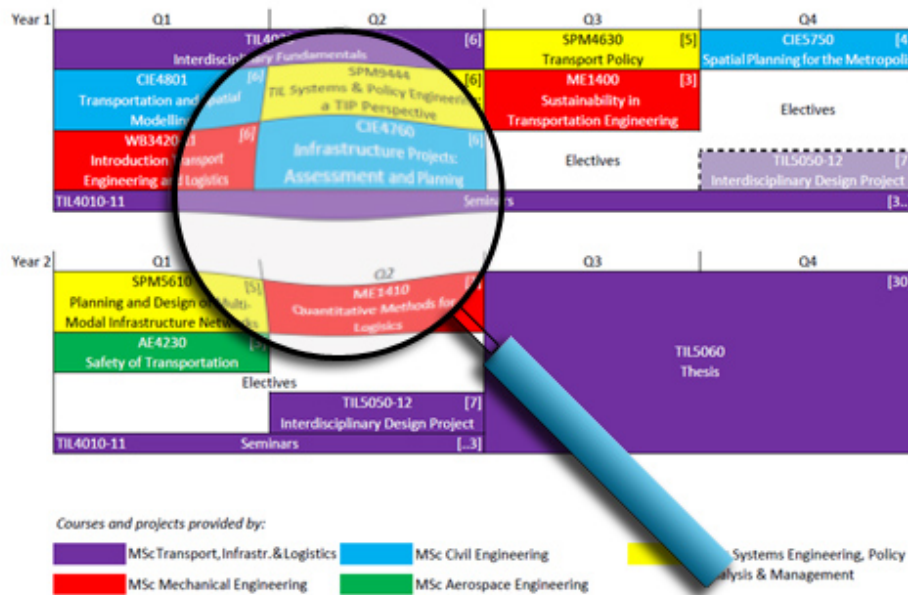


# MSc Transport, Infrastructure and Logistics Programme Navigator 2011



## Overview

### Courses (80 EC)

#### Fundamentals (27 EC)

CIE4801	Transportation and Spatial Modelling
ME1410	Quantitative Methods for Logistics
SPM9444	TIL Systems & Policy Engineering: a TIP Perspective
TIL4030	Interdisciplinary Transport, Infrastructure and Logistics Fundamentals
WB3420-11	Introduction Transport Engineering and Logistics

#### Specialisations (26-27 EC) (1 specialisation)

##### Specialisation P - Policy: Infrastructure, Planning and Environment (26 EC)

AE4230	Safety of Transportation
CIE4760	Infrastructure Projects: Assessment and Planning
CIE5750	Spatial Planning for the Metropolis
ME1400	Sustainability in Transportation Engineering
SPM4630	Transport Policy
SPM5610	Planning and Design of Multi-Modal Infrastructure Networks

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

AE4414-11	Airline Operations and Management
CIE4751	Urban Planning and Transport Networks
CIE4811-09	Design and Control of Public Transport Systems
CIE5802-09	Advanced Transportation Modelling
CIE5803-09	Rail Traffic Management
SPM5610	Planning and Design of Multi-Modal Infrastructure Networks

##### Specialisation O - Operations: Traffic, Technology and Control (26 EC)

CIE4821-09	Traffic Flow Theory and Simulation
CIE5804-09	Innovations in Dynamic Traffic Management
CIE5805	Intelligent Vehicles
SC4026	Control System Design
SPM9325	Simulation Master Class
WB3417-04	Discrete Systems: Modelling, Prototyping, Simulation & Control

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

CIE4840	Freight Transportation Systems: Analysis and Modelling
SPM4620	Supply Chain Analysis
SPM4640	Supply Chain Engineering
SPM5620	Design and Management of Multi-Modal Logistic Chains
WB3419-03	Characterization & Handling of Bulk Solid Materials
WB3421-04	Automation and Control of Transportation and Production Systems

#### Electives (26-27 EC)

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

CIE4751	Urban Planning and Transport Networks
CIE4760	Infrastructure Projects: Assessment and Planning
CIE4811-09	Design and Control of Public Transport Systems
CIE4820	Sociology and Psychology in Transport
CIE4821-09	Traffic Flow Theory and Simulation
CIE4822-09	Traffic Management and Control
CIE4831-09	Empirical Analysis for Transport and Planning
CIE4840	Freight Transportation Systems: Analysis and Modelling
CIE5720	Environmental Impact Assessment
CIE5730	Spatial and Transport Economics
CIE5750	Spatial Planning for the Metropolis
CIE5802-09	Advanced Transportation Modelling
CIE5803-09	Rail Traffic Management
CIE5804-09	Innovations in Dynamic Traffic Management
CIE5805	Intelligent Vehicles
CIE5810-09	Traffic Safety

