

<b>Subject code</b>	<b>Credits</b>
INF4012	4

**Course title in Lithuanian**

**INFORMACINIŲ SISTEMŲ SAUGUMAS**

**Course title in English**

**INFORMATION TECHNOLOGY SECURITY**

**Short course annotation in Lithuanian (up to 500 characters)**

Kurse aptariama informacinių technologijų saugumo klausimai, supažindama su etiško hakerio darbu, išnagrinėjamos belaidžių tinklų konfigūravimo saugumo problemos. Išnagrinėjama, ir praktiškai išbandomi privataus ir viešo rakto naudojimas, elektroninio parašo naudingumas, supažindinama su kriptografija.

**Short course annotation in English (up to 500 characters)**

This course gives the student an overview and the background in the field of security of information technologies and a detailed and practical understanding of selected aspects: risk management, access control, authentication technologies, cryptography, digital signature, public key infrastructure, hardware and software for the implementation of security algorithms, internet security and break-in prevention technologies, content protection and copyright issues. Course contains lectures and laboratory assignments. Students are also expected to both independently study theoretical materials and perform additional individual work.

**Prerequisites for entering the course**

Programming: Operating systems, Networks.

**Course aim**

Understand the security of information systems: web pages, cloud systems, cryptography systems.

**Content**

No	Content (topics)
1.	Ethical hacker.
2.	Cyber security.
3.	Auditing of Information Systems. Security Concepts, Policies, Mechanisms.
4.	Cryptography. History of cryptosystems. Hash functions. Algorithms.
5.	Identification and Authentication. Multifactor authentication. Public key Infrastructure.
6.	Security in Cloud Computing, Apps and Software Development.

**Distribution of workload for students (contact and independent work hours)**

<b>Lectures</b>	<b>30 hours</b>
<b>Laboratory work</b>	<b>30 hours</b>
<b>Individual students work</b>	<b>50 hours</b>
<b>Total:</b>	<b>110 hours</b>

**Structure of cumulative score and value of its constituent parts**

Final written exam (50%), mid-term written exam (17%), and assessments of laboratory (practical) work (33%).

**Recommended reference materials**

No.	Publication year	Authors of publication and title	Publishing house	Number of copies in		
				University library	Self-study rooms	Other libraries
<b>Basic materials</b>						
1.	2015	Fundamentals of Information Systems Security/Information Security and Risk Management.				Available free on internet: <a href="https://en.wikibooks.org/wiki/Fundamentals_of_Information_Systems_Security/Information_Security_and_Risk_Management">https://en.wikibooks.org/wiki/Fundamentals_of_Information_Systems_Security/Information_Security_and_Risk_Management</a>
2.	2002	M. Krause, H.F. Tipton „Information Security Management 2002. ISBN: 0849399475				<a href="http://www.cccure.org/Documents/HISM/ewtoc.html">http://www.cccure.org/Documents/HISM/ewtoc.html</a> .
3.	2016	Latest hacking news				<a href="https://www.latesthackingnews.com">https://www.latesthackingnews.com</a>
4.	2016	EC-Ciuncil, News	EC -			<a href="http://www.eccouncil.org/Cert">http://www.eccouncil.org/Cert</a>

			Council		<a href="#">ification/certified-ethical-hacker</a>
<b>Supplementary materials</b>					
	2008	7 Things Every CEO Should Know About Information Security			Available online: <a href="https://www.lumension.com/Resources/eBooks/7-Things-Every-CEO-Should-Know.aspx">https://www.lumension.com/Resources/eBooks/7-Things-Every-CEO-Should-Know.aspx</a>
	2012	9 Steps to Cybersecurity Explains Cybersecurity and How to Properly Integrate it into Your Organization			Free e-book: <a href="http://www.iso27001standard.com/en/free-ebooks/9-steps-to-cybersecurity-managers-information-security-manual">http://www.iso27001standard.com/en/free-ebooks/9-steps-to-cybersecurity-managers-information-security-manual</a>
	2011	Febg Bao, Jian Weng. Information Security Practice and Experience. 2011. Proceedings of the 7th International Conference on Information Security Practice and Experience, ISPEC 2011,			Available online: <a href="http://www.ebook3000.com/Information-Security-Practice-and-Experience_157522.html">http://www.ebook3000.com/Information-Security-Practice-and-Experience_157522.html</a>
	2016	Penetration testing with KALI linux			<a href="https://www.offensive-security.com/information-security-training/">https://www.offensive-security.com/information-security-training/</a>
	2014	Security Fundamentals	Microsoft		<a href="https://mva.microsoft.com/en-us/training-courses/security-fundamentals-8283?l=pinxx9Wy_5604984382">https://mva.microsoft.com/en-us/training-courses/security-fundamentals-8283?l=pinxx9Wy_5604984382</a>
	2016	CyberSecurity standarts, Conferences, Organizations, News	ISACA		<a href="https://www.isaca.org/Pages/default.aspx">https://www.isaca.org/Pages/default.aspx</a>

**Course programme designed by**

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