

# ROAD NETWORKS I.

# 2024/25. 1. SEMESTER

BASICS		
<b>COURSE NAME</b>	Road networks I.	
<b>COURSE CODE(S)</b>	YCXXKÖÉ2BNF	
<b>DEPARTMENT</b>	Óbuda University Ybl Miklós Faculty of Architecture and Civil Engineering, Institute of CE	
<b>PROGRAMME, TRAINING</b>	Civil Engineer BSc	full time
<b>COURSE INSTRUCTOR</b> (Instructor managing the course)	Dr. Klara Macsinka PhD, Associate Professor macsinka.klara@ybl.uni-obuda.hu	office hours by arrangement
<b>INSTRUCTORS, LECTURERS</b>	Dr. Klara Macsinka PhD, Associate Professor macsinka.klara@ybl.uni-obuda.hu	office hours by arrangement
	Gergely Szücs Assistant professor szucs.gergely@ybl.uni-obuda.hu	office hours by arrangement
<b>PRE-REQUIREMENT</b>	Geodézia II., SGYMALT208XXX Geotechnika II. (Földművek), SGYMKOM2054XA	
<b>HOURS OF LECTURES (WEEKLY)</b>	1 x 45'	
<b>HOURS OF CLASSROOM PRACTICE/ LAB EXERCISE (WEEKLY)</b>	2 x 45'	
<b>FIELD AND TRAINING (WEEKLY)</b>	0 hours	
<b>ASSESSMENT</b>	Exam	
<b>CREDITS</b>	3 credits	
<b>DESCRIPTION</b>	The subject is to introduce the students to the basic notions, elements and the operational principles of road infrastructure. During the seminar students will hear about main types, elements, design principles and priorities of transportation infrastructure. They will learn main terms of transportation dynamics, technology of junctions and carriageways. During seminars students must prepare a studyplan for a rural road, completed with siteplan, longitudinal and cross-sections and technical descriptions.	
<b>RECOMMENDED LITERATURE</b>	<ul style="list-style-type: none"> <li>• Horváth – Koren – Prileszky-Tóth-Szabó: Közlekedéstervezés (HEFOP-jegyzet)</li> <li>• Notes and presentation from e-learning site of the subject</li> </ul>	
<b>REQUIRED TECHNICAL APPLIANCES/ SOFTWARE</b>	Scientific calculator may be used during tests. Use of mobile phones, smart watches and other technical equipment is forbidden! In case of Online studies: Contact: through Neptun-system and e-mail. Notes and presentation: uploaded to the E-learning-site. Lectures and seminars: Google Meet.	

SCHEDULE OF THE SEMESTER				
WEEK	LECTURE	LECTURER	FORM OF PRACTICE	PROGRAM OF PRACTICE
1.	Transportation networks, priorities. Roadnetwork in Hungary.	Dr. Klara Macsinka	online	Process of transportation projects. Types and elements of roadplanning.
2.	Characteristics of roadnetwork, types of roads. Motorways.	Gergely Szucs	online	Basic terms of transportation dynamics, road.
3.	Parameters of carriage-ways, junctions. Split level junctions.	Gergely Szucs	online	Handing out assignments for the semester. Searching for the central line.
4.	Level junctions, geometry. Roundabouts.	Gergely Szucs	online	Main elements of side plan, stationing. Balance of forces affecting cars running in curves Consultation.
5.	Traffic assignments, examinations basic terms.	Gergely Szucs	online	Calculation of stopping distances. Consultation.
6.	Modelling of roadnetworks, traffic estimations.	Gergely Szucs	online	I. Test. Consultation.
7.	Elements of road cross-sections.	Gergely Szucs	online	Basic elements of the longitudinal section, planning.
8.	Earthworks of transportation structures.	Gergely Szucs	online	Calculation of details in the longitudinal section. Consultation.
9.	Pavement types, bases for roads, construction technologies.	Gergely Szucs	online	Consultation.
10.	Asphalt pavements, construction technologies. REMIX-technology.	Gergely Szucs	online	Cross-sections, calculation of earthwork volumes.
11.	Concrete pavements. Cobble stones.	Gergely Szucs	online	Consultation.
12.	Transitional curves.	Dr. Klara Macsinka	online	II. Test, handing in study plan.

REQUIREMENTS FOR THE COMPLETION OF THE SEMESTER		
MID-SEMESTER TASKS AND TESTS		
Criteria	Description	Value (point, %, grade)
<b>RULES OF ATTENDANCE AT LECTURES AND SEMINARS</b>	Participation at the seminars is compulsory. Three absence can be accepted.	-
<b>ACCEPTANCE OF ABSENCE</b>	Absence can be acknowledged by a doctor's notice.	-
<b>Short description of the TASKS</b>	During semester students have to prepare a study plan of a rural road based on the seminars. Necessary rules for all formal criteria and the working map will be given to students in the beginning of the seminar. Compulsory scales: M=1:10000 for the site plan, M= 1:10000 and M=1:500(200) for the longitudinal section. Longitudinal section is to be printed on an A4 high paper roll. At least 5 consultations are needed during the semester. Acceptance of the study plan is based on number of consultations, and meeting the requirements of the given content and formal issues. Missing and non accepted drawings must be replaced.	50 points
<b>TESTS</b>	During semester, two successful tests must be completed by the students. Timing of tests will be clearly given in the beginning of the semester. The tests will contain several calculations that students have to use while preparing the study plan. Tests can repeated once, at the end of the semester.	2x25 points
<b>TOTAL</b>		100 points

SEMESTER CLOSING REQUIREMENTS					
<b>CONDITIONS FOR OBTAINING A SIGNATURE</b>	Participation at the lessons. At least 30 points must be achieved for the study plan and at least 15-15 points in the tests. In case any of the above requirements is not fulfilled, the semester will be refused.				
<b>CONDITIONS FOR OBTAINING AN OFFERED GRADE</b>	No offered grade may be given.				
<b>CONDITIONS FOR ADMISSION TO THE EXAM</b>	Only students obtaining signature (even in a previous seminar) are allowed to take the exam. During the exam period, the student has to register for the exam in the Neptun. Length of the exam is 60 minutes, containing several questions, with a total value of 100 points. The exam can be oral or written.				
<b>EXAM GRADE</b>	0-59 Point	60-69	70-79	80-89	90-115
	1 - FAIL	2 - PASS	3 - SATISFACTORY	4 - GOOD	5 - EXCELLENT