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

SPM4610	Transport and Logistics Systems Engineering
SPM4620	Supply Chain Analysis
SPM4630	Transport Policy
SPM4640	Supply Chain Engineering
SPM5610	Planning and Design of Multi-Modal Infrastructure Networks
SPM5620	Design and Management of Multi-Modal Logistic Chains

**Electives TEL & PEL - Transportation Engineering (at least 1 course)**

ME1400	Sustainability in Transportation Engineering
WB3417-04	Discrete Systems: Modelling, Prototyping, Simulation & Control
WB3419-03	Characterization & Handling of Bulk Solid Materials
WB3421-04	Automation and Control of Transport and Production Systems
WB3422-11	Design of Transport Equipment
WB3423-04	The Delft Systems Approach
WB3424-08	Production Organisation Principles

**Electives TIL - Other TIL fields (at least 1 course)**

AE4230	Safety of Transportation
AE4414-11	Airline Operations and Management
AE4415-11	Airport Design and Operation
AE4420-11	Network and Fleet Management
AE4428-11	Air Traffic Management
CIE4010	Economics
CIE4330	Ports and Waterways 1
CIE4780	Underground Space Technology, Special Topics
CIE5306	Ports and Waterways 2
MT725	Inland Shipping
SC4026	Control System Design
SC4040	Filtering and Identification
SC4081-10	Knowledge Based Control Systems
SPM4416	Strategic Management of Large Engineering Projects
SPM9155	Advanced System Dynamics
SPM9325	Simulation Master Class
SPM9431	Public Private Partnership
WI4062TU	Transport, Routing and Scheduling
WM0320TU	Ethics and Engineering







**Free electives and projects (optional)**

TIL4020-11	Interdisciplinary Research Project
TIL4090-11	External Project: Internship
	Free electives

**Projects and seminars (40 EC)**

TIL4010-11	TIL Seminars
TIL5050-12	Interdisciplinary Design Project
TIL5060	Thesis

*Courses and projects provided by:*

	MSc Transport, Infrastructure and Logistics
	MSc Civil Engineering
	MSc Systems Engineering, Policy Analysis and Management
	MSc Mechanical Engineering
	MSc Aerospace Engineering
	Interfaculty or service education

## Programme

### Overview

#### MSc Transport, Infrastructure and Logistics 2011 (120 EC)

##### Courses (80 EC)

##### Fundamentals (27 EC)

##### Specialisations (26-27 EC) (1 specialisation)

Specialisation P - Policy: Infrastructure, Planning and Environment (26 EC)

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

Specialisation O - Operations: Traffic, Technology and Control (26 EC)

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

##### Electives (26-27 EC)

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

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

Electives TEL & PEL - Transportation Engineering (at least 1 course)

Electives TIL - Other TIL fields (at least 1 course)

Free electives and projects (optional)

##### Projects and seminars (40 EC)

## Programme

Courses				80			
Fundamentals				27			
Interdisciplinary Fundamentals				6			
Transportation and Spatial Modelling				6			
TIL Systems & Policy Engineering: a TIP Perspective				6			
Introduction Transport Engineering and Logistics				6			
Quantitative Methods for Logistics				3			
Specialisations				26-27			
Policy	Design	Operations	Engineering				
Transport Policy	5	Urban Planning and Transport Networks	4	Traffic Flow Theory and Simulation	6	Autom. & Control of Transport & Production Systems	6
Planning & Design of Multi-Modal Infrastr. Networks	5	Advanced Transportation Modelling	4	Innovations in Dynamic Traffic Management	4	Characterization & Handling of Bulk Solid Materials	6
Infrastructure Projects: Assessment and Planning	6	Design and Control of Public Transport Systems	6	Intelligent Vehicles	4	Supply Chain Analysis	3
Spatial Planning for the Metropolis	4	Rail Traffic Management	4	Discrete Systems: MPSC	5	Supply Chain Engineering	4
Sustainability in Transportation Engineering	3	Airline Operations and Management	4	Control System Design	3	Design & Management of Multi-Modal Logistic Chains	4
Safety of Transportation	3	Planning & Design of Multi-Modal Infrastr. Networks	5	Simulation Master Class	4	Freight Transport Systems: Analysis and Modelling	4
Electives				26-27			
Transport & Planning		Transport & Logistics		Transportation Engineering	Other TIL fields		
Projects and seminars				40			
TIL Seminars				3			
Interdisciplinary Design Project				7			
Thesis				30			

Courses and projects provided by:

