

Óbudai Egyetem Neumann János Informatikai Kar			Kiberfizikai Rendszerek Intézet		
Tantárgy neve és kódja: NSTSAVSANK Information Security and Audit of Financial Institutions			Kreditérték: 3		
Mérnök informatikus MSc szak			Nappali tagozat, 2020-21. tanév, II. félév		
Tantárgyfelelős oktató: Dr. Szenes Katalin					
Előtanulmányi feltételek: (kóddal)		-			
Heti óraszámok:	Előadás: 3	Tantermi gyak.:	Laborgyakorlat:	Konzultáció:	
Számonkérés módja (s,v,f):	v				
The Material					
Goal of Education					
To help our students to be useful employees of the financial institutions in the IT development, operations, security, or audit departments or those of the related enterprises, already at starting their career. The most important basics of information security and audit are extended with specialties of financial institutions.					
Subjects:					
In order to help our students to begin their work as a useful employee in a financial institution, or in a related enterprise, an overview is given on:					
<ul style="list-style-type: none"><li>the challenges yielded by the new customers' and legislation requirements in Europe and in Hungary</li><li>well-known attacks, advanced persistent threats</li><li>requirements to be derived from some of the most important best practice EU and USA methodologies &amp; standards - useful hints in the ISACA (Information Systems Audit and Control Association), NIST (National Institute of Standards and Technology), ISO (International Standards Organization), and other materials</li><li>their basic notions - control objectives / measures, their qualifications and use</li><li>the 3 pillars of operations</li><li>the infrastructure of the information systems, and the security problems of some of the infrastructural elements</li><li>secure application development</li><li>business continuity planning and IT business continuity planning</li><li>special problems, e.g. outsourcing</li><li>some of the problems of determining an appropriate structure for the computer network of the institutions</li></ul>					
Scheduling:					
week	subject				
1.	the challenges yielded by the new customers' and legislation requirements in Europe and in Hungary: issues from the European Central bank, and from the EBF (European Banking Federation), PSD2 (Payment Services Directive)				
2.	challenges continued: the US President's Executive Order on Cybersecurity and other NIST requirements				
3.	challenges continued: well-known attacks, advanced persistent threats				
4.	the strategy-based risk assessment & management				
5.-6.-7.	control objectives / preventive – detective - corrective control measures, information criteria, operational and asset handling excellence criteria; practice: CISA exam test questions				
8.	Hungarian specialties - the changes in the laws on financial institutions. Data privacy - the new EU GDPR (General Data Protection Regulation)				
9.	the 3 pillars of the corporate / institution operations: organization, regulation, technics; practice: CISA exam test questions				
10.	outsourcing and other current issues				

11.	how to build compliant IT structure - organizational, regulational control measures; practice: CISA exam test questions
12.	business continuity planning and management
13.	examples for the relations between the strategic goals – preventive / detective / corrective operational activities – pillars of operations
14.	Written test
<p style="text-align: center;"><b>Requirements During Term</b></p> <p style="text-align: center;"><b>Attending the lectures, when they are held in the university, is compulsory</b></p> <p>This, and the completion of every task given by the teacher are necessary conditions for getting a signature</p>	
Should the fulfillment of any task be omitted, the compensation is to be discussed with the teacher.	
Exam: verbal	

**Compulsory literature:**

the presentations

International Standard ISO/IEC 27001 Ed. 2013-10-01 Information technology - Security techniques - Information security management systems - Requirements Copyright ISO/IEC 2013

Special Publication 800-53 Revision 4

(developed by NIST)

under the Federal Information Security Management Act (FISMA)

Executive Order 13717 signed by *President Obama* on 2-2-2016

[www.NIST.org](http://www.NIST.org)

**Recommended literature:**

COBIT® 4.1

Framework, Management Guidelines, Maturity Models Copyright © IT Governance Institute , 2007

editor: Information Systems Audit and Control Association Rolling Meadows, Illinois, USA, © ISACA

Enabling Processes - COBIT® 5 An ISACA Framework Copyright © 2012 ISACA. All rights reserved. For usage guidelines, see [www.isaca.org/COBITuse](http://www.isaca.org/COBITuse) (As an Expert Reviewer of the Subject Matter Expert Team of ISACA COBIT 5 I had participated in the COBIT 5 effort in 2010 - 2011

*Expert Reviewer member of the Subject Matter Expert Team of COBIT 5: Katalin Szenes*

COBIT® 2019 Framework: Introduction and Methodology

COBIT ® 2019 Framework: Governance and Management Objectives

*member of the Expert Reviewer Working Group of COBIT 2019: Katalin Szenes*

CISA Review Technical Information Manual published yearly

editor: Information Systems Audit and Control Association Rolling Meadows, Illinois, USA, © ISACA

*from the year of 1999 member of the Quality Assurance Team of the CISA Manual*

*with the exception of CRM 2011: Katalin Szenes*

(contributes mostly to the chapters Protection of information assets, and Business continuity planning)

Szenes, K.: On the Intelligent and Secure Scheduling of Web Services in Service Oriented Architectures - SOAs Procds. of the 7th International Symposium of Hungarian Researchers on Computational Intelligence Budapest, Hungary, 24-25 November, 2006, p. 473-482

Szenes, K.:

Serving Strategy by Corporate Governance - Case Study: Outsourcing of Operational Activities Procds. of 17th International Business Information Management Association - IBIMA November 14-15, 2011, Milan, Italy, ed. Khalid S. Soliman, ISBN: 978-0-9821489-6-9, DOI: 10.5171/2011.903755, indexat BDI: Ebsco © 2011 IBIMA, [CD-ROM], p. 2387-2398

OASIS - Organization for the Advancement of Structured Information Standards - [www.oasis-open.org](http://www.oasis-open.org)  
e-business guidelines, non-profit

OWASP - Open Web Application Security Project - [www.owasp.org](http://www.owasp.org)

[www.securityfocus.com](http://www.securityfocus.com)