

### 3243 Lightning and Installation Equipment

**ECTS credits:** 7

**Weekly workload:** 3L+0S+2Lab+0P+ca

**Assessment:** exam

**Type of exam:** written

**Departments involved:** Department of Electrical Power Supply and Electrical Equipment, Faculty "Electrical engineering, Electronics and Automation" (EEA)

**Lecturers:**

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**Abstract:**

The lecture course has a general engineering character. Issues about the lightning and installation equipment are discussed which are the base for studying special issues from the same sphere and which are discussed during the higher stages of the degree course. The subject is based on knowledge, acquired during the courses in "Higher Mathematics", "Physics", "Theory of Electrical Engineering", "Management of the Company" and "Economics". It is a prerequisite for the courses in "Lightning Equipment", "Electrical power supply", "Technical Exploitation of Electrical Devices" and Final Year project.

**Course content:**

General notions, values and parameters in the lightning and installation equipment. Lightning sources. Lightning equipment. Systems and types of lightning. Quantity and quality indicators of the lightning equipment. Lightning calculations. Electrical installations – classification and basic elements. Electrical installation items. Choice of the elements of the electrical installations. Protection from damage of electrical current. Special design of electrical installations. Regulation requirements in designing of lightning equipment and electrical installations. Content and implementation of the graphic and text documents of the projects of lightning equipment and electrical installations.

**Teaching and assessment:**

Teaching is based on using classical and modern forms. Acting models and natural patterns are used during the laboratory exercises. The subject includes course assignment, consisting of a project development of lightning equipment and electrical installation of a small industrial site. The exam includes: a) written part on topics from the study material; b) submitting and presentation of the course assignment. Different marks are received for these activities, from which a total mark is formed (the emphasis of the marks are: 0,6 – on item a; 0,4 – on item b).