  MSc Civil Engineering

  MSc Mechanical Engineering

  MSc Transport, Infrastr. & Logistics

  MSc Aerospace Engineering

  MSc Systems Engineering, Policy Analysis & Management

## Courses

Fundamentals (27 EC)  
 Specialisations (26-27 EC)  
 Electives (26-27 EC)

**Total**                      **80 EC**

## Courses

<b>Fundamentals</b>	<b>27</b>
Interdisciplinary Fundamentals	6
Transportation and Spatial Modelling	6
TIL Systems & Policy Engineering: a TIP Perspective	6
Introduction Transport Engineering and Logistics	6
Quantitative Methods for Logistics	3

<b>Specialisations</b>				<b>26-27</b>
<i>Policy</i>	<i>Design</i>	<i>Operations</i>	<i>Engineering</i>	
Transport Policy                      5	Urban Planning and Transport Networks                      4	Traffic Flow Theory and Simulation                      6	Autom. & Control of Transport & Production Systems                      6	
Planning & Design of Multi-Modal Infrastr. Networks                      5	Advanced Transportation Modelling                      4	Innovations in Dynamic Traffic Management                      4	Characterization & Handling of Bulk Solid Materials                      6	
Infrastructure Projects: Assessment and Planning                      6	Design and Control of Public Transport Systems                      6	Intelligent Vehicles                      4	Supply Chain Analysis                      3	
Spatial Planning for the Metropolis                      4	Rail Traffic Management                      4	Discrete Systems: MPSC                      5	Supply Chain Engineering                      4	
Sustainability in Transportation Engineering                      3	Airline Operations and Management                      4	Control System Design                      3	Design & Management of Multi-Modal Logistic Chains                      4	
Safety of Transportation                      3	Planning & Design of Multi-Modal Infrastr. Networks                      5	Simulation Master Class                      4	Freight Transport Systems: Analysis and Modelling                      4	

<b>Electives</b>				<b>26-27</b>
<i>Transport &amp; Planning</i>	<i>Transport &amp; Logistics</i>	<i>Transportation Engineering</i>	<i>Other TIL fields</i>	
>= 1 course	>= 1 course	>= 1 course	>= 1 course	

Courses provided by:

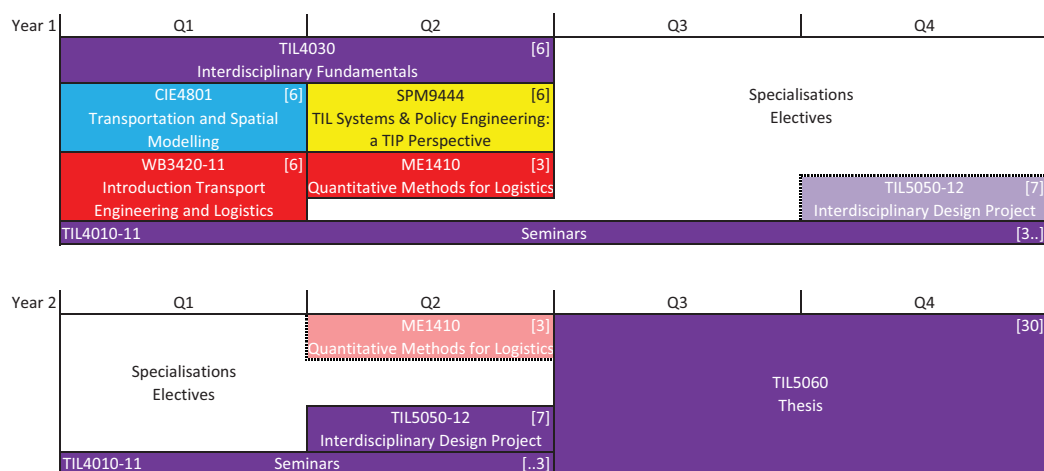
	MSc Civil Engineering		MSc Mechanical Engineering		MSc Transport, Infrastr. & Logistics
	MSc Aerospace Engineering		MSc Systems Engineering, Policy Analysis & Management		

## Fundamentals

Course	EC	2010 remark
TIL4030 Interdisciplinary Fundamentals	6	Ess
CIE4801 Transportation and Spatial Modelling	6	Ess
SPM9444 TIL Systems & Policy Engineering: a TIP Perspective	6	Ess
WB3420-11 Introduction Transport Engineering and Logistics	6	C1 was 5 EC
ME1410 Quantitative Methods for Logistics	3	
<b>Total</b>	<b>27</b>	

Compulsory

## Fundamentals



Courses and projects provided by:

