial Engineering	AE4321-15 [4] Air Traffic Management		RO47016 [5] Automotive Human Factors
	CIE4874 [4] Elements of Railway Engineering	MT44070 [5] Shipping Management	
	ME41106 [5] Intelligent Vehicles 3mE		

Courses provided by:

- MSc Aerospace Engineering, Track Control & Operations
- AR Electives
- CEG Electives
- 3mE Electives
- Interfaculty Education EEMCS / TPM

(P) Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D) Course is part of Specialisation D - Design: Transport Systems and Networks
(O) Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E) Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

3.4.1 Electives C&O - Control and Operations

	Course	*EC*
AE4321-15	Air Traffic Management	4
AE4423-20	Airline Planning and Optimisation	4
AE4446	Airport Operations	4

Choose at least 1 course, not already chosen as part of specialisation
Optional if at least 1 course of Electives U or TIL has been chosen

3.4.1 Electives C&O - Control and Operations

Q1	Q2	Q3	Q4
	(D) AE4423-20 Airline Planning and Optimisation [4]	(D) AE4446 Airport Operations [4]	
	AE4321-15 Air Traffic Management [4]		

Courses provided by:

AE	MSc Aerospace Engineering Track Control & Operations

(P)	Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D)	Course is part of Specialisation D - Design: Transport Systems and Networks
(O)	Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E)	Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

3.4.2 Electives U - Urbanism

	Course	*EC*
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

Choose at least 1 course, not already chosen as part of specialisation
Optional if at least 1 course of Electives C&O or TIL has been chosen

3.4.2 Electives U - Urbanism

Q1	Q2	Q3	Q4
AR8003TU [5] Legal and Governance	(P) AR0228 [5] Infrastructure and Environment Method Module		(P) AR0228 [5] Infrastructure and Environment Method Module
AR3CS021 [5] Seminar Cross Domain City of the Future			(P) AR0168 [5] People, Movement and Public Space

Courses provided by:

AR	MSc Architecture, Urbanism & Building Sciences AR Electives

(P)	Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D)	Course is part of Specialisation D - Design: Transport Systems and Networks
(O)	Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E)	Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

3.4.3 Electives TIL - Other TIL fields

	Course	*EC*
CIE4330	Ports and Waterways 1	4
CIE4874	Elements of Railway Engineering	4
CIE5306	Ports and Waterways 2	4
CME2300	Financial Engineering	4
ME41106	Intelligent Vehicles 3mE	5
MT44070	Shipping Management	5
RO47016	Automotive Human Factors	5
WI4062TU	Transport, Routing and Scheduling	3
WM1301TU	Ethics of Transportation	3

Choose at least 1 course, not already chosen as part of specialisation
Optional if at least 1 course of Electives C&O or U has been chosen

3.4.3 Electives TIL - Other TIL fields

Q1	Q2	Q3	Q4
CME2300 [4] Financial Engineering	ME41106 [5] Intelligent Vehicles 3mE	MT44070 [5] Shipping Management	RO47016 [5] Automotive Human Factors
CIE4330 [4] Ports and Waterways 1	CIE4874 [4] Elements of Railway Engineering	WI4062TU [3] Transport, Routing and Scheduling	CIE5306 [4] Ports and Waterways 2
		WM1301TU [3] Ethics of Transportation	

Courses provided by:

CEG Electives — 3mE Electives — Interfaculty Education EEMCS / TPM

(P) Course is part of Specialisation P - Policy: Infrastructure, Planning and Environment
(D) Course is part of Specialisation D - Design: Transport Systems and Networks
(O) Course is part of Specialisation O - Operations: Traffic, Technology and Control
(E) Course is part of Specialisation E - Engineering: Transport, Logistics and Supply Chains

CIE courses available in 2021-2022 only

3.5 Free electives

	Course	*EC*
TIL6000	TIL Capita Selecta *(in conjunction with AR3CS021 only)*	1
TIL6010	TIL Programming	2
TIL6020	TIL Scientific Assignment	7
	Free electives	

Optional

TU Delft
Technische Universiteit ...
Delft

3.5 Free electives

Q1	Q2	Q3	Q4
Free elective	Free elective	Free elective	Free elective
TIL6020 [7] TIL Scientific Assignment	TIL6020 [7] TIL Scientific Assignment	TIL6020 [7] TIL Scientific Assignment	TIL6020 [7] TIL Scientific Assignment
TIL6000 TIL Capita Selecta [1]			
TIL6010 TIL Programming [2]			

Courses provided by:

