

## Curriculum Industrial Engineering Focusing on Mobility and Traffic (WMV) – B.Sc.

Term	Modules and related courses	Credit points
1 28 credit points	<b>WMV 1: Introduction to Traffic Systems</b>	5
	Introduction to Traffic Systems	
	<b>WMV 2: Economics and Private Business Law</b>	8
	Economics (Microeconomics and Macroeconomics)	
	Private Business Law	
	<b>WMV 3: Mathematics I</b>	9
	Introduction to Mathematics	
	<b>WMV 4: Introduction to Business Administration</b>	6
Introduction to Business Administration		
2 30 credit points	<b>WMV 5: Transport Industry and Mobility</b>	5
	Transport Industry and Mobility	
	<b>WMV 6: Introduction to Information Systems</b>	5
	Introduction to Information Systems	
	<b>WMV 7: Mathematics II</b>	9
	Advanced Mathematics	
	<b>WMV 8: Academic and Social Skills</b>	6
	Academic Skills and Methods	
Communicating, Presenting, Facilitating Meetings		
<b>WMV 9: Finance and Accountancy</b>	5	
Finance and Accountancy		
3 28 credit points	<b>WMV 10: Engineering Mechanics</b>	5
	Engineering Mechanics	
	<b>WMV 11: Traffic Ecology</b>	5
	Traffic Ecology	
	<b>WMV 12: Traffic Planning</b>	5
	Traffic Planning	
	<b>WMV 13: Programming with Laboratory</b>	5
	Programming with Laboratory	
<b>WMV 14: Business English</b>	3	
Business English		
<b>WMV 15: Electrical Engineering with Laboratory</b>	5	

	Electrical Engineering with Laboratory	
4 33 credit points	<b>WMV 16: Database Systems</b>	5
	Database Systems	
	<b>WMV 17: Road Traffic Systems</b>	8
	Driving Dynamics of Road Transport Vehicles with Laboratory	
	Road Traffic Systems	
	<b>WMV 18: Rail Traffic Systems</b>	8
	Driving Dynamics of Rail Vehicles with Laboratory	
	Rail Traffic Systems	
	<b>WMV 19: Flight Mechanics and Aerodynamics with Laboratory</b>	7
	Flight Mechanics	
Aerodynamics with Laboratory		
<b>WMV 20: Measurement and Control with Laboratory</b>	5	
Measurement and Control with Laboratory		
5 30 credit points mobility window	<b>WMV 21: Short-Range Mobility</b>	5
	Short-Range Mobility	
	<b>WMV 22: Traffic Management with Laboratory</b>	5
	Traffic Management with Laboratory	
	<b>WMV 23: Digitization in Traffic with Laboratory</b>	5
	Digitization in Traffic with Laboratory	
	<b>WMV 24: Specialization Module I (*)</b>	8
	Specialization Module I	
<b>WMV 25: Thesis</b>	5	
Thesis		
<b>WMV 26: Electives (***)</b>	2(4)	
Elective I		
6 31 credit points	<b>WMV 27: Flight Guidance and Air Traffic Control</b>	5
	Flight Guidance	
	Air Traffic Control	
	<b>WMV 28: Traffic Control with Laboratory</b>	5
	Traffic Control with Laboratory	
	<b>WMV 29: Mobility Analyses and Traffic Models</b>	6
	Methods of Traffic Survey and Mobility Analyses	
	Traffic Models	
	<b>WMV 30: Seminar Traffic Projects</b>	5
	Seminar Traffic Projects	
Project Management		
<b>WMV 31: Specialization Module II (*)</b>	8	
Specialization Module II		
<b>WMV 26: Electives (***)</b>	2(4)	
Elective II		
7	<b>WMV 32: Supervised Internship</b>	15
	Supervised Internship	

30 credit points	<b>WMV 33: Bachelor's Thesis and Defense</b>	
	Bachelor's Thesis	12
	Thesis Defense	3
	<b>Total:</b>	<b>210</b>

(\*) One specialization module to be selected from the catalog of specialization modules (see below)

(\*\*\*) One mandatory elective to be selected from the catalog of mandatory electives (see below)

## Catalog of Specialization Modules and Mandatory Electives

for the degree programs

Logistics Management,  
 Logistics Management part-time in industry with integrated vocational training,  
 Logistics and Information Management,  
 Logistics and Information Management part-time in industry with integrated vocational training,  
 Mobility and Passenger Transport Management,  
 Industrial Engineering Focusing on Mobility and Traffic

### Specialization Modules:

Modules and related courses	Credit points
<b>SPM 1: Cooperation Management</b>	8
Cooperation Management in the Field of Logistics Cooperation Management Projects	
<b>SPM 2: Special Topics of the Transport Industry</b>	8
Transport, Infrastructure and Pricing Policy Current Problems of Freight Transport	
<b>SPM 3: Airline and Airport Management</b>	8
Airline Management with Seminar Airport Management	
<b>SPM 4 Human Resources</b>	8
Human Resources Labor Law	
<b>SPM 5: Business Application Systems</b>	8
Building Blocks of Business Application Systems in Logistics Implementation of Logistics Application Systems	
<b>SPM 6: Process Management in Logistics and Supply Chain</b>	8
Process Management in Logistics and Supply Chain Exercises / Projects	
<b>SPM 7: Optimization of Transport and Traffic</b>	8
Modeling and Quantitative Solutions Computer-Aided Optimization	
<b>SPM 8: Applied Market Research</b>	8
Introduction to Applied Market Research Project	
<b>SPM 9: Electromobility</b>	8
Introduction to Electromobility Electric Drives	

Modules and related courses	Credit points
Current Topics Electromobility	
<b>SPM 10: Specialization in Overland Transport Technology</b>	8
Specialization in Rail Transport	
Specialization in Road Transport	
<b>SPM 11: Integrated Network Planning</b>	8
Integrated Network Planning	
Case Studies of Integrated Network Planning	
Integrated Interface Planning	

### Mandatory Electives:

Modules and related courses	Credit points
<b>WPF 1: Practical Philosophy - erroneous paths you'd better leave to others</b>	2
Practical Philosophy - erroneous paths you'd better leave to others	
<b>WPF 2: International Summer School Traffic and Infrastructure</b>	2
Summer School with Széchenyi István University (Hungary)	
<b>WPF 3: Cost and Activity Accounting Goods Transport Land/Sea</b>	2
Cost and Activity Accounting Goods Transport Land/Sea	
<b>WPF 4: Current Issues in the Maritime and Seaport Industries</b>	2
Current Issues in the Maritime and Seaport Industries	
<b>WPF 5: Introduction to SAP</b>	2
Introduction to SAP	
<b>WPF 6: Practical Modeling and Robot Programming</b>	2
Practical Modeling and Robot Programming	
<b>WPF 7: Management of Working Time</b>	2
Management of Working Time	
<b>WPF 8: Management of Non-Profit Organizations</b>	2
Management of Non-Profit Organizations	
<b>WPF 9: Rail Transport in Practice</b>	2
Rail Transport in Practice	