

Faculty of Architecture

Department: Construction Engineering

Professional field: 5.7. Architecture, Civil Engineering and Geodesy

Specialty: Building Constructions

Educational-qualification degree: Master

COURSE DESCRIPTION

1. Course title: **Steel Bridges**
2. Course code: **CIE 3009**
3. Type of course: **compulsory**
4. Level of course: **Master**
5. Year of study: **second**
6. Semester when the course is delivered: **third**
7. Number of ECTS credits allocated: **7,5 (4,5 – lectures and 3 – seminars and course project)**
8. Name of lecturer: **Assoc. Prof., Eng. Ivan Pavlov, PhD**
9. Learning outcomes of the course: as a result of the course students will know about the requirements for materials, road construction on the bridge and its relationship with major carriers. Special attention is paid to the issue of "fatigue" of the material; students will acquire skills to determine the various constructive solutions to major plated brackets and trusses (farms) and in both cases will be able to analyze the details of specific components and assemblies.
10. Mode of delivery: **face-to-face**
11. Prerequisites and co-requisites: It is assumed that students have already received the necessary theoretical and practical knowledge attained in the Bachelor's course of Construction Engineering.
12. Course contents: to form knowledge regarding the bracing of bridge constructions and various types of connections, the possibilities for implementation of bridges with composite steel - reinforced concrete structure, as well as brief information on cable-stayed, arch and suspension bridges.
13. Recommended or required reading:
 - Ръководство за упражнения по стоманени мостове, ВИАС, 1990
 - Петропавловски, А.О., Проектирования металлических мостов, М., 1998
 - Гибшман, Е.Е., Проектирования металлических мостов, 1971
 - Протасов, К.Г., Металлические мосты, М., 1973
 - Дулевски, Е., Стоманени мостове, УАСГ, 2001
 - БДС EN 1993-2:2007, Еврокод 3: Проектиране на стоманени конструкции, Част 2: Стоманени мостове, БИС, 2007
 - БДС EN 1998-2:2006, Еврокод 8: Проектиране на конструкциите за сеизмични въздействия, Част 2: Мостове, БИС, 2006
14. Planned learning activities and teaching methods: **lectures, seminars, course project, contact hours, independent work.**
15. Assessment methods and criteria: defence of a course project – a separate grade, written and oral examination. As elements of assessment during training shall be: attending classes - 10%, oral examination - 20% and written examination - 70%. The final examination constitutes two questions from the conspectus. Reasons for the evaluation, students receive on the day of the examination, based on the knowledge demonstrated.
16. Language of instruction: **Bulgarian, English**
17. Work placement(s): **none**