MSc Transport, Infrastructure and Logistics

Universiteit Leiden
Universiteit Leiden
Leiden

Erasmus Universiteit ...
Rotterdam

Technische Universiteit ...
Eindhoven

Universiteit Twente
Enschede

Wageningen University ...
Wageningen

Tilburg University
Tilburg

Universiteit van Amster...
Amsterdam

Vrije Universiteit ...
Amsterdam

Universiteit Utrecht
Utrecht

Rijksuniver...
Groningen
Groningen

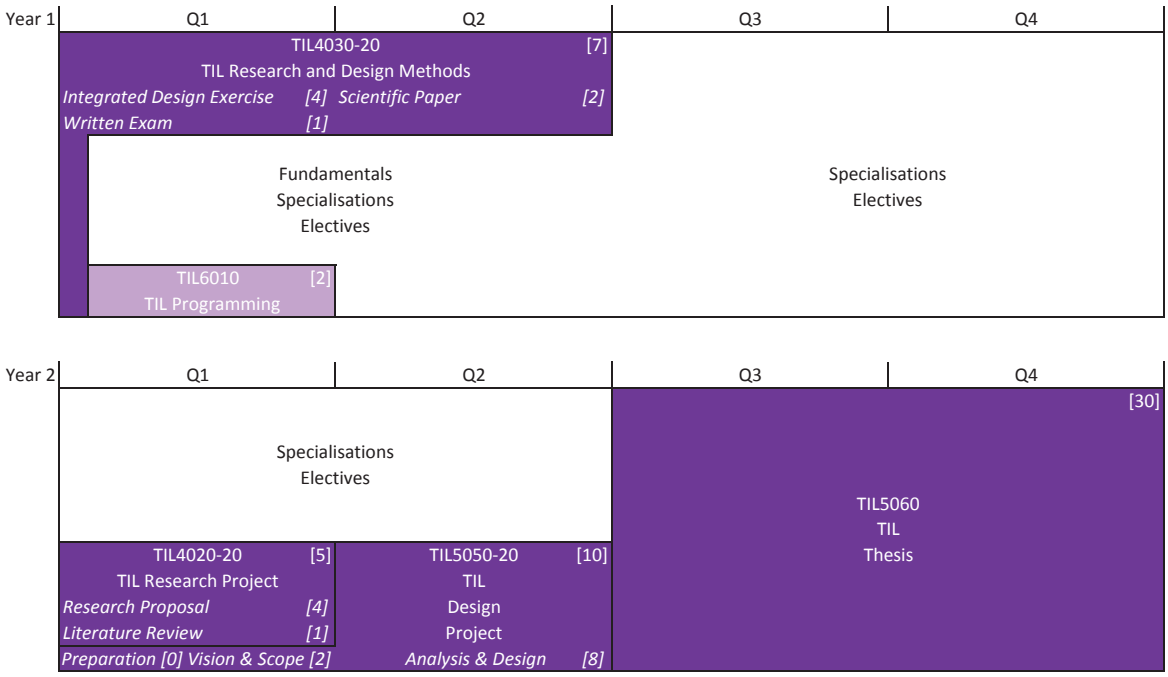
Radboud Universiteit
Nijmegen

Maastricht University
Maastricht

4 5 Projects and thesis

Project type	*EC*
Projects	15
Thesis	30
Total	*45*

4 5 Projects and Thesis



Courses and projects provided by:

MSc Transport, Infrastructure and Logistics

4 Projects

	Project		*EC*
TIL4020-20	TIL Research Project		5
TIL4020-20 P1	*Research Proposal*	*4*	
TIL4020-20 P2	*Literature Review*	*1*	
TIL5050-20	TIL Design Project		10
TIL5050-20 P0	*Preparation*	*0*	
TIL5050-20 P1	*Vision & Scope*	*2*	
TIL5050-20 P2	*Analysis & Design*	*8*	
	Total		*15*

Compulsory

4 Projects

Year 2	Q1	Q2	Q3	Q4
	TIL4020-20 [5] TIL Research Project *Research Proposal [4]* *Literature Review [1]*		TIL4020-20 [5] TIL Research Project *Research Proposal [4]* *Literature Review [1]*	
	Analysis & Design [8] TIL Design Project TIL5050-20 [10] *Preparation [0] Vision & Scope [2]*	*Preparation [0] Vision & Scope [2]* TIL5050-20 [10] TIL Design Project *Analysis & Design [8]*	*Analysis & Design [8]* TIL Design Project TIL5050-20 [10] *Preparation [0] Vision & Scope [2]*	*Preparation [0] Vision & Scope [2]* TIL5050-20 [10] TIL Design Project *Analysis & Design [8]*

