

SDAŃSK UNIVERSITY 的 OF TECHNOLOGY

Subject card

| Subject name and code | Alarm Systems Engineering, PG_00038314 | | | | | | | |
|--|--|--|---|-------------------------------------|--------|---|---------|-----|
| Field of study | Automation, Robotics and Control Systems | | | | | | | |
| Date of commencement of studies | October 2022 | | Academic year of realisation of subject | | | 2022/2023 | | |
| Education level | second-cycle studies | | Subject group | | | Optional subject group Subject group related to scientific research in the field of study | | |
| Mode of study | Part-time studies | | Mode of delivery | | | at the university | | |
| Year of study | 1 | | Language of instruction | | | Polish | | |
| Semester of study | 2 | | ECTS credits | | | 3.0 | | |
| Learning profile | general academic profile | | Assessment form | | | assessment | | |
| Conducting unit | Department of Metrology and Information Systems -> Faculty of Electrical and Control Engineering | | | | | | ering | |
| Name and surname | Subject supervisor | dr inż. Ariel Dzwonkowski | | | | | | |
| of lecturer (lecturers) | Teachers | | dr inż. Ariel Dzwonkowski | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Projec | t | Seminar | SUM |
| | Number of study hours | 10.0 | 0.0 | 20.0 | .0 0.0 | | 0.0 | 30 |
| | E-learning hours included: 0.0 | | | | | | | |
| Learning activity and number of study hours | Learning activity | Participation in didactic classes included in study plan | | Participation in consultation hours | | Self-study | | SUM |
| | Number of study hours | 30 | | 7.0 | | 38.0 | | 75 |
| Subject objectives | The aim of the course is to introduce students to the subject of Intruder Alarms Systems, Access Control Systems and CCTV. | | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | | Method of verification | | |
| | K7_W13 | | The student explains the principles of operation of basic devices of burglary and assault signaling systems. Student describes the construction and operation of alarm control panels and selects appropriate devices for use in burglary and assault signaling systems. The student discusses the purpose and principle of the monitoring system. | | | [SW1] Assessment of factual knowledge | | |
| | K/_UU1 | | programs the devices of the burglary and assault signaling system. The student presents the purpose and lists the types of basic notification systems. Student correctly assembles, launches, configures and programs simple alarm systems. The student performs the design of an alarm system intended for a small facility. Student explains the purpose of CCTV systems and describes the principle of operation of CCTV system devices. | | | analyse information | | |

| Subject contents | LECTURE An overview of alarming systems devices. Detectors - types, principles of operation. Sirens and equipment for notification. Alarm systems - rules for the selection of equipment, levels of security. Access control systems - an overview of devices, principles of selection. Control panels - construction, principle of operation, programming and configuration using external devices. Remote controling the operations of alarm systems. Notification devices - GSM, Ethernet. Monitoring stations - construction, working principles, transmission channels, the software. Wireless systems - rules for the selection of equipment, systems configuration. Transmission Reliability - distorted and undistorted signals. CCTV systems - an overview of solutions, equipment parameters, configuration and optimization of the system. LABORATORY EXERCISES Programming and running of ACCO access control system and wireless system ABAX. Practical verification of the configuration, connection and programming of alarm systems. | | | | | |
|--|--|---|-------------------------------|--|--|--|
| Prerequisites and co-requisites | Basic electric enginnering knowledge. Ability to connect electrical and electronic circuits. | | | | | |
| Assessment methods | Subject passing criteria | Passing threshold | Percentage of the final grade | | | |
| and criteria | Practical exercise | 60.0% | 40.0% | | | |
| | Midterm colloquium | 60.0% | 60.0% | | | |
| Recommended reading | Basic literature | Mikulik, Jerzy: Podstawowe systemy bezpieczeństwa w budynkac inteligentnych, Wydawnictwo Politechniki Śląskiej, Gliwice 2005 2. Wójcik, Andrzej: Mechaniczne i elektroniczne systemy zabezpieczeń. Fachowy poradnik dla: projektantów, instalatorów, producentów, inwestorów, agencji ochrony mienia, użytkowników. Mechaniczne i elektroniczne systemy zabezpieczeń. Fachowy poradnik dla: projektantów, instalatorów, producentów, inwestorów agencji ochrony mienia, użytkowników. Zespół autorów pod redakcją dr inż. Andrzeja Wójcika. Satel training materials. | | | | |
| | Supplementary literature | No recommendations. | | | | |
| | eResources addresses | Adresy na platformie eNauczanie: | | | | |
| Example issues/ example questions/ tasks being completed | What is an alarm system? Construction and operation of motion detectors. What functions does the alarm control panel? How do install the sirens? What is Access Control System? What devices are part of the Access Control System? What types of cameras used in CCTV systems? In which connection configurations can operate devices connected to the CCTV system? | | | | | |
| Work placement | Not applicable | | | | | |