

COURSE DESCRIPTION

COURSE NAME		WORKFLOW. MODELLING, VERIFICATION, SECURITY				CODE: MSD2206
STUDY YEAR	MASTER II	SEMESTER	2	COURSE STATUS (C -compulsory/ OP -optional/ F -facultative)		C
HOURS PER WEEK				TOTAL HOURS PER SEMESTER	TOTAL HOURS INDIVIDUAL ACTIVITY	CREDITS
C	S	L	Pr.	56	184	8
2	-	2	-			
EVALUATION (P -during the semester, C -oral examination, E -written examination, M -mixed)						
M						
TEACHING LANGUAGE						
English						
COURSE TEACHER		TEACHING AND SCIENTIFIC DEGREE, FIRST NAME, LAST NAME			DEPARTMENT	
		PROF. DR. CRISTIAN-DUMITRU MASALAGIU			Computer Science	
PREVIOUS COURSES REQUESTED		Coding Theory and Cryptography (optional), Petri Nets and Applications (optional)				
OBJECTIVES		<ol style="list-style-type: none"> 1. Understand the role of workflow technologies for modern software development 2. Learn the most important modelling languages and apply workflow patterns for concrete modelling problems 3. Know how to use verification methods for workflow 4. Recognise security concerns given a concrete workflow instance 				
GENERAL DESCRIPTION		<ol style="list-style-type: none"> 1. The Role of Workflow in Complex Information Systems 2. Modelling Languages <ol style="list-style-type: none"> 2.1. BPMN (Business Process Model and Notation) 2.2. YAWL (Yet Another Workflow Language) 2.3. Colored Petri-nets 3. Workflow Patterns 4. Workflow Semantics and Verification Techniques 5. Security Concerns for Workflow Management Systems 				
DESCRIPTION OF SEMINARY / LABORATORY WORKS		The main goal of any Seminar/Laboratory is to facilitate a deeper understanding of the content of the previous courses, with the help of more complicated, new and detailed examples. This will be accomplished with the direct participation of the students				
TEACHING METHODS		All the classical didactic methods will be used: systematic exposure of knowledge, conversation, learning „by discovery”, etc. The courses will be taught using a video-projector				
MAIN BIBLIOGRAPHY (SELECTION)		<ol style="list-style-type: none"> 1. OMG Group, Business Process Model and Notation - Specification, v. 2.0 beta 1, 2009 2. M. Salatino, jBPM Developer Guide, Packt Publishing, 2009 3. A. H. M. ter Hofstede et al, Modern Business Process Automation, Springer, 2010 4. The YAWL Foundation, YAWL – User Manual, v. 2.1 beta, 2010 5. W.M.P. van der Aalst, The Application of Petri Nets to Workflow Management, JCSC, 1998 6. N. Russell, et al., Control-Flow Patterns, BPMcenter.org, 2006 7. N. Russell, et al., Data Patterns, QUT Technical report, 2004 8. N. Russell, et al., Workflow Resource Patterns: Identification, Representation and Tool Support, Springer-Verlag, 2005 9. N. Russell, et al., Workflow Exception Patterns, Springer-Verlag, 2006 10. Workflow Management Coalition, Workflow Security Considerations, 1998 				
EVALUATION		conditions	Every student will be tested during the 14 weeks of seminars/labs (see below), not necessarily immediately to the corresponding course. A bonus may be granted for supplementary (good) answers/work (including research)			
		criteria	The concrete criteria will be established during the first lecture			
		evaluation methods	Additional written test may be given at fixed or unannounced dates			
		final result - formula	The grades will be rounded such as to get a Gauss curve for the given year of study (see the regulations in the web page of the Faculty).			