

Study program: Information Technology			
Course title: DATA SECURITY			
Teacher(s): Vladimir M. Mladenović			
Course status: mandatory			
Number of ECTS credits: 6			
Prerequisite courses: none			
Course objectives The aim of the course is to enable students to understand, apply and manage data protection procedures in the field of computing, communications and other business systems. Students should be able to perform a risk analysis, and to explain to system users the importance of applying the policy and prescribed protection procedures.			
Learning outcomes Students are trained to apply protection procedures, they know security mechanisms and services to ensure data security.			
Content of the course <i>Theoretical teaching</i> Threats, attacks, security and protection methods; Security architectures and models; Cryptography; Security protocols; Access control and network barriers; Intrusion detection and prevention systems; Malicious programs; Electronic business and Internet security; Security of wireless and mobile networks; Security and protection of operating systems; Security of databases; Security aspects of programming. <i>Practical teaching</i> Analysis of basic protection systems; Symmetrical protection systems; Asymmetric protection systems; Security services Hash functions and digital signature; Network barriers: IPTABLES; Malicious software; SQL injection; Buffer overflow; Security on Linux and Windows operating systems			
Literature [1] Д. Плесковић, Н. Мачек, Б. Ђорђевић, М. Царић, Сигурност рачунарских система и мрежа, МикроКњига, 2007, ISBN: 978-86-7555-305-2 [2] Mark Stamp, Information Security, Wiley, 2011, ISBN: 978-0-471-74418-4 [3] P. van Oorschot, and S. Vanstone, Handbook of Applied Cryptography, CRC Press, 2002, ISBN: 0-8493-8523-7 [4] B. Schneier: Primenjena kriptografija: protokoli, algoritmi i izvorni kod na jeziku C, Mikroknjiga, Beograd, 2007, ISBN 978-86-7555-317-5 [5] Stallings W., Cryptography and Network Security: Principles and Practice, Pearson, 2023, ISBN: 1-292-43748-0			
Number of active teaching classes: 4		Theoretical teaching: 2	Practical teaching: 2
Teaching methods Oral presentation, practical work, demonstration method, laboratory exercises			
Evaluation of knowledge (maximum number of points 100)			
Pre-exam obligations	Points	Final exam	Points
Activities during teaching process	10	Final exam (written):	50
Practice teaching	/	Final exam (oral):	20
Colloquium	20		
Project	/		