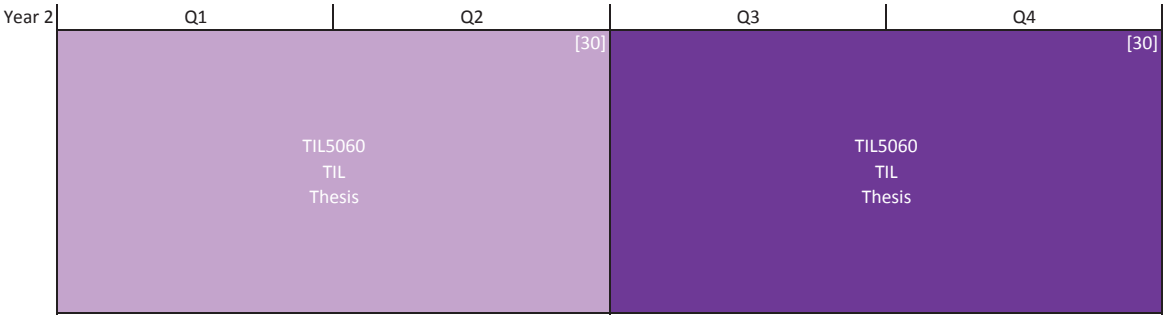
Projects provided by:

MSc Transport, Infrastructure and Logistics

5 Thesis

	Project	*EC*
TIL5060	TIL Thesis	30
	Compulsory	

5 Thesis



Projects provided by:

MSc Transport, Infrastructure and Logistics

Extras

A Honours Programme Master
B Cross Domain Graduation Studio 'City of the Future'
  B.1 Example courses Cross Domain Graduation Studio 'City of the Future'
  B.2 Cross Domain Graduation Studio 'City of the Future': Specialisations D & O
  B.3 Cross Domain Graduation Studio 'City of the Future': Specialisations P & E
C Schakelprogramma HBO (Bridging Programme)
D Convergentieprogramma WO (Convergence Programme)
  D.1 Convergence Programme: Specialisation P - Policy
  D.2 Convergence Programme: Specialisation D - Design
  D.3 Convergence Programme: Specialisation O - Operations
  D.4 Convergence Programme: Specialisation E - Engineering
E Example Electives
  E.1 Example Electives in Specialisation P - Policy
  E.2 Example Electives in Specialisation D - Design
  E.3 Example Electives in Specialisation O - Operations
  E.4 Example Electives in Specialisation E - Engineering

A Honours Programme Master

	Course or project	*EC*
UD2010	Critical Reflection on Technology	5
TIL6020	TIL Scientific Assignment	7
	Thematically consistent set of Electives	8
	Total	*20*

Optional
20 EC on top of MSc programme

A Honours Programme Master

Q1	Q2	Q3	Q4
Electives	Electives	Electives	Electives
TIL6020 [7] TIL Scientific Assignment	TIL6020 [7] TIL Scientific Assignment	TIL6020 [7] TIL Scientific Assignment	TIL6020 [7] TIL Scientific Assignment
UD2010 [5] Critical Reflection on Technology	UD2010 [5] Critical Reflection on Technology		UD2010 [5] Critical Reflection on Technology

Courses provided by:

