Załącznik nr 2 do Zarządzenia Nr 915 z 2019 r. Rektora PB

**COURSE DESCRIPTION CARD**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Faculty of Electrical Engineering** | | | | | | | | | | |
| **Field of study** | **Electrical Engineering** | | | | | | | **Degree level and programme type** | **Bachelor's degree** | |
| **Specialization/ diploma path** | **-** | | | | | | | **Study profile** | **-** | |
| **Course name** | **Project of Electrical Installations  in Industrial Building** | | | | | | | **Course code** | **IS-FEE-10044W** | |
| **Course type** | **elective** | |
| **Forms and number of hours of tuition** | **L** | **C** | **LC** | **P** | **SW** | **FW** | **S** | **Semester** | **winter** | |
|  |  |  | **30** |  |  |  | **No. of ECTS credits** | **6** | |
| **Entry requirements** | **-** | | | | | | | | | |
| **Course objectives** | **Teaching how to solve an engineering project task by means of the information obtained from literature, databases and other sources.** | | | | | | | | | |
| **Course content** | **Complete with module content: Rules and statutory regulations, Installed power loads – Characteristics, LV architecture selection guide, Lighting installations, Sizing and protection of conductors, Protection against electric shocks, LV switchgear: functions & selection, Overvoltage protection, Reactive energy** | | | | | | | | | |
| **Teaching methods** | **discussion, presentation** | | | | | | | | | |
| **Assessment method** | **projects completion, presentation and discussion of the projects** | | | | | | | | | |
| **Symbol of learning outcome** | **Learning outcomes** | | | | | | | | **Reference to the learning outcomes for the field of study** | |
| **LO1** | **can elaborate and realize the schedule of actions necessary to achieve the goal** | | | | | | | |  | |
| **LO2** | **identyfies and describes basic technical solutions in the area of the project** | | | | | | | |  | |
| **LO3** | **can calculate basic quantities describing operating simple systems connected with the area of the project** | | | | | | | |  | |
| **LO4** | **is able to obtain information from the literature, databases, and other sources for the project;** | | | | | | | |  | |
| **LO5** | **can design circuits and systems in chosen field of electrical engineering** | | | | | | | |  | |
| **LO6** | **is able to use the data sheets and application notes to** | | | | | | | |  | |
| **LO7** | **is able to prepare and present a short presentation on of the completed project.** | | | | | | | |  | |
| **LO8** |  | | | | | | | |  | |
| **Symbol of learning outcome** | **Methods of assessing the learning outcomes** | | | | | | | | **Type of tuition during which the outcome is assessed** | |
| **LO1** | **project documentation and oral performance in project's classes** | | | | | | | |  | |
| **LO2** | **project documentation** | | | | | | | |  | |
| **LO3** | **project documentation** | | | | | | | |  | |
| **LO4** | **project documentation** | | | | | | | |  | |
| **LO5** | **project documentation** | | | | | | | |  | |
| **LO6** | **project documentation** | | | | | | | |  | |
| **LO7** | **oral performance in project's classes** | | | | | | | |  | |
| **LO8** |  | | | | | | | |  | |
| **Student workload (in hours)** | | | | | | | | | **No. of hours** | |
| **Calculation** | **work on the project** | | | | | | | | **130** | |
| **consultations** | | | | | | | | **30** | |
| **preparation to the defence of the project** | | | | | | | | **20** | |
|  | | | | | | | |  | |
|  | | | | | | | |  | |
|  | | | | | | | |  | |
|  | | | | | | | |  | |
|  | | | | | | | |  | |
| **TOTAL:** | | | | | | | | **180** | |
| **Quantitative indicators** | | | | | | | | | **HOURS** | **No. of ECTS credits** |
| **Student workload – activities that require direct teacher participation** | | | | | | | | | **30** | **1** |
| **Student workload – practical activities** | | | | | | | | | **180** | **6** |
| **Basic references** | **1. Seip G.G.: Electrical Installations Handbook. John Wiley and Sons. Third Edition, 2000.**  **2. Atkinson Bill: Electrical installation design. John Wiley and Sons, Fourth Edition, 2013.**  **3. Standards IEC 60364:Low voltage installations**  **4. Electrical installation guide. According to IEC international standards. Schneider Electric. Edition 2016** | | | | | | | | | |
| **Supplementary references** | **1. Electrical installation handbook. Protection, control and electrical devices. Technical guide- 6-th edition 2010. ABB Sace** | | | | | | | | | |
| **Organisational unit conducting the course** | **Department of Electrotechnics, Power Electronics and Power Engineering** | | | | | | | | **Date of issuing the programme** | |
| **Author of the programme** | **Marcin A. Sulkowski PhD, Eng** | | | | | | | | **13.01.2020** | |

**L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW - field work,**

**S – seminar**