



Subject card

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|---|--|--|--|-------------------------------------|---|------------|-----|
| Subject name and code | Computer Networks in Robotics, PG_00038330 | | | | | | |
| Field of study | Automation, Robotics and Control Systems | | | | | | |
| Date of commencement of studies | October 2025 | Academic year of realisation of subject | | | 2026/2027 | | |
| Education level | second-cycle studies | Subject group | | | Specialty 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 | 2 | Language of instruction | | | Polish | | |
| Semester of study | 3 | ECTS credits | | | 3.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Faculty Of Electrical And Control Engineering -> Wydział Politechniki Gdańskiej | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | prof. dr hab. inż. Grzegorz Redlarski | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 10.0 | 0.0 | 10.0 | 0.0 | 0.0 | 20 |
| | E-learning hours included: 0.0 | | | | | | |
| | Adresy na platformie eNauczanie: | | | | | | |
| 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 | 20 | | 7.0 | | 48.0 | 75 |
| Subject objectives | The aim of the course is an acquisition of the knowledge skills and competences in the field of design, administration and maintenance of computer networks used, among others, in industrial distributed systems. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [K7_U07] is able to use analytical, simulation and experimental methods to formulate and solve engineering tasks and simple research problems in the field of automation and robotics | | The student is able to use specialized computer tools supporting the solution of a specific task | | [SU1] Assessment of task fulfilment | | |
| | [K7_K02] can interact and work in a group assuming various roles and identify priorities for the achievement of a specific task | | The student has the ability to perform tasks that are part of a complex system | | [SK2] Assessment of progress of work | | |
| | [K7_W08] has in-depth knowledge of program development and design of complex systems automation systems using PLC and SCADA, transmission and processing of signals occurring in a variety of physical objects | | | | | | |

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| Subject contents | 1. Models of the computer networks 2. The physical and logical topologies of computer networks 4. Network and subnetworks 3. Power distributed computer systems 4. The tools to the support of the process of computer systems designing | | |
| Prerequisites and co-requisites | The basic knowledge of numeral systems (binary, decimal, hexal and octal). | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Laboratory report | 60.0% | 50.0% |
| | Test - lecture part | 60.0% | 50.0% |
| Recommended reading | Basic literature | [1] Cisco Networking Academy program, CCNA 1 and 2 Companion Guide, 3 rd Edition. Cisco Systems Inc., 2004. | |
| | Supplementary literature | [1] Cisco Networking Academy program CCNA 3 and 4 Companion Guide, 3 rd Edition. Cisco Systems Inc., 2004. | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | 1. Similarities and differences between models: OSI and TCP/IP 2. Basic networking devices - the essence of an action 3. The physical topology of computer networks 4. The logical topology of computer networks 5. The essence of the division of the networks into subnetworks | | |
| Work placement | Not applicable | | |

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