<span style="background-color: #4a4a8a; color: white; padding: 2px;"> </span> MSc Transport, Infrastr. & Logistics	<span style="background-color: #00aaff; color: white; padding: 2px;"> </span> MSc Civil Engineering	<span style="background-color: #ffff00; color: black; padding: 2px;"> </span> MSc Systems Engineering, Policy Analysis & Management
<span style="background-color: #ff0000; color: white; padding: 2px;"> </span> MSc Mechanical Engineering	<span style="background-color: #00ff00; color: black; padding: 2px;"> </span> MSc Aerospace Engineering	

## Specialisations

Specialisation P - Policy: Infrastructure, Planning and Environment (26 EC)

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

Specialisation O - Operations: Traffic, Technology and Control (26 EC)

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

Choose 1 specialisation

## Specialisations

<i>Policy</i>	<i>Design</i>	<i>Operations</i>	<i>Engineering</i>
Transport Policy	5	Urban Planning and Transport Networks	4
Planning & Design of Multi-Modal Infrastr. Networks	5	Advanced Transportation Modelling	4
Infrastructure Projects: Assessment and Planning	6	Design and Control of Public Transport Systems	6
Spatial Planning for the Metropolis	4	Rail Traffic Management	4
Sustainability in Transportation Engineering	3	Airline Operations and Management	4
Safety of Transportation	3	Planning & Design of Multi-Modal Infrastr. Networks	5
		Traffic Flow Theory and Simulation	6
		Innovations in Dynamic Traffic Management	4
		Intelligent Vehicles	4
		Discrete Systems: MPSC	5
		Control System Design	3
		Simulation Master Class	4
		Autom. & Control of Transport & Production Systems	6
		Characterization & Handling of Bulk Solid Materials	6
		Supply Chain Analysis	3
		Supply Chain Engineering	4
		Design & Management of Multi-Modal Logistic Chains	4
		Freight Transport Systems: Analysis and Modelling	4

Courses provided by:

■ MSc Civil Engineering

■ MSc Mechanical Engineering

■ MSc Transport, Infrastr. & Logistics

■ MSc Aerospace Engineering

■ MSc Systems Engineering, Policy Analysis & Management

### Specialisation P - Policy: Infrastructure, Planning & Environment

Course	EC	2010	remark
SPM4630	5	A1	was 6 EC
SPM5610	5	A1	was 6 EC
CIE4760	6	A2	
CIE5750	4	A2	
ME1400	3	B3	
AE4230	3	B3	
<b>Total</b>	<b>26</b>		

*In a chosen specialisation all courses are compulsory*

### Specialisation P - Policy: Infrastructure, Planning & Environment

Year 1	Q1	Q2	Q3	Q4
	TIL4030 [6] Interdisciplinary Fundamentals		SPM4630 [5] Transport Policy	CIE5750 [4] Spatial Planning for the Metropolis
	CIE4801 [6] Transportation and Spatial Modelling	SPM9444 [6] TIL Systems & Policy Engineering: a TIP Perspective	ME1400 [3] Sustainability in Transportation Engineering	Electives
	WB3420-11 [6] Introduction Transport Engineering and Logistics	CIE4760 [6] Infrastructure Projects: Assessment and Planning	Electives	TIL5050-12 [7] Interdisciplinary Design Project
	TIL4010-11 Seminars [3..]			
Year 2	Q1	Q2	Q3	Q4
	SPM5610 [5] Planning and Design of Multi-Modal Infrastructure Networks	ME1410 [3] Quantitative Methods for Logistics	TIL5060 Thesis [30]	
	AE4230 [3] Safety of Transportation			
	Electives	TIL5050-12 [7] Interdisciplinary Design Project		
	TIL4010-11 Seminars [..3]			

Courses and projects provided by:

<span style="background-color: #4b0082; color: white; padding: 2px;"> </span> MScTransport, Infrastr.& Logistics	<span style="background-color: #00b0f0; color: white; padding: 2px;"> </span> MSc Civil Engineering	<span style="background-color: #ffff00; color: black; padding: 2px;"> </span> MSc Systems Engineering, Policy Analysis & Management
<span style="background-color: #ff0000; color: white; padding: 2px;"> </span> MSc Mechanical Engineering	<span style="background-color: #008000; color: white; padding: 2px;"> </span> MSc Aerospace Engineering	

## Specialisation D - Design: Transport Systems & Networks

Course	EC	2010	remark
CIE4751 Urban Planning and Transport Networks (*)	4	A2	
CIE5802-09 Advanced Transportation Modelling	4	B2	
CIE4811-09 Design and Control of Public Transport Systems	6	B2	
CIE5803-09 Rail Traffic Management	4	B2	
AE4414-11 Airline Operations and Management	4	B	was 5 EC
SPM5610 Planning & Design of Multi-Modal Infrastructure Networks	5	A1	was 6 EC
<b>Total</b>	<b>27</b>		

