Zarqa University Skills Matrix Computer Science Department

متطلب تخصص اختياري متطلب تخصص اجباري المتطلبات المسائدة



	kills VS. Courses Ind understanding of: Ind Physics In and statistical methods Indication: Indication									First Year								Second Year												Third Year											Fourth Year								
Skills VS. Courses		National Education	English Language 1	Elective university Course	Computer Programming 1	Programming Lab. 1	Computer Programming 2	Programming Lab. 2	Web Programming (1)	Web Lab. 1	Odiculus I	Digital Edgic Design	Arabic Language 1		Selected Programming Language	Discrete Mathematics	Introduction to Software Engineering	Computer Organization and Architectur	Data Structures		Design and Analysis of Algorithms	Department Elective course	Statistics and Probabilities	Advanced Programming	Database Systems	Distributed Systems and Cloud Compur	Linear Algebra 1	Numerical Analysis	Artificial Intelligence	Theory of Computation	Research Methodology and Ethics	Elective university Course	Elective department Course	Project in Computer Science	Internship for CS	Network and Information Security		Wireless Networks	Machine Learning	Military Sciences	e e	Compilers Construction							
A. Knowledge and understanding of:																																				┸	┸	┺		\bot	Ш.	L	$oldsymbol{oldsymbol{oldsymbol{eta}}}$						
Mathematics and Physics																																									\perp	Ш							
A1. Mathematical and statistical methods appropriate to CS.										:	x 2	x				х							х				x			x										L									
A2. Essential physics principles.																																																	
Hardware																																																	
A3. Computer architecture and construction.											,	x						х																															
A4. Processor architecture.											2	x						х																			Ш						Ш.						
A5. Basic electronics and logic design.												x						х																		╙	Ш		Ш.			L							
																																									\perp	Ш							
Software																																					Ш		Ш.		\perp	X	<u> </u>						
A6. Programming languages.														_		_								х		X								х	_		┸			┷	Ш.	L	igwdow						
A7. Software tools and packages.												X		_		_	X							х										х	_	4	┸			┷	Ш.	L	—						
A8. Computer applications.											4													х	X	X								х	_	_	Щ	┷	Щ	┷	х	L	Щ						
A9. Structuring of data and information.											4			_		_							_		X						Х			х	(X		4	4	4	┷	₩	Х	₩						
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Communication	H		_	_					_	_	+	-	_		_	_	_	4	4	_	_	_	_{	+	_			-	-		+	-	-	╀	-	х	+	+	+	+	+	+	₩						
A10. Computer networks and distributed																				х			1															x	.										
systems. A11. Operating systems.	H		_	_			- 		+	+	+	+	_	+			+	\dashv	\dashv		+	+	\dashv	\dashv	_		+	+	+	-	+	+	-	+	+	+	x	+	+	+	+	+	+						
7111. Operating systems.	\vdash		\dashv	\dashv			-	+	+	+	+	+	+	+	+	+	+	\dashv	\dashv	\dashv	\dashv	\dashv	┪	\dashv	+		+	+	+	+	+	+	+	╁	+	+	+^	+	+	+	+	+	+						
Theory	\vdash		_	_				+	+	+	+	+	-	+	-	\dashv	-	+	\dashv	+	_	\dashv	1	+	_		-	-	+	-	+	+	+	t	+	+	+	+	+	+	+	+	t						
A12. Algorithm design and analysis.					х	х	х	х	x :	х	1	1	\exists	1	х	х	х	1	х		х	\exists	T	7	1			\top			T	1	\top	×		T	+	T	+	+	+	T	1						
A13. Formal methods and description techniques.																	х		İ		İ		İ											Ī		1		T	T		T	T							
A14. Modeling and frameworks.								-	+	+	1	+	\dashv	\dashv	\dashv	\dashv	х	1	\dashv	+	+	\dashv	1	\dashv	_			\dashv	+	+	x	+	╁	╁	+	+	十	+	╁	+	+	+	+						
A15. Analysis, prediction, and generalization.															T							1	1						×		x			×		T	T	1	х	1	T	T							
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تطلب تخصص اختياري تطلب تخصص اجباري المتطلبات المسائدة



