

## COURSE SYLLABUS AND COURSE REQUIREMENTS

### ACADEMIC YEAR 2023/24 SEMESTER 2

<i>Course title</i>	<i>Transport Networks</i>
<i>Course Code</i>	<i>SZB075AN</i>
<i>Hours/Week: le/pr/lab</i>	<i>2 le / 1 pr</i>
<i>Credits</i>	<i>2</i>
<i>Degree Programme</i>	<i>Civil Engineering BSc (elective)</i>
<i>Study Mode</i>	<i>full time</i>
<i>Requirements</i>	<i>mid-term mark</i>
<i>Teaching Period</i>	<i>spring</i>
<i>Prerequisites</i>	<i>-</i>
<i>Department(s)</i>	<i>Civil Engineering</i>
<i>Course Director</i>	
<i>Teaching Staff</i>	<i>Eller Balázs, Dr. Gulyás András</i>

## COURSE DESCRIPTION

*A short description of the course (max. 10 sentences).*

*Neptun: Instruction/Subjects/Subject Details/Basic data/Subject description*

Characteristics and specialties of transport networks and transport connections. Principles of network planning and their practical application, road network and road traffic planning methods, railway network and railway traffic planning methods.

## SYLLABUS

*Neptun: Instruction/Subjects/Subject Details/Syllabus*

### 1. GOALS AND OBJECTIVES

*Goals, student learning outcome.*

*Neptun: Instruction/Subjects/Subject Details/Syllabus/Goal of Instruction*

Basic knowledge in the field of transport networks.

### 2. COURSE CONTENT

*Neptun: Instruction/Subjects/Subject Details/Syllabus/Subject content*

#### TOPICS

LECTURE	TOPICS
	1. Spatial structure and transport networks
	2. Transport policy, strategies, road network development
	3. Road network hierarchy, network planning
	4. Traffic planning of road networks
	5. Network characteristics, trans-European networks
	6. Network connections, multimodality
	7. Public transport networks
	8. Freight transport, water and air networks
	9. International railway networks
	10. High-speed railway networks
	11. Railway network development
	12. Urban rail networks
	13. Mid-term test
	14. Mid-term test retake

**PRACTICE**

1-2. Comparison of project alternatives  
 3-5. Road network traffic planning  
 6-7. Urban traffic planning  
 8. Practice for mid-term test Part 1  
 9-12. Railway traffic planning

**DETAILED SYLLABUS AND COURSE SCHEDULE**

ACADEMIC HOLIDAYS INCLUDED

**LECTURE**

<i>week</i>	<b>Topic</b>	<b>Compulsory reading; page number (from ... to ...)</b>	<b>Required tasks (assignments, tests, etc.)</b>	<b>Completion date, due date</b>
1.	Spatial structure and transport networks	Presentation 1 Lecture notes 3-14	...	08 February
2.	Transport policy, strategies, road network development	Presentation 2 Lecture notes 15-26		15 February
3.	Road network hierarchy, network planning	Presentation 3 Lecture notes 27-35		22 February
4.	Traffic planning of road networks	Presentation 4 Lecture notes 36-48		29 February
5.	Network characteristics, trans-European networks	Presentation 5 Lecture notes 49-57		07 March
6.	Network connections, multimodality	Presentation 6 Lecture notes 58-66		14 March
7.	Public transport networks	Presentation 7 Lecture notes 67-76		21 March
8.	Spring break			28 March
9.	Freight transport, water and air networks	Presentation 8 Lecture notes 77-86		04 April
10.	International railway networks	Presentation 9		11 April
11.	High-speed railway networks	Presentation 10		18 April
12.	Railway network development	Presentation 11		25 April
13.	Urban rail networks	Presentation 12		02 May
14.	Mid-term test	All presentations Lecture notes	Mid-term test	09 May

**PRACTICE, LABORATORY PRACTICE**

<i>week</i>	<b>Topic</b>	<b>Compulsory reading; page number (from ... to ...)</b>	<b>Required tasks (assignments, tests, etc.)</b>	<b>Completion date, due date</b>
1.	Comparison of project alternatives	1-2 Practice 1-27 slides Practice manual 3-7	worksheet filling	08 February
2.	Comparison of project alternatives	1-2 Practice 28-55 slides Practice manual 7-12	worksheet filling	15 February
3.	Road network traffic planning	3-5 Practice 1-37 slides Practice manual 13-17	worksheet filling	22 February
4.	Road network traffic planning	3-5 Practice 38-61 slides Practice manual 18-21	worksheet filling	29 February
5.	Road network traffic planning	3-5 Practice 62-73 slides Practice manual 21-26	worksheet filling	07 March
6.	Urban traffic planning	6-7 Practice 1-23 slides Practice manual 27-30	worksheet filling	14 March
7.	Urban traffic planning	6-7 Practice 24-32 slides Practice manual 31-34	worksheet filling	21 March
8.	Spring break			28 March
9.	Practice for mid-term test	Presentations 1-8	attendance	04 April

10.	Railway traffic planning + Homework upload	9-11 Practice 1-30 slides	drawing	11 April
11.	Railway traffic planning	9-11 Practice 31-60 slides	drawing	18 April
12.	Railway traffic planning	9-11 Practice 61-90 slides	drawing	25 April
13.	Student presentations for plus points		attendance	02 May
14.	Student presentations for plus points		attendance	09 May

### 3. ASSESSMENT AND EVALUATION

(Neptun: Instruction/Subjects/Subject Details/Syllabus/Examination and Evaluation System)

#### ATTENDANCE

In accordance with the Code of Studies and Examinations of the University of Pécs, Article 45 (2) and Annex 9. (Article 3) a student may be refused a grade or qualification in the given full-time course if the number of class absences exceeds 30% of the contact hours stipulated in the course description.

**Method for monitoring attendance** (e.g.: attendance sheet / online test/ register, etc.)

Attendance sheet

#### ASSESSMENT

Cells of the appropriate type of requirement is to be filled out (course-units resulting in mid-term grade or examination). Cells of the other type can be deleted.

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#### **Course resulting in mid-term grade (PTE TVSz 40§(3))**

**Mid-term assessments, performance evaluation and their ratio in the final grade** (The samples in the table to be deleted.)

Type	Assessment	Ratio in the final grade
Mid-term test	max 20 points	100 %

**Opportunity and procedure for re-takes** (PTE TVSz 47§(4))

The specific regulations for improving grades and resitting tests must be read and applied according to the general Code of Studies and Examinations. E.g.: all tests and assessment tasks can be repeated/improved at least once every semester, and the tests and home assignments can be repeated/improved at least once in the first two weeks of the examination period.

First week of the exam period (16 May)

#### **Grade calculation as a percentage**

based on the aggregate performance according to the following table

Course grade	Performance in %
excellent (5)	85 % ...
good (4)	70 % ... 85 %
satisfactory (3)	55 % ... 70 %
pass (2)	40 % ... 55 %
fail (1)	below 40 %

The lower limit given at each grade belongs to that grade.

### 4. SPECIFIED LITERATURE

In order of relevance. (In Neptun ES: Instruction/Subject/Subject details/Syllabus/Literature)

#### COMPULSORY READING AND AVAILABILITY

[1.] Presentations, Lecture notes. Practice manual (Teams, Neptun Meet Street, witch)

#### RECOMMENDED LITERATURE AND AVAILABILITY

[2.] Rodrigue, J-P et al. (2020) The Geography of Transport Systems, Hofstra University, Department of Global Studies & Geography, <https://transportgeography.org/>