\* if course is already taken in minor CT-Mi-127 as CT4751 or CIE4751MI, it must be replaced by

CIE4330 Ports and Waterways 1	4	C	
-------------------------------	---	---	--

In a chosen specialisation all courses are compulsory

## Specialisation D - Design: Transport Systems & Networks

Year	Q1	Q2	Q3	Q4
Year 1	TIL4030 Interdisciplinary Fundamentals [6]		Electives	TIL5050-12 Interdisciplinary Design Project [7]
	CIE4801 Transportation and Spatial Modelling [6]	SPM9444 TIL Systems & Policy Engineering [6]		
	WB3420-11 Introduction Transport Engineering and Logistics [6]	CIE4751 Urb. Planning & Transport Networks [4]		
	CIE5802-09 Advanced Transportation Modelling [4]			
	TIL4010-11 Seminars [3..]			
Year 2	AE4414-11 Airline Operations and Management [4]		TIL5060 Thesis [30]	
	CIE4811-09 Design and Control of Public Transport Systems [6]	CIE5803-09 Rail Traffic Management [4]		
	SPM5610 Planning and Design of Multi-Modal Infrastructure Networks [5]	ME1410 Quantitative Methods for Logistics [3]		
	TIL5050-12 Interdisciplinary Design Project [7]			
	TIL4010-11 Seminars [..3]			

Courses and projects provided by:

<span style="background-color: #4b0082; color: white; padding: 2px;"> </span> MSc Transport, Infrast. & Logistics	<span style="background-color: #00b0f0; color: white; padding: 2px;"> </span> MSc Civil Engineering	<span style="background-color: #ffff00; color: black; padding: 2px;"> </span> MSc Systems Engineering, Policy Analysis & Management
<span style="background-color: #ff0000; color: white; padding: 2px;"> </span> MSc Mechanical Engineering	<span style="background-color: #008000; color: white; padding: 2px;"> </span> MSc Aerospace Engineering	

## Specialisation O - Operations: Traffic, Technology & Control

Course	EC	2010	remark
CIE4821-09 Traffic Flow Theory and Simulation	6	D2	
CIE5804-09 Innovations in Dynamic Traffic Management	4	D2	
CIE5805 Intelligent Vehicles	4	new	
WB3417-04 Discrete Systems: Modelling, Prototyping, Simulation, Contr.	5	B4	
SC4026 Control System Design	3		
SPM9325 Simulation Master Class	4	D	was 5 EC
<b>Total</b>	<b>26</b>		

*In a chosen specialisation all courses are compulsory*

## Specialisation O - Operations: Traffic, Technology & Control

Year 1	Q1	Q2	Q3	Q4
	TIL4030 Interdisciplinary Fundamentals [6]		CIE4821-09 Traffic Flow Theory and Simulation [6]	CIE5805 Intelligent Vehicles [4]
	CIE4801 Transportation and Spatial Modelling [6]	SPM9444 TIL Systems & Policy Engineering: a TIP Perspective [6]	Electives	CIE5804-09 Innovations in Dynamic Traffic Management [4]
	WB3420-11 Introduction Transport Engineering and Logistics [6]	ME1410 Quantitative Methods for Logistics [3]		TIL5050-12 Interdisciplinary Design Project [7]
	TIL4010-11 Seminars [3..]			
Year 2	Q1	Q2	Q3	Q4
	WB3417-04 Discrete Systems: Modelling, Prototyping, Simulation & Control [5]		TIL5060 Thesis [30]	
	SC4026 Control System Design [3]	Electives		
	SPM9325 Simulation Master Class [4]			
	Electives	TIL5050-12 Interdisciplinary Design Project [7]		
	TIL4010-11 Seminars [..3]			

Courses and projects provided by:

<span style="background-color: purple; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> MSc Transport, Infrastr. & Logistics	<span style="background-color: cyan; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> MSc Civil Engineering	<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> MSc Systems Engineering, Policy Analysis & Management
<span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> MSc Mechanical Engineering	<span style="background-color: green; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> MSc Aerospace Engineering	

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






Course		EC	2010	remark
WB3421-04	Automation & Control of Transport & Production Systems	6		Ess
WB3419-03	Characterization and Handling of Bulk Solid Materials	6		C1
SPM4620	Supply Chain Analysis	3		B1
SPM4640	Supply Chain Engineering	4		B1 was 6 EC
SPM5620	Design and Management of Multi-Modal Logistic Chains	4		B1 was 6 EC
CIE4840	Freight Transportation Systems: Analysis and Modelling	4		
<b>Total</b>		<b>27</b>		

