

COURSE SYLLABUS

Course code	1080-BU400-ISA-0301
Course name	Fundamentals of Roads Engineering II
Course version	2027L
Level of education	first cycle programme
Form and mode of study	full-time study
Study profile	general academic profile
Field of study	Civil Engineering
Specialisation	-
Organizational unit	The Faculty of Civil Engineering
Implementing unit	The Faculty of Civil Engineering
Course unit	n/a
Course groups	-
Course status	Obligatory
Language of the course	English
Study stage code	BU000-S4-ISA-1080
Number of ECTS credits	2

Part I**01. Learning outcomes and the method of conducting classes**

Learning outcomes	see table "Learning outcomes"
Forms of classes and the number of hours in the semester	
project	15,00 h
lectures	10,00 h

02. ECTS balance

Number of ECTS credits	2	
Course workload	Hours	ECTS
Total number of hours and ECTS credits for the course:		
Hours and ECTS credits for courses involving direct participation of academic teachers	25	1,00
Hours and ECTS credits involving student's independent work	25	1,00
Total	50	2,00
Number of hours involving direct participation of academic teachers:		
Hours connected with class participation	25	
Other synchronous hours	0	
Total	25	
Number of hours involving student's independent work:		
Hours for student's independent work	25	

03. Course content

Course content	Attitudes of planning transport systems. Transport policy and development strategies. Urban and out-of-town transport. Traffic analysis and forecasting. Selected issues of road design. Selected issues of designing infrastructure for pedestrians and bicycles. Road safety. Elements of traffic engineering and traffic management. Transport engineering and the environment. Road surfaces - introduction . Asphalt surfaces. Concrete surfaces. Selection of the arrangement of layers of the pavement structure according to KTKN PiP and KTKNS. Modern technological and construction solutions in road construction.
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Table: Learning outcomes

Knowledge

USOS: Syllabus

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Part I	
Outcomes code	W1
Description	Has a basic knowledge of transportation infrastructure design
Related field-of-study learning outcomes	K1_W12
Skills	
Outcomes code	U1
Description	Can select parameters of transport infrastructure, take into account the assumed traffic load.
Related field-of-study learning outcomes	K1_U12
Social competence	
Outcomes code	K1
Description	The participant is able to assess the correctness of the adopted construction solutions in projects for the construction and reconstruction of roads and streets.
Related field-of-study learning outcomes	K1_K01
Part II	
04. Year and semester of studies	
Year	2027L
Semester	4
05. Course leader and course teachers	
Course leader	Piotr Szagała
project	Piotr Szagała
lectures	Piotr Szagała
06. Course objective	
Course objective	Familiarizing students with issues related to the design of transport infrastructure. Acquiring practical knowledge and skills in the safe design of transport infrastructure.
07. Teaching methods and techniques	
project	group work, multimedia presentation, discussion
lectures	lecture with a multimedia presentation
08. Methods of verifying learning outcomes	
Knowledge	
Outcomes code	W1
Description	Has a basic knowledge of transportation infrastructure design
Verification methods	lectures: presentation project : presentation
Skills	
Outcomes code	U1
Description	Can select parameters of transport infrastructure, take into account the assumed traffic load.
Verification methods	lectures: presentation project : presentation
Social competence	
Outcomes code	K1
Description	The participant is able to assess the correctness of the adopted construction solutions in projects for the construction and reconstruction of roads and streets.
Verification methods	lectures: presentation project : presentation
09. Required and recommended reading list	
Required reading	Bernhardt, Carolyn: Engineer it! road projects. ISBN : 1-68078-716-0

Part II	
Recommended reading	A policy on geometric design of highways and streets. ISBN : 1-5231-1959-4
10. Other information	
Other information	In according to the course regulations