# GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

| | |
|---|---|
| Subject name and code | Network Security Management, PG_00053895 |
| Field of study | Informatics |

| | | | |
|---|---|---|---|
| Date of commencement of studies | October 2021 | Academic year of realisation of subject | 2023/2024 |
| Education level | first-cycle studies | Subject group | Obligatory subject group in the field of study |
| | | | Subject group related to scientific research in the field of study |
| Mode of study | Full-time studies | Mode of delivery | at the university |
| Year of study | 3 | Language of instruction | Polish |
| Semester of study | 6 | ECTS credits | 3.0 |
| Learning profile | general academic profile | Assessment form | exam |

| | |
|---|---|
| Conducting unit | Department of Computer Communications -> Faculty of Electronics, Telecommunications and Informatics |

| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Krzysztof Gierłowski |
|---|---|---|
| | Teachers | dr inż. Krzysztof Gierłowski |
| | | dr inż. Michał Hoeft |
| | | mgr inż. Jakub Grochowski |
| | | Zenon Werbowy |
| | | dr hab. inż. Jacek Rak |

| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|---|
| | Number of study hours | 15.0 | 0.0 | 30.0 | 0.0 | 0.0 | 45 |
| | 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 | 45 | 1.0 | 29.0 | 75 |

| Subject objectives | The aim of the course is to acquiant students in theory and practice with the basic security mechanisms, the related threats, security solutions which can be applied to mitigate them and most important to form the attitude to security understood as the continuous process - security management. |
|---|---|

| Learning outcomes | Course outcome | Subject outcome | Method of verification |
|---|---|---|---|
| | [K6_W43] Knows and understands, to an advanced extent, standards and methods of IT systems administration, monitoring of processes occurring in them and immunising them to undesirable phenomena and activities | Student knows current IT systems security solutions, is capable of choosing them according to identified threats. | [SW1] Assessment of factual knowledge |
| | [K6_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment | Student is capable of configuring known security measures applicable to computer networks. | [SU1] Assessment of task fulfilment |
| | [K6_W03] Knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum | Student knows the limitations of popular network solutions from security point of view, is capable of proposing mitigation techniques. | [SW1] Assessment of factual knowledge |
| | [K6_U42] can apply tools and methods of designing, optimization, monitoring, management, increasing reliability and protection from safety hazards in local and distributed information systems and applications | Student knows current IT systems security solutions, is capable of choosing them according to identified threats. | [SU2] Assessment of ability to analyse information |

| Subject contents | Security threats of networked systems. Attack categories, techniques of systems penetration. Network security management requirements. Biometric methods. Cryptography, PKI. Role of network security policy. Security maintenance. Security management of information systems. |
|---|---|
| Prerequisites and co-requisites | Basic network functioning knowledge |

| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|---|
| | lab | 50.0% | 50.0% |
| | exam | 50.0% | 50.0% |

| Recommended reading | Basic literature | Białas A.: Bezpieczeństwo informacji i usług w nowoczesnej instytucji i firmie, WNT, Warszawa 2007 r.<br><br>Liderman K. : Podręcznik administratora bezpieczeństwa sieciowego, Mikom, Warszawa 2003 r.<br><br>Liderman K. : Analiza ryzyka i ochrona informacji w systemach komputerowych, PWN, Warszawa 2008 r.<br><br>Stokłosa J., Bilski T., Pankowski T.: Bezpieczeństwo danych w systemach informatycznych, PWN, Warszawa 2001 r. |
|---|---|---|
| | Supplementary literature | Denning E.: Wojna informatyczna i bezpieczeństwo informacji, WNT, Warszawa 2002 r.<br><br>Benjamin H. : Cisco CCIE Security, Mikom, Warszawa 2004 r. |
| | eResources addresses | Adresy na platformie eNauczanie:<br>Zarządzanie bezpieczeństwem sieci (2024L) - Moodle ID: 37073<br>https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37073 |

| Example issues/ example questions/ tasks being completed | |
|---|---|
| Work placement | Not applicable |