Uniwersytet Ekonomiczny w Katowicach

CYBERSECURITY

Syllabus

Basic information

Field of study Electives **Speciality** - **Organizational unit** School of Undergraduate and Graduate Studies **Study level** graduate studies **Study form** full-time **Education profile** general academic/practical	**Didactic cycle** 2026/27 **Subject code** EKOPSWS.M2.2073.26 **Lecture languages** English **Mandatory** Elective **Block** Free choice electives **Department responsible for the subject** Department of Informatics **Subject related to scientific research** No **Subject shaping practical skills** No

Coordinator	Paulina Rutecka
Teacher	Paulina Rutecka

Period	**Form of teaching, number of hours and method of examination**	**Number of ECTS points**
Semester 2	• lecture: 14, Credit with grade	3

Sustainable Development Goals	ethics/ ethical

Goals

Code	Goal
C1	familiarizing students with the basic principles of Internet safety
C2	transfer of knowledge in the field of IT systems security
C3	developing skills in recognizing cyber threats

Recommended requirements

English language level B2

Subject's learning outcomes

Code	Outcomes in terms of	Major learning outcomes for the subject	Examination methods
Knowledge:			
W1	Knows and understands the fundamental dilemmas of modern civilization related to the use of information technology in a conscious and safe manner that does not threaten users.	DNS.M_W04	Final test (written) - test
Skills:			
U1	Is able to solve practical tasks requiring the use of information technology, using experience gained in the IT environment in the field of cybersecurity.	DNS.M_U07	Final test (written) - test
U2	Can use a foreign language at level B2+ of the Common European Framework of Reference for Languages and specialist terminology related to cybersecurity.	DNS.M_U10	Final test (written) - test
Social competences:			
K1	Is ready to recognize the importance of knowledge in solving practical problems related to the security of data and people and to seek expert advice in the event of difficulties in solving the problem independently.	DNS.M_K02	Final test (written) - test

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	Privacy and Cybersecurity - Definitions, Threats, Concepts	W1	lecture
2.	Methods of Securing Local Data	U2	lecture
3.	Passwords and Their Security, Basic Cryptography Concepts	W1	lecture
4.	Secure Communication - Emails, Messengers, Malware	U1	lecture

No.	Course content	Subject's learning outcomes	Activities
5.	Online Tracking, Digital Fingerprinting, Anonymization Methods	U1	lecture
6.	Cyber Threats - Open Source Intelligence and Social Engineering	K1	lecture

Additional information

Activities	Methods of conducting classes
lecture	Lecture using multimedia techniques, Lecture using case studies, Lecture using activating techniques

Activities	Examination method	Percentage
lecture	Final test (written) - test	100%

Activities	Credit conditions
lecture	In order to pass the course 51% points of the final test is required.

Literature

Obligatory

1. Peter Kim (2015) The Hacker Playbook: Practical Guide To Penetration Testing
2. William Stallings, Lawrie Brown (2012) Computer security: principles and practice
3. Andrew Hoffman (2020) Web Application Security: Exploitation and Countermeasures for Modern Web Applications

Optional

1. Malwina Popiołek (2018) Indywidualne zarządzanie prywatnością w serwisach społecznościowych – zarys problemu w kontekście rozważań dotyczących społeczeństwa informacyjnego
2. Krzysztof Wosiński (2024) OSINT: Nowy wymiar poszukiwań w sieci
3. Gynvael Coldwind, Marek Zmysłowski i inni (2023) Wprowadzenie do bezpieczeństwa IT

Calculation of ECTS points

Activity form	Activity hours*
lecture	14
Literature study	31
Analysis of lecture notes	21
Solving tasks and case studies	20
Consultations	2
Re-sit assignement	2

Student workload	**Hours** 90
Number of ECTS points	**ECTS** 3

* hour means 45 minutes

Major learning outcomes for the subject

Code	Content
DNS.M_K02	Jest gotów do uznawania znaczenia wiedzy w rozwiązywaniu problemów poznawczych i praktycznych oraz zasięgania opinii ekspertów w przypadku trudności z samodzielnym rozwiązaniem problemu.
DNS.M_U07	Potrafi rozwiązywać praktyczne zadania wymagające stosowania technologii informatycznych, wykorzystując doświadczenie zdobyte w środowisku informatycznym.
DNS.M_U10	Potrafi posługiwać się językiem obcym na poziomie B2+ Europejskiego Systemu Opisu Kształcenia Językowego oraz specjalistyczną terminologią.
DNS.M_W04	Zna i rozumie fundamentalne dylematy współczesnej cywilizacji związane z wykorzystaniem technologii informatycznych.