MSc Transport, Infrastructure and Logistics

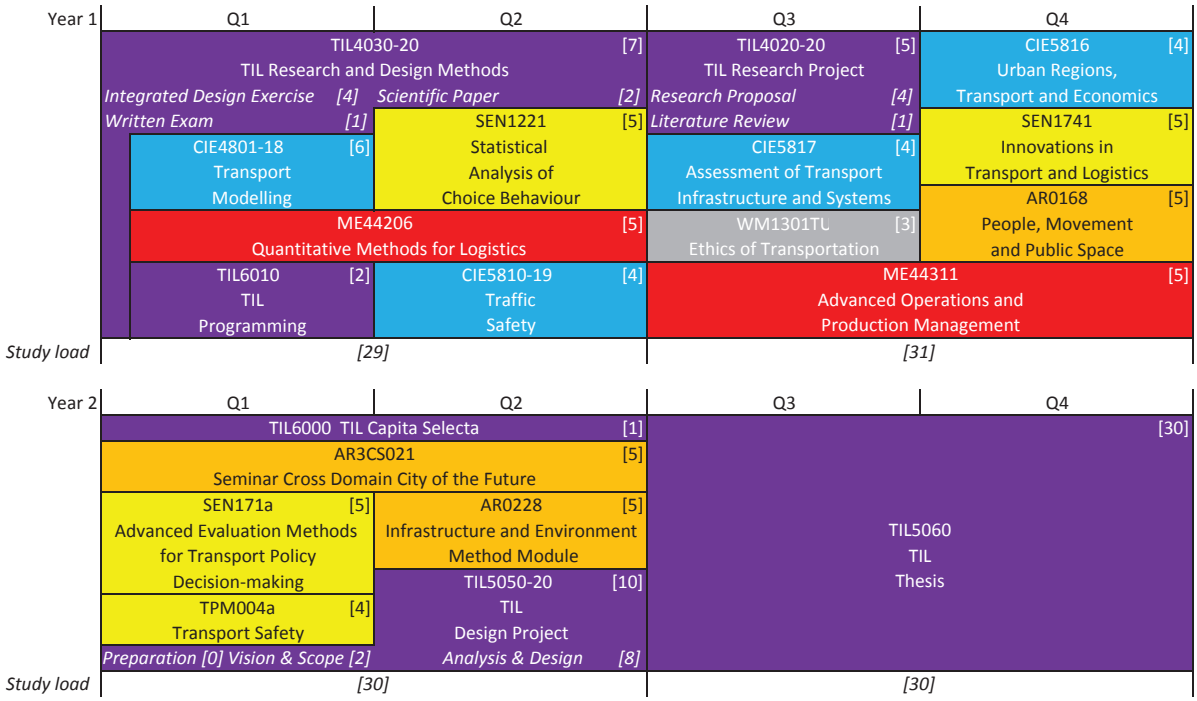
Interfaculty Education TPM

B Cross Domain Graduation Studio 'City of the Future'

	Course or project	*EC*
AR3CS021	Seminar Cross Domain City of the Future	5
TIL6000	TIL Capita Selecta *(in conjunction with AR3CS021 only)*	1
TIL5060	TIL Thesis	30

Courses are optional as part of graduation studio

B.1 Example courses Cross Domain Graduation Studio 'City of the Future'



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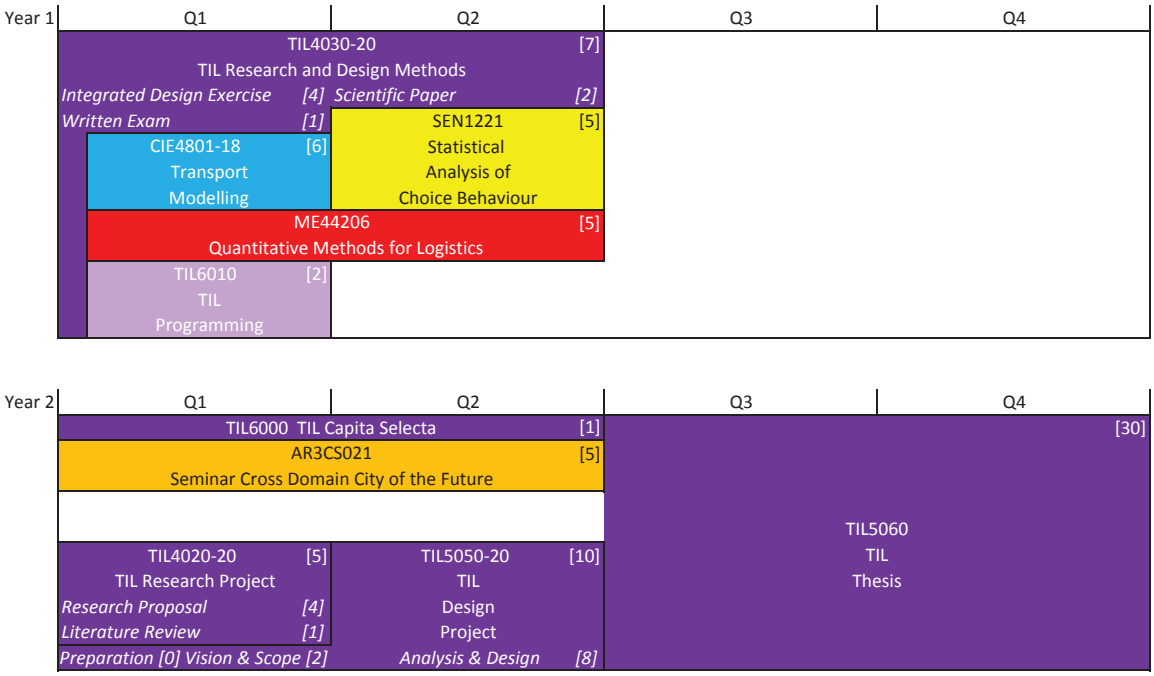
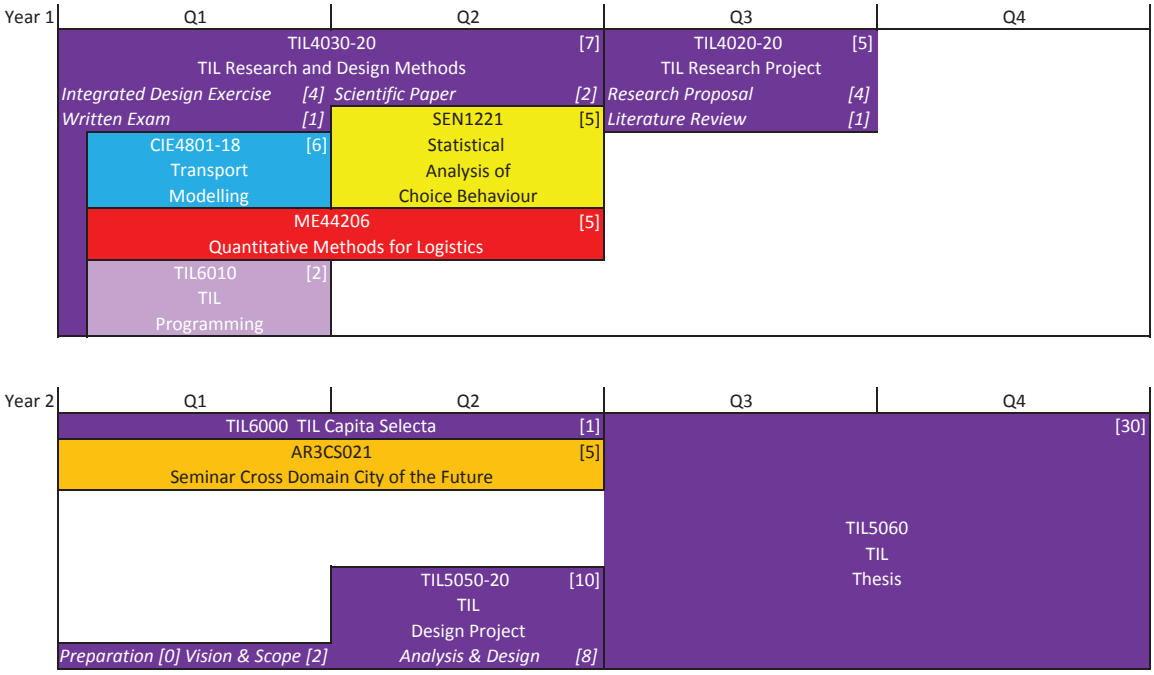
Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences
TU	Interfaculty Education EEMCS / TPM

