

**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:** Building Materials and Technologies
2. **Course unit code:** CIE 2018
3. **Type of course unit:** compulsory
4. **Level of course unit:** Master
5. **Year of study:** first
6. **Semester when the course unit is delivered:** first
7. **Number of ECTS credits allocated:** 6
8. **Name of lecturer:** Assoc. Prof. Eng. Rositsa Petkova - Slipets, PhD
9. **Learning outcomes of the course unit:** The course in Building Materials and Technologies gives future architects knowledge about the relation composition-structure-properties-application of the building materials. They acquire knowledge about the modern materials and products used in construction, architecture and design. They master skills how to choose the suitable materials aiming at stability, reliability and durability of the designed with them structures and elements.
10. **Mode of delivery:** face-to-face
11. **Prerequisites and co-requisites:** basic knowledge in Physics, Chemistry and Mechanics
12. **Course contents:** the course Building Materials and Technologies studies the raw materials, technologies of production, composition, properties and application areas of the following building materials: rocks, aggregates, concrete, metals, ceramics, glass, wood, polymers. Knowledge about the destroying effects on the building materials used in construction and the ways to protect them is given. Insulation materials used in construction are studied.
13. **Recommended or required reading:**
  1. Симеонов Й. и др. - Строителни материали, «Техника», София, 1991
  2. Петкова-Слипец Р. – Строителни материали, електронен учебник, 2010
  3. Айрапетов Г.А.- Строительные материалы, „Феникс”, Ростов-на-Дон, 2005
  4. Kumar Mehta P. – Concrete–Microstructure, Properties and Materials, McGraw-Hill, 2006
  5. *БДС EN 206-1:2002* Бетон. Част 1: Спецификация, свойства, производство и съответствие
  6. *БДС EN 10080:2005* Стомани за армиране на бетон. Заваряема армировъчна стомана.
14. **Planned learning activities and teaching methods:** lectures, seminars, contact hours
15. **Assessment methods and criteria:** 2 tests are done in the process of training. If the student passes them both with at least a very good mark, he is exempt from the exam. The course finishes with an exam (written and oral) in a form of a test, including a number of open and closed questions. The time limit of the test is 2 hours. The oral exam is a discussion on the written questions aiming at reaching the final grade. In all tests the correct answer gives points which are stated in advance and depend on how difficult the question is. The total number of points and their equivalent as a grade are given in a table at the end of the test. All students are given a motivation for the grade they receive.
16. **Language of instruction:** Bulgarian, Russian, English
17. **Work placement(s):**