*In a chosen specialisation all courses are compulsory*

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

Year 1	Q1	Q2	Q3	Q4
	TIL4030 Interdisciplinary Fundamentals [6]		WB3421-04 Automation and Control of Transport and Production Systems [6]	
	CIE4801 [6] Transportation and Spatial Modelling	SPM9444 [6] TIL Systems & Policy Engineering	CIE4840 [4] Freight Transportation Systems; Analysis and Modelling	SPM4640 [4] Supply Chain Engineering
	WB3420-11 [6] Introduction Transport Engineering and Logistics	ME1410 [3] Quantitative Methods for Logistics	Electives	TIL5050-12 [7] Interdisciplinary Design Project
	SPM4620 [3] Supply Chain Analysis			
	TIL4010-11 Seminars [3..]			
Year 2	Q1	Q2	Q3	Q4
	WB3419-03 [6] Characterization and Handling of Bulk Solid Materials		TIL5060 Thesis [30]	
	Electives	SPM5620 [4] Design and Management of Multi-Modal Logistic Chains		
		TIL5050-12 [7] Interdisciplinary Design Project		
	TIL4010-11 Seminars [..3]			

Courses and projects provided by:

 MSc Transport, Infrastr.&Logistics	 MSc Civil Engineering	 MSc Systems Engineering, Policy Analysis & Management
 MSc Mechanical Engineering	 MSc Aerospace Engineering	

## Electives

- Electives T&P - Transport and Planning (at least 1 course)
- Electives T&L - Transport and Logistics (at least 1 course)
- Electives TEL & PEL - Transportation Engineering (at least 1 course)
- Electives TIL - Other TIL fields (at least 1 course)
- Free electives and projects (optional)

## Electives

<i>Transport &amp; Planning</i>	<i>Transport &amp; Logistics</i>	<i>Transportation Engineering</i>	<i>Other TIL fields</i>	<i>Free electives &amp; projects</i>
Urban Planning and Transport Networks	Transport and Logistics Systems Engineering	Sustainability in Transportation Engineering	Economics	Interdisciplinary Research Project
Infrastructure Projects: Assessment and Planning	Supply Chain Analysis	Discrete Systems: MPSC	Underground Space Technology, Special Topics	External Project: Internship
Design and Control of Public Transport Systems	Transport Policy	Characterization & Handling of Bulk Solid Materials	Ports and Waterways 1	Free electives
Sociology and Psychology in Transport	Supply Chain Engineering	Autom. & Control of Transport & Production Systems	Ports and Waterways 2	
Traffic Flow Theory and Simulation	Planning & Design of Multi-Modal Infrastr. Networks	Design of Transport Equipment	Strategic Management of Large Engineering Projects	
Traffic Management and Control	Design & Management of Multi-Modal Logistic Chains	The Delft Systems Approach	Public Private Partnership	
Empirical Analysis for Transport and Planning		Production Organisation Principles	Simulation Master Class	
Freight Transport Systems: Analysis and Modelling			Advanced System Dynamics	
Environmental Impact Assessment			Control System Design	
Spatial and Transport Economics			Filtering and Identification	
Spatial Planning for the Metropolis			Knowledge Based Control Systems	
Advanced Transportation Modelling			Inland Shipping	
Rail Traffic Management			Airline Operations and Management	
Innovations in Dynamic Traffic Management			Airport Design and Operation	
Intelligent Vehicles			Network and Fleet Management	
Traffic Safety			Air Traffic Management	
			Safety of Transportation	
			Transport, Routing and Scheduling	
			Ethics and Engineering	

Courses provided by:	<span style="display: inline-block; width: 10px; height: 10px; background-color: purple; border: 1px solid black;"></span> MSc TIL	<span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black;"></span> MSc Civil Engineering
	<span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black;"></span> MSc SEPAM	<span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black;"></span> MSc Mechanical Engineering
	<span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black;"></span> MSc Aerospace Engineering	<span style="display: inline-block; width: 10px; height: 10px; background-color: grey; border: 1px solid black;"></span> Interfaculty or service education

