

ROAD NETWORKS II.

2021/22. 2. SEMESTER

BASICS		
COURSE NAME	Road networks II.	
COURSE CODE(S)	YCRKÖÉ2BNF	
DEPARTMENT	Óbuda University Ybl Miklós Faculty of Architecture AND Civil Engineering, Institute of CE	
PROGRAMME, TRAINING	Civil Engineer BSc	full time and Erasmus
COURSE INSTRUCTOR (Instructor managing the course)	Dr. Klara Macsinka PhD, Associate Professor	macsinka.klara@ybl.uni-obuda.hu consulting hours: by appointment
INSTRUCTORS, LECTURERS	Dr. Klara Macsinka PhD, Associate Professor	macsinka.klara@ybl.uni-obuda.hu
PRE-REQUIREMENT	Road networks I. (Közlekedésépítés I.)	
HOURS OF LECTURES (WEEKLY)	2 hours	
HOURS OF CLASSROOM PRACTICE/ LAB EXERCISE (WEEKLY)	0 hours	
FIELD AND TRAINING (WEEKLY)	0 hours	
ASSIGNMENT	Two tests are to be completed successfully.	
CREDITS	6 credits	
AIM OF THE COURSE, BRIEF DESCRIPTION	The aim of the course is to deepen knowledge of road networks, their characteristics and design methods, as well as introducing basic features of railway networks.	
RECOMMENDED LITERATURE	<ul style="list-style-type: none"> • Dr. Fischer Szabolcs- Eller Balázs - Kada Zoltán - Németh Attila: Vasútépítés, 2015. • Dr. Kazinczy László: Városi vasutak • Lecture notes 	
REQUIRED TECHNICAL APPLIANCES/ SOFTWARE	The use of mobile phones is prohibited during tests. In the case of online education: Contact: Neptun, E-learning and E-mail. Education materials: According to E-learning Lessons: E-learning, Zoom	

SCHEDULE OF THE SEMESTER				
WEEK	LECTURE	LECTURER	FORM OF PRACTICE	PROGRAM OF PRACTICE
1.	General overview of road and railway networks.	Dr. Klara Macsinka		
2.	Geometry of the horizontal axis, detailed calculation of horizontal axis geometry.	Dr. Klara Macsinka		
3.	Geometry of the vertical axis, calculation of detailed vertical axis geometry.	Dr. Klara Macsinka		
4.	Balance of forces effecting a vehicle moving in a curve. Superelevation.	Dr. Klara Macsinka		
5.	Summary of axis-geometry calculations.	Dr. Klara Macsinka		
6.	Test on calculations of detailed road axis.	Dr. Klara Macsinka		
7.	Railway building - basics.	Dr. Klara Macsinka		
8.	Elements of tracks (rails, reinforcement, ballast).	Dr. Klara Macsinka		
9.	Switches, track-connections.	Dr. Klara Macsinka		
10.	Stops and stations.	Dr. Klara Macsinka		
11.	Urban railways. Tram train, interoperability.	Dr. Klara Macsinka		
12.	Special types of railways (mountain rails, monorails, magnetic railways).	Dr. Klara Macsinka		
13.	Test on main aspects of railway building and networks.	Dr. Klara Macsinka		

REQUIREMENTS FOR THE COMPLETION OF THE SEMESTER		
MID-SEMESTER TASKS AND TESTS		
Requirement	Description	Value (point, %, grade)
PARTICIPATION AT LESSONS	The lessons can be missed up to three times.	-
IN CASE OF ABSENCE FROM LESSONS AND EXAMINATIONS	Absence is considered to be justified with a medical certificate presented.	-
Short description of the TASKS		
Short description of the TASKS		
Pre-exam / exam		
TOTAL		

SEMESTER CLOSING REQUIREMENTS					
CONDITIONS FOR OBTAINING A SIGNATURE	Participation at the lessons. Tests are to be completed with at least 60 % result in both. Final grade is given based on the test results (average of the results).				
FINAL GRADE	0-59 Point (%)	60-69	70-79	80-89	90-100
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT