Course Unit Descriptor

Study Programme: Civil Engineering

Course Unit Title: Road Design

Course Unit Code: 113

Name of Lecturer(s): Igor Jokanović, Mila Svilar

Type and Level of Studies: Bachelor Academic Degree

Course Status (compulsory/elective): compulsory

Semester (winter/summer): winter

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 6

Prerequisites: Basics of Traffic Infrastructure, Traffic Infrastructure and Space

Course Aims:

Acquiring the necessary theoretical and practical knowledge in the field of road designing. Road design is studied in terms of traffic, spatial, driving-dynamic, geometric, aesthetic, economic and environmental aspects, in order to determine the optimal alignment solution.

Learning Outcomes:

Planning and design of roads. Performance of geometric and driving-dynamic analysis.

Syllabus:

Theory

Road and traffic; System driver-vehicle-environment; Road cross section; Elements of design geometry; Layout and formation; Analysis of driving dynamics and geometric analysis; Intersections; Traffic and technical equipment and service facilities; Methodology and technology of road design: process and structure of design work; Evaluation of alternative solutions.

Practice

Design of road alignment at the level of conceptual and preliminary design.

Required Reading:

1. Žnideršić, B., Priručnik za obeležavanje prelaznica oblika klotoide pravouglim koordinatama, Građevinska knjiga, Beograd, 1966.
2. Kasper, H., Schurba, W., Lorenz, H., Die Klotoide als Trassierungselement, Ferd. Dummlers Verlag, Bonn, 1968.
3. Katanić, J., Anđus, V., Maletin, M., Projektovanje puteva, Građevinska knjiga, Beograd, 1983.
4. Anđus, V., Maletin, M., Metodologija projektovanja puteva, Univerzitet u Beogradu, Građevinski fakultet, Beograd, 1993.

Weekly Contact Hours: 6	**Lectures:** 3	**Practical work:** 3

Teaching Methods:

lectures, exercises, practical work, colloquium, consultations

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	15
Practical work	20	oral exam	20
Colloquium	40 (20 + 20)		
Seminar(s)			