B.2 Cross Domain Graduation Studio 'City of the Future': Specialisations D & O



B.3 Cross Domain Graduation Studio 'City of the Future': Specialisations P & E



Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences
TU	Interfaculty Education EEMCS / TPM

C Schakelprogramma HBO

	Vak	*EC*
IFEEMCS012100	Calculus for Engineering, deel 1	3
IFEEMCS012200	Calculus for Engineering, deel 2	3
IFEEMCS012300	Calculus for Engineering, deel 3	3
IFEEMCS010400	Lineaire Algebra	5
IFEEMCS010500	Kansrekening en Statistiek	3
WI1909TH	Differentiaalvergelijkingen	3
CTB1420-17	Transport & Planning	5
TB111b	Probleemanalyse	5
	Totaal	*30*

Verplicht of te ronden vóór aanvang MSc-opleiding

C Schakelprogramma HBO

Schakeljaar	Q1	Q2	Q3	Q4
	IFEEMCS012100 [3] Calculus for Engineering deel 1	IFEEMCS012200 [3] Calculus for Engineering deel 2	IFEEMCS012300 [3] Calculus for Engineering deel 3	IFEEMCS010500 [3] Kansrekening en Statistiek
	IFEEMCS010400 [5] Lineaire Algebra	WI1909TH [3] Differentiaal-vergelijkingen		CTB1420-17 [5] Transport & Planning
	TB111b [5] Probleem-analyse			

Vak afkomstig uit:

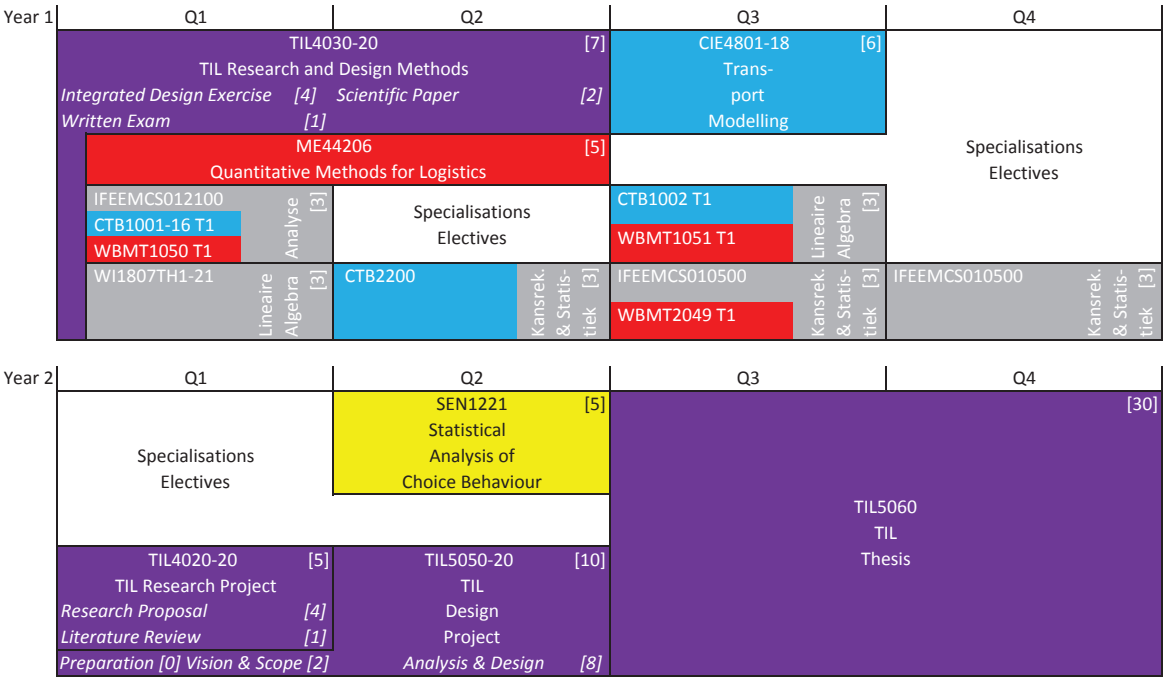
IFEEMCS	Interfacultair onderwijs EWI
CTB	BSc Civiele Techniek
TB	BSc Technische Bestuurskunde