## Electives T&P - Transport and Planning

Course	EC	2010	remark
CIE4751 Urban Planning and Transport Networks	4	A2	<i>not if in minor</i>
CIE4760 Infrastructure Projects: Assessment and Planning	6	A2	
CIE4811-09 Design and Control of Public Transport Systems	6	B2	
CIE4820 Sociology and Psychology in Transport	4	D	
CIE4821-09 Traffic Flow Theory and Simulation	6	D2	
CIE4822-09 Traffic Management and Control	6	D2	
CIE4831-09 Empirical Analysis for Transport and Planning	6	E1	
CIE4840 Freight Transportation Systems: Analysis and Modelling	4		
CIE5720 Environmental Impact Assessment	4	A2	
CIE5730 Spatial and Transport Economics	4	D	<i>not if in minor</i>
CIE5750 Spatial Planning for the Metropolis	4	A2	
CIE5802-09 Advanced Transportation Modelling	4	B2	
CIE5803-09 Rail Traffic Management	4	B2	
CIE5804-09 Innovations in Dynamic Traffic Management	4	D2	
CIE5805 Intelligent Vehicles	4	new	
CIE5810-09 Traffic Safety	4	B2	

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

## Electives T&P - Transport and Planning

Q1	Q2	Q3	Q4
(D) CIE4811-09 [6] Design and Control of Public Transport Systems	(D) CIE4751 [4] Urban Planning and Transport Networks	(O) CIE4821-09 [6] Traffic Flow Theory and Simulation	CIE4822-09 [6] Traffic Management and Control
CIE5730 [4] Spatial and Transport Economics	(P) CIE4760 [6] Infrastructure Projects: Assessment and Planning	CIE4831-09 [6] Empirical Analysis for Transport and Planning	CIE5720 [4] Environmental Impact Assessment
	CIE4820 [4] Sociology and Psychology in Transport	(E) CIE4840 [4] Freight Transportation Systems: Analysis and Modelling	(P) CIE5750 [4] Spatial Planning for the Metropolis
	(D) CIE5802-09 [4] Advanced Transportation Modelling		(O) CIE5804-09 [4] Innovations in Dynamic Traffic Management
	(D) CIE5803-09 [4] Rail Traffic Management		(O) CIE5805 [4] Intelligent Vehicles
	CIE5810-09 [4] Traffic Safety		

Courses provided by:

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

## Electives T&L - Transport and Logistics

Course	EC	2010	remark
SPM4610	6	B3	was 9 EC
SPM4620	3	new	
SPM4630	5	A1	was 6 EC
SPM4640	4	B1	was 6 EC
SPM5610	5	A1	was 6 EC
SPM5620	4	B1	was 6 EC

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

## Electives T&L - Transport and Logistics

Q1	Q2	Q3	Q4
SPM4610 Transport and Logistics Systems Engineering	[6] (P)	SPM4630 Transport Policy	[5] (E) SPM4640 Supply Chain Engineering [4]
(P/D) SPM5610 Planning and Design of Multi- Modal Infrastructure Networks	[5] (E)	SPM4620 Supply Chain Analysis	[3]
	(E)	SPM5620 Design and Management of Multi-Modal Logistic Chains	[4]

Courses provided by:

MSc Systems Engineering, Policy Analysis and Management  
Domain 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

## Electives TEL & PEL - Transportation Engineering

Course	EC	2010	remark
ME1400	3	B3	
WB3417-04	5	B4	
WB3419-03	6	C1	
WB3421-04	6	Ess	
WB3422-11	6	C1	was 6 EC
WB3423-04	3	B3	
WB3424-08	3	B3	

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

## Electives TEL & PEL - Transportation Engineering

Q1	Q2	Q3	Q4
(O) WB3417-04 Discrete Systems: Modelling, Prototyping, Simulation & Control	[5] (E)	WB3421-04 Automation and Control of Transport and Production Systems	[6]
(E) WB3419-03 Characterization and Handling of Bulk Solid Materials	[6]	WB3422-11 Design of Transport Equipment	[6]
WB3423-04 [3] The Delft Systems Approach	WB3424-08 [3] (P) Production Organisation Principles	ME1400 [3] Sustainability in Transportation Engineering	

Courses provided by:

MSc Mechanical Engineering  
Track Transportation Engineering  
Specialisation Transport Engineering & Logistics  
Specialisation Production Engineering & 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

## Electives TIL - Other TIL fields

Course	EC	2010	remark
CIE4010	4	D	
CIE4780	4	C	
CIE4330	4	C	
CIE5306	4	C	
SPM4416	6	A3	
SPM9431	6	A3	
SPM9325	4	B+D	was 5 EC
SPM9155	4	D	was 5 EC
SC4026	3		
SC4040	6		
SC4081-10	4	D1	
MT725	2	A	
AE4414-11	4	B	was 5 EC
AE4415-11	4	B	was 5 EC
AE4420-11	3	D	was 2 EC
AE4428-11	3		was 4 EC
AE4230	3	B3	
WI4062TU	3	D	
WM0320TU	3		

