Study program: Civil engineering

Type and level of studies: Bachelor studies, UAS **(**Undergraduate academic studies)

Course unit: Traffic Systems and Road Design

Teacher in charge: Dr Vladimir Mandić

Language of instruction: English

ECTS: 6

Prerequisites: Geodesy exam passed and knowledge of AutoCAD

Semester: SS (summer semester)

Course unit objective:
Introducing students to basic knowledge in the field of traffic infrastructure systems and basic principles in road design.

Learning outcomes of the course unit

Acquiring theoretical and professional knowledge in the field of traffic infrastructure systems, training students to prepare technical documentation of less demanding local roads, and introducing students to Plateia road design software.

Course unit contents

Theoretical classes

Theoretical classes includes the following units:

Constructive elements of roads; Road classification; Fundamentals of the theory of vehicle movement; Cross profile of the road; Horizontal routing; Elements of the longitudinal profile; Road sweeping; Spatial routing; Design Elements; Basic types of pavement structures; Fundamentals of dimensioning of rigid and flexible pavement structures (principles, program conditions, methods...).

Practical classes

creation of a semester assignment (technical documentation for given local road parameters) and training for working in road design software.

Literature

1. Robinson, Richard, and Bent Thagesen. Road engineering for development. CRC Press, 2018.

Number of active teaching hours				**Other classes**
Lectures:	Practice:	Other forms of classes:	Independent work:	
30	15	/	15	/

Teaching methods :

Lectures and exercises, or mentoring work with a smaller number of students.

Examination methods (maximum 100 points)

Exam prerequisites	**No. of points:**	**Final exam**	**No. of points:**
Student's activity during lectures	5	oral examination	40
practical classes/tests	5	written examination	30
Seminars/homework	/	.....	
Project	20		
Other	/		

Grading system

Grade	**No. of points**	**Description**
10	**91-100**	Excellent
9	**81-90**	Exceptionally good
8	**71-80**	Very good
7	**61-70**	Good
6	**51-60**	Passing
5	**Less than 51**	Failing