D Convergentieprogramma WO

	Vak	*Onderdeel*	*EC*
	Analyse		*(kies 1 vak)*
IFEEMCS012100	Calculus for Engineering, deel 1		3
CTB1001-16 Toets 1	Analyse	Analyse deeltentamen 1	3
WBMT1050 Toets 1	Wiskunde 1	Analyse 1 - deeltentamen	3
	ingangseis voor CIE4801-18 Transport Modelling		
	Lineaire Algebra		*(kies 1 vak)*
WI1807TH1-21	Linear Algebra		3
CTB1002 Toets 1	Lineaire Algebra	Toets 1	3
WBMT1051 Toets 1	Wiskunde 2	Lineaire Algebra 1 - deeltentamen	3
	ingangseis voor CIE4801-18 Transport Modelling		
	Kansrekening en Statistiek		*(kies 1 vak)*
IFEEMCS010500	Kansrekening en Statistiek		3
CTB2200	Kansrekening en Statistiek		3
WBMT2049 T1	Wiskunde 4	Kansrekening en Statistiek - deeltentamen	3
	ingangseis voor SEN1221 Statistical Analysis of Choice Behaviour		

Uit elke categorie 1 vak op te nemen als Free Elective in MSc-opleiding

D Convergence Programme: Fundamentals



Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences
	Mathematics options for Convergence Programme

D.1 Convergence Programme: Specialisation P - Policy

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods *Integrated Design Exercise [4] Scientific Paper [2]* *Written Exam [1]*		CIE4801-18 [6] Transport Modelling	(P) CIE5816 [4] Urban Regions, Transport and Economics
	ME44206 [5] Quantitative Methods for Logistics		CIE5817 [4] Assessment of Transport Infrastructure and Systems	AR0168 [5] People, Movement and Public Space
	IFEEMCS012100 Analyse [3] CTB1001-16 T1 WBMT1050 T1	AR0228 [5] Infrastructure and Environment Method Module	Electives	AR0228 [5] Infrastructure and Environment Method Module
	WI1807TH1-21 Lineaire Algebra [3]	CTB2200 Kansrek. & Statis-tiek [3]	IFEEMCS010500 Kansrek. & Statis-tiek [3] WBMT2049 T1	IFEEMCS010500 Kansrek. & Statis-tiek [3]

Year 2	Q1	Q2	Q3	Q4
	SEN171a [5] Advanced Evaluation Methods for Transport Decision-making	SEN1221 [5] Statistical Analysis of Choice Behaviour	TIL5060 TIL Thesis [30]	
	TPM004a [4] Transport Safety	Electives		
	TIL4020-20 [5] TIL Research Project *Research Proposal [4]* *Literature Review [1]* *Preparation [0] Vision & Scope [2]*	TIL5050-20 [10] TIL Design Project *Analysis & Design [8]*		

D.2 Convergence Programme: Specialisation D - Design

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods *Integrated Design Exercise [4] Scientific Paper [2]* *Written Exam [1]*		CIE4801-18 [6] Transport Modelling	CIE5803-18 [4] Railway Traffic Management
	ME44206 [5] Quantitative Methods for Logistics		CIE5826 [4] Railway Operations and Control	Electives
	IFEEMCS012100 Analyse [3] CTB1001-16 T1 WBMT1050 T1	AE4423-20 [4] Airline Planning and Optimization	AE4446 [4] Airport Operations	
	WI1807TH1-21 Lineaire Algebra [3]	SEN1721 [5] Travel Behaviour Research	IFEEMCS010500 Kansrek. & Statis-tiek [3] WBMT2049 T1	IFEEMCS010500 Kansrek. & Statis-tiek [3]

