Óbudai Egyetem Neumann János Informatikai Kar	Kiberfizikai Rendszerek Intézet

Tantárgy neve és kódja: Information Security and Audit of Financial Institutions / ***NSTSAVSANK***
Kreditérték*: *3

Mérnök informatikus MSc szak *Nappali tagozat, 2022-23. 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 or that of other enterprises either in the IT division - development, operations, or in the security, or audit departments, 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:

- the challenges yielded by the new customers' and legislation requirements in Europe and in Hungary
- well-known attacks, advanced persistent threats
- requirements to be derived from some of the most important best practice EU and USA methodologies & 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
- their basic notions - control objectives / measures, their qualifications and use
- the 3 pillars of operations
- the infrastructure of the information systems, and the security problems of some of the infrastructural elements
- secure application development
- business continuity planning and IT business continuity planning
- special problems, e.g. outsourcing
- some of the problems of determining an appropriate structure for the computer network of the institutions

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 specialities - 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

Requirements During Term

Attending the lectures, when they are held in the university, is compulsory
This, and the completion of every task given by the teacher are necessary conditions for getting a signature.

Should the fulfillment of any of the above tasks be omitted, no signature can be given.

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

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 (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
e-business guidelines, non-profit
OWASP - Open Web Application Security Project - www.owasp.org

www.securityfocus.com