

Faculty of Architecture

Department of Construction of Buildings and Structures

Professional Area: Architecture, Civil Engineering and Geodesy

Major: Fire and Emergency Safety of Buildings and Structures

Educational and Qualification Degree: Master

1. **Course unit title:** Automation of anti-explosion protection
2. **Course unit code:** TEC 3003
3. **Type of the course unit:** elective
4. **Cycle:** specializing
5. **Year of study when the component is delivered:** second
6. **Semester:** third
7. **Number of ECTS credits allocated:** 3
8. **Name of lecturer:** Assoc. Prof. Milena Kichekova, PhD
9. **Learning outcomes:** to introduce the students to the regulatory requirements of anti-explosion protection and how to assess the potentially explosive areas in premises, technological facilities and apparatuses in which explosive mixtures can be formed under normal operation and as a result of accidents and malfunctions; to gain knowledge of the structure and the practical application of automatic equipment for anti-explosion protection such as: automatic signaling; blocking of technological lines and devices working with explosive vapours and dust, etc.
10. **Mode of delivery:** face-to-face
11. **Prerequisites and co-requisites:** previous knowledge of the physico-chemical aspects of combustion and explosion, fire and explosion safety in construction and technologies.
12. **Course content (annotation):** Regulatory requirements of anti-explosion protection of buildings, technological equipment, apparatuses and installations; anti-explosion automation for protection of premises, apparatuses and installations; automatic signaling, regulation and locking devices; explosive environment analysis devices, fast-acting fire-stopping and shut-off devices. Regulatory requirements of the application of anti-explosion protection devices and control of their state. Economic evaluation of anti-explosion protection measures.
13. **Recommended or required reading and other learning resources/tools:**
 - , , , 1987
 - „ , 2004
 - „ , 2001
14. **Planned learning activities and teaching methods:** lectures, contact hours, self-study

15. Assessment methods and criteria: The following elements are included in the assessment of the student's individual performance: 10% attendance, 1 test and / or development of a paper on an assigned topic (in case of very good performance - mark above 4.50, the student could exempt from the final exam) - 20%, final exam (test) - 70%.

16. Language of instruction: Bulgarian

17. Placement: none