



The Faculty of:	Faculty of Electrical Engineering and Informatics
Field of study:	Electronics and Telecommunications (ET)
Speciality:	
Study degree (BSc, MSc):	MSc, second circle Master's degree part time studies

COURSE UNIT DESCRIPTION

Course title:	Security of Information Systems
Lecturer responsible for course:	Marcin Bednarek, PhD
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Department : Department of Computer and Control Engineering	

Semester	Weekly load	Type of classes				Number of ECTS credits
		L Lectures	C Theoretical Classes	Lb Laboratory	P Project	
30	2	10			20	2

Course description
<p>Lecture: Information security. Security policy. Organizational and legal aspects of information security. Security assessment of systems - criterions. Security threats - detection and prevention. Security attacks. Security architecture. Security services, security mechanism. Quality and certification of systems. Basic elements of cryptography. Properties of secure ciphers. Kinds of ciphers. Symmetric key cryptography: stream ciphers and block ciphers. Symmetric and asymmetric cipher algorithms. Public key cryptography. Key distribution. Quantum cryptography. Authentication methods. Digital signature. Malware. Digital watermarking and steganography. Compromising emanations. Spurious emission - mechanism of generation, ways of reducing emissions. Electromagnetic leakage (protection of information, protection zones)</p>
<p>Classes:</p>
<p>Laboratory:</p>
<p>Project: Analysis and/or planning the security of information systems.</p>

Objectives of the course
The goal of the course is to learn about security of information systems (analysis and planning the security of information systems).

Examination method
Written test, written solution of design problems, oral discussion.

Bibliography
<ol style="list-style-type: none">1. Stamp M.: Information Security. Principles and Practice. Willey-Interscience, Hoboken, 2006.2. Stallings W.: Ochrona danych w sieci i intersieci. W teorii i praktyce. WNT, Warszawa 19973. Stokłosa J., Bilski T., Pankowski T.: Bezpieczeństwo danych w systemach informatycznych, PWN, Warszawa – Poznań 20014. Liderman K.: Bezpieczeństwo Teleinformatyczne, Instytut Automatyki i Robotyki WAT, Warszawa 20015. Anderson J.: Security Engineering. A Guide to Building Dependable Distributed Systems, Wiley Publishing Inc., Indianapolis 20086. Maiwald E. Bezpieczeństwo w sieci: kurs podstawowy, EDITION 2000, Kraków 20017. Sutton R. J.: Bezpieczeństwo telekomunikacji: praktyka i zarządzanie, WKiŁ, Warszawa 20048. Schneier B.: Kryptografia dla praktyków, WNT, Warszawa 20029. Dennig D.E.: Wojna informacyjna i bezpieczeństwo informacji, WNT, Warszawa 200210. Put D.: Szkoła Hakerów – podręcznik, Wydawnictwo CHS, Kwidzyn 2006

Lecturer signature	
Head of Department signature	
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