1.	Course title	Lo	Logical and functional programming					
2.	Course code							
3.	Study program INFO							
4.	Unit offering the course		FCSE					
5.	Undergraduate/postgraduate/PhD	raduate						
6.	Year/semester	7.	7. ECTS: 6					
8.	Teacher(s)	d-r Sonja Gievska, d-r Igor Trajkovski						
9.	Course prerequisites		Discrete Mathematics 1					
10.	Goals (competences): The goal of this course is to learn the basic concepts of logical and functional programming. Students will develop programs using declarative and functional programming. Topics that will be covered in this course are good basis for the incoming problems from the domain of artificial intelligence / intelligent systems.							
11.	Course content: Propositional calculus, Methods for propositional reasoning, Principe of resolution, Predicate logic, Introduction to PROLOG, Automated theorem proving, Recursion in PROLOG, Structured programming in PROLOG, Searching in PROLOG, Classes of problems suitable for solving with declarative programming, Introduction to LISP and functional programming, Evaluation of S-expressions, Functions in LISP, Recursion in LISP, Associative data structures, Objects and relational models in LISP, Classes of problems suitable for solving with functional programming, Comparing the functional and declarative paradigm							
12.	Teaching methods: Teaching, supported by slides, interactive lecturing, exercises, projects, guest lectures, programming assignments.							
13.	Total available time6 ECTS x 30 hours = 180 hours							
14.	Distribution of the available time $30 + 30 + 40 + 40 + 40$							
15.		15.1.	Lectures		30 hours			
	Teaching activities	15.2.	Training (labs, problem solving), seminar and tea work	am	30 hours			
16.		16.1.	Project work		40 hours			
	Other activities	16.2.	Self study		40 hours			
			Home work		40 hours			
17.	Grading							
	17.1. Tests	80 points						
	17.2. Seminar work/project (written	10 points						
	17.3. Active participation	10 points						
10	Cuoding anitaria	to	50 points	5 (five) (F)				
18.	Grading criteria	fro	om 51 to 60 points	6 (	six) (E)			

		Į	from 61 to 70 points	7 (seven) (D)				
			from 71 to 80 points	8 (eight) (C)				
			from 81 to 90 points	9 (nine) (B)				
			from 91 to 100 points	10 (ten) (A)				
Final exam prerequisites		erequisites	Finished activities 15 and 16					
Course language		ge	English					
Quality assurance methods			Mechanisms of internal evaluation and polls					
Literature								
Compulsory								
22.1.	No.	Authors	Title	Publisher	Year			
	1.	J. Darlington, Peter Henderson, D. A. Turner	Functional Programming and its Applications	Prentice Hall	1982			
	2.	Burnham W. and Hall A.	Prolog Programming and Applications	New York: Halsted Press	1986			
	3.	Bratko I.	Prolog Programming for Artifical Intelligence	MA: Addison Wesley	2001			
	4	Paul Graham	On Lisp: Advanced Techniques for Common Lisp	Prentice Hall	1994			
22.2.	Mandatory							
	No.	Authors	Title	Publisher	Year			
	1.							
	2.							
	3.							
	Final e Course Quality Literat 22.1.	Final exam pre Course langua Quality assurat Literature Comp No. 1. 2. 22.1. 3. 4 Mand No. 22.2. 1. 2. 3.	Final exam prerequisitesCourse languageQuality assurance methodsLiteratureCompulsoryNo. Authors1.J. Darlington, Peter Henderson, D. A. Turner2.Burnham W. and Hall A.2.Burnham W. and Hall A.3.Bratko I.4Paul GrahamMandatory22.2.1.2.3.	from 61 to 70 points     from 71 to 80 points     from 91 to 100 points     Final exam prerequisites   Finished activ     Course language   Eng     Quality assurance methods   Mechanisms of international programming and its Applications     Literature   Functional Programming and its Applications     22.1.   Burnham W. and Hall A.     Prolog Programming and Applications   Prolog Programming for Artifical Intelligence     3.   Bratko I.     4   Paul Graham     22.2.   Mandatory     No.   Authors     Title   I.     3.   Bratko I.     Paul Graham   Title     22.2.1.   Mandatory	from 61 to 70 points 7 ( from 71 to 80 points 8 ( from 71 to 80 points   Final exam prerequisites Finished activities 15 and 16   Course language English   Quality assurance methods Mechanisms of internal evaluation and Literature   Compulsory No.   Authors Title   Publisher   1. J. Darlington, Peter Henderson, D. A. Turner   21. Burnham W. and Hall A.   Prolog Programming and Applications New York: Halsted Press   3. Bratko I.   Prolog Programming for Authors MA: Addison Artifical Intelligence   4 Paul Graham   22.2.1. Mandatory   22.2.2. 1.   2. 1.   2. 2.   3. Statory			