Year 2	Q1	Q2	Q3	Q4
	CIE4811-18 [6] Planning and Operation of Public Transport Systems	SEN1221 [5] Statistical Analysis of Choice Behaviour	TIL5060 TIL Thesis [30]	
	Electives			
	TIL4020-20 [5] TIL Research Project *Research Proposal [4]* *Literature Review [1]* *Preparation [0] Vision & Scope [2]*	TIL5050-20 [10] TIL Design Project *Analysis & Design [8]*		

Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences
	Mathematics options for Convergence Programme

D.3 Convergence Programme: Specialisation O - Operations

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods *Integrated Design Exercise [4] Scientific Paper [2] Written Exam [1]*		CIE4801-18 [6] Transport Modelling	CIE5805-18 [4] Intelligent Vehicles for Safe & Efficient Traffic
	ME44206 [5] Quantitative Methods for Logistics		ME44305 [5] System Analysis and Simulation	
	IFEEMCS012100 [3] Analyse; CTB1001-16 T1; WBMT1050 T1	CIE4825 [6] Traffic Flow Modelling and Control Part 1	CIE5826 [4] Traffic Flow Modelling and Control Part 2	Electives
	WI1807TH1-21 [3] Lineaire Algebra	CTB2200 [3] Kansrek. & Statistiek	ME44200 [3] Operations and Maintenance	IFEEMCS010500 [3] Kansrek. & Statistiek

Year 2	Q1	Q2	Q3	Q4
	SEN9110 [5] Simulation Master Class	SEN1221 [5] Statistical Analysis of Choice Behaviour	TIL5060 TIL Thesis [30]	
	Electives			
	TIL4020-20 [5] TIL Research Project *Research Proposal [4] Literature Review [1] Preparation [0] Vision & Scope [2]*	TIL5050-20 [10] TIL Design Project *Analysis & Design [8]*		

D.4 Convergence Programme: Specialisation E - Engineering

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods *Integrated Design Exercise [4] Scientific Paper [2] Written Exam [1]*		ME44311 [5] Advanced Operations and Production Management	
	ME44206 [5] Quantitative Methods for Logistics		CIE4801-18 [6] Transport Modelling	ME44300 [3] Multi-Machine Coordination for Logistics
	IFEEMCS012100 [3] Analyse; CTB1001-16 T1; WBMT1050 T1	TPM028a [5] Decision Making in Multimodal Transport Systems	CIE5830 [5] Freight Transport Systems: Analysis and Modelling	Electives
	WI1807TH1-21 [3] Lineaire Algebra	CTB2200 [3] Kansrek. & Statistiek	IFEEMCS010500 [3] Kansrek. & Statistiek; WBMT2049 T1	IFEEMCS010500 [3] Kansrek. & Statistiek

Year 2	Q1	Q2	Q3	Q4
	SEN9720 [5] Logistics and Supply Chain Innovations	SEN1221 [5] Statistical Analysis of Choice Behaviour	TIL5060 TIL Thesis [30]	
	ME44101 [4] Dynamics and Interaction of Material and Equipment	Electives		
	TIL4020-20 [5] TIL Research Project *Research Proposal [4] Literature Review [1] Preparation [0] Vision & Scope [2]*	TIL5050-20 [10] TIL Design Project *Analysis & Design [8]*		

Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences
	Mathematics options for Convergence Programme

E.1 Example Electives in Specialisation P - Policy

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods		CIE5817 [4] Assessment of Transport Infrastructure and Systems	CIE5816 [4] Urban Regions, Transport and Economics
	Integrated Design Exercise [4]	*Scientific Paper [2]*		
	Written Exam [1]	SEN1221 [5] Statistical Analysis of Choice Behaviour	CIE5830 [5] Freight Transport Systems: Analysis and Modelling	SEN1741 [5] Innovations in Transport and Logistics
	CIE4801-18 [6] Transport Modelling		WM1301TU [3] Ethics of Transportation	AR0168 [5] People, Movement and Public Space
	ME44206 [5] Quantitative Methods for Logistics			
	TIL6010 [2] TIL Programming	AR0228 [5] Infrastructure and Environment Method Module	ME44311 [5] Advanced Operations and Production Management	
Study load	*[30]*		*[31]*	

Year 2	Q1	Q2	Q3	Q4
	SEN171a [5] Advanced Evaluation Methods for Transport Policy Decision-making	ME41106 [5] Intelligent Vehicles 3mE	TIL5060 TIL Thesis [30]	
	TPM004a [4] Transport Safety	TIL5050-20 [10] TIL Design Project		
	TIL4020-20 [5] TIL Research Project			
	Research Proposal [4]	*Analysis & Design [8]*		
	Literature Review [1]			
	Preparation [0] Vision & Scope [2]			
Study load	*[29]*		*[30]*	

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E.2 Example Electives in Specialisation D - Design

