Faculty of Architecture
Department: Architecture and Urbanism
Professional area: Architecture, Civil Engineering and Geodesy
Major: Architecture
Educational-and-qualification Degree: Master

COURSE DESCRIPTION

1. **Course unit title**: Reinforced Concrete Structures
2. **Course unit code**: CIE 2014
3. **Type of course unit**: compulsory
4. **Level of course unit**: Master
5. **Year of study**: third
6. **Semester when the course unit is delivered**: fifth
7. **Number of ECTS credits allocated**: 7,5
8. **Name of lecturer**: Assoc. Prof. Dariya Mihaleva, PhD
9. **Learning outcomes of the course unit**: Students acquire knowledge and skills about the basic principles of design, composing and working out the details of reinforced concrete structures and their seismic safety.
10. **Mode of delivery**: face-to-face
11. **Prerequisites and co-requisites**: It is necessary for the students to have knowledge about the following subjects: Building Materials and Technologies (CIE2018); Building Mechanics 1 (CIE2015) and Building Mechanics 2 (CIE2016).
12. **Course contents**: The course includes physical and mechanical properties of the materials (concrete and reinforcement); principles of design, composing and working out the details of reinforced concrete structures for seismic influences and expedient composing of the vertical subsystems.
13. **Recommended or required reading**:
    1. Маноилов Л., Стоманобетон, Техника, София, 2008
    2. Гочев Г. и др., Ръководство по стоманобетон, Техника, София, 2009
    3. Даалов Т., Даалов Б., Ръководство за проектиране на стоманобетонни конструкции по Еврокод 2, ВСУ" Любен Каравелов", 2010
    4. Сотиров П., Игнатиев Н., Михалева Д., Павлов Ив., Практическо ръководство по прилагането на Еврокод 8 (EN 1998-1, БДС EN 1998-1) – Проектиране на конструкциите за сеизмични въздействия, КИИП, 2011

    Aditional reading:
    1. БДС EN 1998-1:2005, Еврокод 8: Проектиране на конструкциите за сеизмични въздействия, Част 1: Общи правила, сеизмични въздействия и правила за сгради, БИС, 2005
    2. Taranath B.S., Reinforced concrete design of tall buildings, CRC Press, 2010
14. **Planned learning activities and teaching methods**: lectures, seminars, project assignment
15. **Assessment methods and criteria**: Students who have done and defended a project assignment are allowed to sit an exam. The exam is into two parts: a written one and an oral one. The written exam includes solving a problem (two hours time limit) and writing about two questions from the synopsis (two hours time limit). The assessment is done after the time limit in the presence of the students. The oral part of the exam includes

asking questions about the problem and the questions aiming at fair assessment of the acquired knowledge and skills.

16. **Language of instruction**: Bulgarian
17. **Work placement(s):** none