**DESCRIPTION OF A STUDY COURSE – SYLLABUS**

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| **Title of a course** | **Risk management in industry of hazardous substances** | | | | |
| **Study programme** | **Specialist professional graduate study Occupational Safety** | | | | |
| **Status of a course** | Obligatory | | | | |
| **Year of study** | 2. | **Semester** | W | **ECTS credits** | 5 |
| **Teaching plan**  **(L + E + S+ Pr)** | 2+1+1 | | | | |
| **Goals of a course** | | | | | |
| Introduce students to hazardous substances in process industry and recommend risk mitigation measures through risk assessment. | | | | | |
| **Conditions for enrolling course** | | | | | |
| No conditions | | | | | |
| **Expected learning outcomes on a level of a course** | | | | | |
| 1. Identify and analyse the physical and chemical characteristics of hazardous substances at a specific workplace or plant. 2. Recommend a qualitative or quantitative method of risk assessment, depending on the type of industry or type of hazard. 3. Prepare simpler risk assessments by one of the qualitative and quantitative risk assessment methods. 4. Evaluate the impact of the human factor in risk assessment methods. 5. Provide the necessary measures to reduce risks from the unacceptable level to the acceptable level. | | | | | |
| **Content of a course** | | | | | |
| Physical and chemical characteristics of dangerous substances in process industry. Toxicology (informatively). Flammable liquids. Flammable and explosive gasses. Difference in approach to storage and processing of liquefied gasses (interdependence between temperature and pressure of stems) and liquefied cool gasses. Critical temperature, critical pressure, content of a heat, temperature of boiling, behaviour in fire and dispersion in working environment. Approach to work with toxic and aggressive working substances. Reactive chemicals. Technical measures of protection. Basic rules of protection. Systems for detection and prevention. Special rules of protection in handling hazardous substances. Personal and collective protective means and equipment. Approach to analysis of work positions with special work conditions. | | | | | |
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