متطلب جامعة اجباري متطلب كلية اجباري متطلب جامعة اختياري

		First Year													Second Year												⁄ea	r			Fourth Year									
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Skills VS. Courses	Islamic Culture	National Education	English Language 1	Computer Programming 1	Programming Lab. 1	Computer Programming 2	Programming Lab. 2	Web Programming (1)	Web Lab. 1	Calculus 1	Digital Logic Design	Arabic Language 1	Elective university Course	Selected Flogramming Language	Introduction to Software Engineering	Computer Organization and Architectu	Data Structures	Computer Networks	Design and Analysis of Algorithms	Department Elective course	Statistics and Probabilities	Advanced Programming	200	Distributed Systems and Cloud Comp.	Numerical Analysis	Systems Analysis	Artificial Intelligence	Theory of Computation	Research Methodology and Ethics	Elective university Course	Project in Computer Science	Internship for CS	Network and Information Security	Operating Systems	Wireless Networks	Machine Learning	Military Sciences		Compilers Construction	Elective department Course
B. Practical skills – students will be																																								
able to:																															х	:				П				
B1. Specify, analyze, design, and implement					Ì				Ì	寸	T	T				Ì	.,			1	T	T		İ		х	Ţ	T		1	1		1	1			T	\neg	T	\neg
computer-based systems.																	Х					x				Х	x				х						,			
B2. Deploy effectively the computer tools to				х	х	х	х	х	х	T	7			x			х						x :	x		х	х				х					П	П	\Box	\top	
solve practical problems.	igspace			Ļ	Ļ^	Ļ		^	^	_		_		`			^			_		х	<u>~ '</u>			^	^	_			L^		\bot	₩	└	Ш	\dashv		_	
B3. Operate computing equipments																															x						ı	x		
effectively.																_					4											_	4	┷	↓ '	Щ	\vdash	_	_	
										_	_				-						4			_						_	-	+	+	₩	₩'	<u> </u>	\dashv	\dashv	\dashv	_
C. Cognitive skills – students will be										_	_				-						4			_						_	-	+	+	₩	₩'	<u> </u>	\dashv	\dashv	\dashv	_
able to:			_	_	1								_		-	-					4	_	_							_	-	-	┿	₩	<u> </u>	Ш	,—	-	\dashv	
C1. Demonstrate knowledge understanding of essential facts and concepts in computing.														,	1							x	x							:	x x							x		x
C2. Model, design, and evaluate a computer- based system.																						x	x			х			х		х	:								
C3. Recognize and analyze criteria and specifications appropriate to specific problems.				x	x	х	x	x	x					x	x	:		x					x :	x		x	x				x	:						x		
C4. Deploy appropriate theory, practice, and tools to solve real problems.																						x	x	x		х	x				x	:								x
C5. Recognize the professional, moral, and ethical issues related to work.	х	х	×	1								х	х										x			х			х	x							х			
D. General transferable skills – students	\vdash	-	+	+	1	1			_	7	\dashv	\dashv	\dashv	-	\top	-	1		\vdash	\dashv	十	\dashv	\dashv	+				7	\dashv	\dashv	-	╁	+	+	T	\vdash	\dashv	十	十	-
will be able to:																																		1			, [
D1. Effectively communicate both orally and										T											T							T			1		T	1			T	\neg		
in writing using appropriate tools.		'	x x	1						Į		х										x							x		х	×					,			
D2. Work effectively as part of a team.					Ì					T		\neg										_	x :	x		х		T	х		х	х	1	1			T	\neg		
D3. Effective use of general IT facilities.		[х		х		х	x 2	x		х			х		хх	x	Ī	1			T			x
D4. Do independent learning and continue				х	х	х	х	х	х	T				x				х		х			x :	x		х	х		х		х	x								
professional development.	\sqcup	_				<u> </u>		\sqcup		_	_		_ _	_	4				\sqcup	_	4	х	_					4		_	_		\bot	₩	<u> </u>	Щ	\dashv	_	+	
D5. Communicate and present logical argument related to computing.														>	:														x			x					.			
D6. Employ scientific methods in the	\vdash		+	+	-	<u> </u>	H	\vdash		\dashv	_	\dashv	_		+	+			H	\dashv	+	+	+	+				\dashv	_	+	+	+	+	+-	╁┷	$\vdash \vdash$	\dashv	+	+	_
solution of problems.				x	x	x	x	x	x					x	x			х	х	x		x	x	×		x	x		x		x x		x	1			ı	x		X