

1.	Course	Business, Technical and Security aspects of Cloud Computing			
2.	Code	INF-S3			
3.	Study programme	Informatics			
4.	Study programme organized by	Faculty of Computer Science and Engineering			
5.	Cycle	Third - PhD			
6.	Academic year / semester winter/summer/elective	first/second	7.	ECTS credits	7.5
8.	Teacher	Prof. D-r Marjan Gusev, Ass. Prof. D-r Sasko Ristov			
9.	Prerequisites	None			
10.	<p>Course programme goals (competences): This course will qualify a student with advance knowledge for business and technical models in cloud computing, as well as the security challenges in Cloud.</p>				
11.	<p>Course syllabus: Cloud concepts, Cloud computing development, business model, financial aspects of business models, structure of costs and revenue, market offers, pricing policies, strategy, business process modeling. How to select a cloud service provider, Service level agreement. SaaS application transformation. Basic standards / Best practices / Guidelines for Information System Security (ISO 27000 family standards, NIST family standards, SAS70, COBIT, HIPAA, PCI/DSS). Cloud security standardization (CSA, ENISA, NIST). General security standards with cloud computing security standards compliance. New security risks in cloud computing, data privacy and security, Security-as-a-Service (SECaaS), Intrusion-Detection-System-as-a-Service (IDaaS), security challenges and benefits of cloud service migration, business information systems continuity, evaluation of security in different levels in Cloud, Cloud systems, cloud service providers. Security risk mangament in Cloud.</p>				
12.	<p>Teaching methods: Classes supported with slide presentations, interactive teaching, lab equipment and other software packages, teamwork, case studies, invited guest lecturers, presentations of project works, e-learning materials, forums and consultations</p>				
13.	Total fund of work hours	7,5 EKTС x 30 h = 225 h			
14.	Available hours distribution	45+30+150 = 225			
15.	Teaching activities	15.1.	Theoretical classes	45 h	
		15.2.	Practical classes (labs, exercises), seminars, team work	30 h	
16.	Other activities	16.1.	Project tasks	50 h	
		16.2.	Self study	50 h	
		16.3.	Homework	50 h	
17.	Grading				
	17.1.	Tests	40 points		

	17.2.	Seminar work/ project (presentation: written and oral)	50 points
	17.3.	Active participation	10 points
18.	Grading criteria (points/grade)	to 59 points	5 (five) (F)
		from 60 to 68 points	6 (six) (E)
		from 69 to 76 points	7 (seven) (D)
		from 77 to 84 points	8 (eight) (C)
		from 85 to 92 points	9 (nine) (B)
		from 93 to 100 points	10 (ten) (A)
19.	Conditions for attending the final exam	Successful completion of activities 15.1 and 15.2	
20.	Language	Macedonian or English	
21.	Quality assessment	Internal evaluation and student pools	

22.	Literature					
	22.1.	Compulsory				
		No.	Author	Title	Publisher	Year
		1.	Mark I. Williams	A Quick Start Guide to Cloud Computing: Moving Your Business into the Cloud	Kogan Page Limited	2010
		2.	Charles Babcock	Management Strategies for the Cloud Revolution: How Cloud Computing Is Transforming Business and Why You Can't Afford to Be Left Behind	McGraw-Hill	2010
	3.	Christian Baun, Marcel Kunze, Jens Nimis, Stefan Tai	Cloud Computing Web-Based Dynamic IT Services	Springer	2011	
	22.2.	Additional				
		No.	Author	Title	Publisher	Year
		1.	Marc Benioff, Carlye Adler	Behind the Cloud	Wiley	2010
		2.	Ronald L. Krutz Russell Dean Vines	Cloud Security - A Comprehensive Guide to Secure Cloud Computing	Wiley	2010
3.						