STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Data security	**1010331471010330124**

Field of study	Profile of study (general academic, practical)	Year /Semester
Information Engineering	**(brak)**	**4 / 7**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
Safety of Computer Systems	**polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours	No. of credits
Lecture: **-** Classes: **-** Laboratory: **1** Project/seminars: **1**	**3**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**3 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Has structured knowledge based on a theoretical foundation in the area of basic algorithms and their analysis, algorithm design techniques, abstract data structures and their implementation, computationally hard problems. Has structured knowledge based on a theoretical foundation in the area of network technologies and data protection basics.
2	**Skills**	Is able to search for information in literature, databases and other sources; is able to integrate acquired information, interpret it, draw conclusions and formulate and argument opinions.
3	**Social competencies**	Is able to construct algorithms using basic algorithmic techniques and analyse their complexity.

Assumptions and objectives of the course:

The goal of the course is to broaden the ability to apply data protection methods in information systems.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Has structured knowledge based on a theoretical foundation in the area of data protection and information systems security. - [-]

Skills:

1. Is able to apply appropriate data protection methods and ensure security of the information system. - [-]

Social competencies:

1. Is aware of the importance of professional behaviour, following professional ethics and respecting diverse views and cultures. - [-]

Assessment methods of study outcomes

Laboratory class with scoring based on presence record, performed exercises, quality of reports and final test.

Project is scored based on presence record, project work and project documentation.

Course description

http://www.put.poznan.pl/

Laboratory classes:

Block cipher design. Block ciphers cryptanalysis. Asymmetric cryptography. Steganography. SSH and PGP. Digital certificates.

Project:

Executing a project in the field of data security.

Basic bibliography:

1. Bezpieczeństwo danych w systemach informatycznych, Stokłosa J., Bilski T., Pankowski T., Wydawnictwo Naukowe PWN, Warszawa-Poznań, 2001

2. Wprowadzenie do kryptografii (Introduction to Cryptography), Buchmann J. A., Wydawnictwo Naukowe PWN (Springer), Warszawa (New York), 2006 (2004)

3. Ochrona danych i zabezpieczenia w systemach teleinformatycznych, Stokłosa J. (red.), Wydawnictwo Politechniki Poznańskiej, Poznań, 2005

Additional bibliography:

1. Kryptografia (Cryptography. Theory and Practice), Stinson D.R., WNT (CRC Press), Warszawa (Boca Raton), 2005 (1995)

2. Kryptografia w praktyce, Ferguson N., Schneier B., Helion, Gliwice, 2004

3. Firewalle i bezpieczeństwo w sieci, Chestwick W. R. , Bellovin S.M. , Rubin A.D., Helion, Gliwice, 2003

4. Kryptologia. Budowa i łamanie zabezpieczeń, Wobst R., Wydawnictwo RM, Warszawa, 2002

Result of average student's workload

Activity	Time (working hours)
1. Participating in project classes	15
2. Participating in laboratory classes	15
3. Practical preparation for laboratory classes	15
4. Preparing laboratory classes reports	5
5. Executing a project	30
6. Participating in consulting meetings	5

Student's workload

Source of workload	hours	ECTS
Total workload	85	3
Contact hours	35	1
Practical activities	75	3

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