**DESCRIPTION OF A STUDY COURSE – SYLLABUS**

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| **Title of a course** | **Protection from explosions** | | | | |
| **Study programme** | **Professional undergraduate study Occupational Safety** | | | | |
| **Status of a course** | Obligatory | | | | |
| **Year of study** | 3. | **Semester** | W | **ECTS credits** | 5 |
| **Teaching plan**  **(L + E + S+ Pr)** | 2+2+0+0 | | | | |
| **Goals of a course** | | | | | |
| To acquaint students with the conditions of formation of explosive mixture and the possibilities of protection and methods of prevention from explosion. | | | | | |
| **Conditions for enrolling course** | | | | | |
| No conditions | | | | | |
| **Expected learning outcomes on a level of a course** | | | | | |
| 1. Assess the opportunities and conditions for the formation of an explosive mixture. 2. Describe the procedures for preventing an explosion occurring due to possible emergence of an explosive atmosphere. 3. Suggest the design of electrical devices and other possible sources of ignition in areas with a potential for the emergence of an explosive atmosphere. 4. Select tools and appliances in areas where there is a possibility of emergence of an explosive atmosphere. 5. Apply legislation and technical regulations regarding premises with an explosive atmosphere or the possibility of its emergence. | | | | | |
| **Content of a course** | | | | | |
| Area at risk of explosions. Concepts, volume and characteristics of gasses, steam, haze and thin fibres that in certain conditions create a risk area. Limits of explosiveness, physical and chemical grounds for explosions. Causes of detonation. Classification of risk areas and risk assessment. Assessing the risk of an area. Hazardous areas. Risk elaboration. Methods and ways of creating plants, electric systems and devices for areas exposed to hazard of explosive materials. Primary and secondary protection. Basic requirements for electric systems, devices and installations designed for risk areas. Maintenance and reparation. Legislative regulation. Organization of safety measures. | | | | | |
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