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods		CIE5826 [4] Railway Operations and Control	CIE5803-18 [4] Railway Traffic Management
	Integrated Design Exercise [4]	*Scientific Paper [2]*		
	Written Exam [1]	SEN1221 [5] Statistical Analysis of Choice Behaviour	CIE5825 [4] Advanced Public Transport Operations and Modelling	SEN1741 [5] Innovations in Transport and Logistics
	CIE4801-18 [6] Transport Modelling			
		AE4423-20 [4] Airline Planning & Optimization	AE4446 [4] Airport Operations	
	TIL6010 [2] TIL Programming	AE4321-15 [4] Air Traffic Management		ME44300 [3] Multi-Machine Coordination for Logistics
	ME44206 [5] Quantitative Methods for Logistics		WI4062TU [3] Transport, Routing & Scheduling	
Study load	*[31]*		*[29]*	

Year 2	Q1	Q2	Q3	Q4
	CIE4811-18 [6] Planning and Operation of Public Transport Systems	SEN1721 [5] Travel Behaviour Research	TIL5060 TIL Thesis [30]	
		ME44106 [4] Structural Design with FEM		
	TIL4020-20 [5] TIL Research Project	TIL5050-20 [10] TIL Design Project		
	Research Proposal [4]	*Analysis & Design [8]*		
	Literature Review [1]			
	Preparation [0] Vision & Scope [2]			
Study load	*[30]*		*[30]*	

[∑ 120]

Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
SEN	MSc Complex Systems Engineering & Management
ME	MSc Mechanical Engineering
AE	MSc Aerospace Engineering
AR	MSc Architecture, Urbanism & Building Sciences
TU	Interfaculty Education EEMCS / TPM

E.3 Example Electives in Specialisation O - Operations

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods		ME44305 [5] System Analysis and Simulation	
	Integrated Design Exercise [4]	*Scientific Paper [2]*	ME44200 [3] Operations and Maintenance	ME44300 [3] Multi-Machine Coordination for Logistics
	Written Exam [1]	SEN1221 [5] Statistical Analysis of Choice Behaviour	CIE5822 [4] Active Modes: Traffic & Transport	RO47016 [5] Automotive Human Factors
	CIE4801-18 [6] Transport Modelling	CIE4825 [6] Traffic Flow Modelling and Control Part 1	CIE5826 [4] Traffic Flow Modelling and Control Part 2	
	ME44206 [5] Quantitative Methods for Logistics		CIE5815 [4] Resilient Transport Systems: Analysis and Interventions	CIE5805-18 [4] Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment
Study load	*[29]*		*[32]*	

Year 2	Q1	Q2	Q3	Q4
	SEN9110 [5] Simulation Master Class	SEN1721 [5] Travel Behaviour Research	TIL5060 TIL Thesis [30]	
		AE4423-20 [4] Airline Planning & Optimization		
	TIL4020-20 [5] TIL Research Project	TIL5050-20 [10] TIL Design Project		
	Research Proposal [4]			
	Literature Review [1]			
	Preparation [0] Vision & Scope [2]	*Analysis & Design [8]*		
Study load	*[29]*		*[30]*	

[∑ 120]

E.4 Example Electives in Specialisation E - Engineering

Year 1	Q1	Q2	Q3	Q4
	TIL4030-20 [7] TIL Research and Design Methods		CIE5830 [5] Freight Transport Systems: Analysis and Modelling	CIE5805-18 [4] Intelligent Vehicles for Safe & Efficient Traffic
	Integrated Design Exercise [4]	*Scientific Paper [2]*	ME44200 [3] Operations and Maintenance	ME44300 [3] Multi-Machine Coordination for Logistics
	Written Exam [1]	SEN1221 [5] Statistical Analysis of Choice Behaviour	MT44070 [5] Shipping Management	RO47016 [5] Automotive Human Factors
	CIE4801-18 [6] Transport Modelling	TPM028a [5] Decision Making in Multimodal Transport Systems		
	ME44210 [3] Drive & Energy Systems			
	ME44206 [5] Quantitative Methods for Logistics		ME44311 [5] Advanced Operations and Production Management	
Study load	*[31]*		*[30]*	

Year 2	Q1	Q2	Q3	Q4
	SEN9720 [5] Logistics & Supply Chain Innovations	SEN9725 [5] Supply Chain Gaming	TIL5060 TIL Thesis [30]	
	ME44101 [4] Dynamics and Interaction of Material and Equipment			
	TIL4020-20 [5] TIL Research Project	TIL5050-20 [10] TIL Design Project		
	Research Proposal [4]			
	Literature Review [1]			
	Preparation [0] Vision & Scope [2]	*Analysis & Design [8]*		
Study load	*[29]*		*[30]*	

[∑ 120]

Courses and projects provided by:

TIL	MSc Transport, Infrastructure & Logistics
CIE	MSc Civil Engineering
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AR	MSc Architecture, Urbanism & Building Sciences
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