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

## Electives TIL - Other TIL fields

Q1	Q2	Q3	Q4
			SPM9431 [6] Public Private Partnership
(O) SPM9325 [4] Simulation Master Class	SPM9155 [4] Advanced System Dynamics	SPM4416 [6] Strategic Management of Large Engineering Projects	
(O) SC4026 [3] Control System Design	SC4040 [6] Filtering and Identification	SC4081-10 [4] Knowledge Based Control Systems	MT725 [2] Inland Shipping
CIE4330 [4] Ports and Waterways 1		WI4062TU [3] Transport, Routing & Scheduling	CIE5306 [4] Ports and Waterways 2
WM0320TU [3] Ethics and Engineering	CIE4010 [4] Economics	WM0320TU [3] Ethics and Engineering	CIE4780 [4] Underground Space Technology
(D) AE4414-11 [4] Airline Operations and Management		AE4415-11 [4] Airport Design and Operation	
AE4428-11 [3] Air Traffic Management			AE4420-11 [3] Network and Fleet Management
(P) AE4230 [3] Safety of Transportation			

Courses provided by:

<span style="background-color: #800080; width: 20px; height: 10px; display: inline-block;"></span> MSc Transport, Infratr. & Logistics	<span style="background-color: #00B0F0; width: 20px; height: 10px; display: inline-block;"></span> MSc Civil Engineering	<span style="background-color: #FFFF00; width: 20px; height: 10px; display: inline-block;"></span> MSc SEPAM
<span style="background-color: #FF0000; width: 20px; height: 10px; display: inline-block;"></span> MSc Mechanical Engineering	<span style="background-color: #008000; width: 20px; height: 10px; display: inline-block;"></span> MSc Aerospace Engineering	<span style="background-color: #A9A9A9; width: 20px; height: 10px; display: inline-block;"></span> Interfaculty or service education

- (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

## Free electives and projects

<i>Course or project</i>		<i>EC</i>		<i>2010</i>	<i>remark</i>
	Free electives				<i>new needs approval</i>
TIL4020-11	Interdisciplinary Research Project	7	E1		<i>was 6 EC</i>
TIL4090-11	External Project: Internship	10	D		<i>was 11 EC</i>

### Optional

## Free electives and projects

Q1	Q2	Q3	Q4
Free electives			
TIL4020-11 [7] Interdisciplinary Research Project	TIL4020-11 [7] Interdisciplinary Research Project	TIL4020-11 [7] Interdisciplinary Research Project	TIL4020-11 [7] Interdisciplinary Research Project
TIL4090-11 [10] External Project: Internship	TIL4090-11 [10] External Project: Internship	TIL4090-11 [10] External Project: Internship	TIL4090-11 [10] External Project: Internship

Projects provided by:

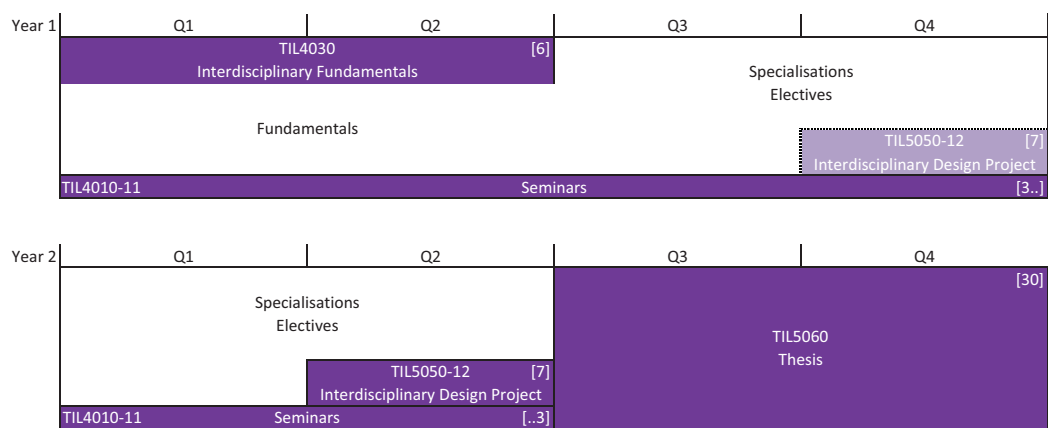
MSc Transport, Infrastructure and Logistics

## Projects and seminars

	<i>Project or seminar</i>	<i>EC</i>	<i>2010 remark</i>
TIL4010-11	TIL Seminars	3	was 6 EC
TIL5050-12	Interdisciplinary Design Project	7	was 10 EC
TIL5060	Thesis	30	

### Compulsory

## Projects and seminars



Courses and projects provided by:

MSc Transport, Infrastructure and Logistics