THE RELATIONSHIP BETWEEN NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY- PROGRAMME KEY LEARNING OUTCOMES- BASIC FIELD QUALIFICATIONS

Qualifications of Fields of Education (Engineering - Academically Oriented)	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY (NQF-HETR) 6. Level (Associate's) Qualifications
KNOWLEDGE — have sufficient background in mathematics, natural sciences and their own field of study.	X	X		X		X					Possess advanced level theoretical and practical knowledge supported by textbooks with updated information, practice equipment and other resources.
	X			X	X	X					
SKILLS — make use of theoretical and practical knowledge on mathematics, natural sciences and their own field concurrently for engineering solutions.	X	X			X	X					Use of advanced theoretical and practical knowledge within the field
	X	X	X	X	X	X	X				
identify, define, formulate and solve engineering problems; select and apply analytical methods and modeling techniques appropriate for this purpose.	X	X	X		X		X				Interpret and evaluate data, define and analyze problems, develop solutions based on research and proofs by using acquired advanced knowledge and skills within the field.
		X	X		X		X				
analyze a system, a system component or a process; make a design in consideration of realistic constraints in order to meet the needs expected; and apply modern design methods.	X		X	X		X					
select and use modern techniques and devices required for engineering applications.	X	X		X	X	X					
design and conduct experiments; collect data; report and interpret the data collected.	X		X				X				
COMPETENCES — Competence to Work Independently and Take Responsibility — assume active responsibility in individual work or multi-disciplinary team work.		X		X		X		X		X	Conduct studies at an advanced level in the field independently.
	X	X	X		X	X	X	X	X		
know how to access information and do literature survey; and make use of databases and other information resources.	X	X		X	X	X	X			X	Take responsibility both as a team member and individually in order to solve unexpected complex problems faced within the implementations in the field.
		X			X	X		X	X		
											Planning and managing activities towards the development of subordinates in the framework of a project.
							X	X		X	

THE RELATIONSHIP BETWEEN NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY- PROGRAMME KEY LEARNING OUTCOMES- BASIC FIELD QUALIFICATIONS

Qualifications of Fields of Education (Engineering - Academically Oriented)			PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY (NQF-HETR) 6. Level (Associate's) Qualifications		
YETKİNLİKLER	Learning Competence	know how to access information and do literature survey; and make use of databases and other information resources.	X	X		X	X	X	X			X	Evaluate the knowledge and skills acquired at an advanced level in the field with a critical approach	Learning Competence	COMPETENCES
									X		X				
		are aware of the need for lifelong learning; keep up with the developments in science and technology and renew themselves continuously.	X								X		Determine learning needs and direct the learning.		
								X		X	X				
		make use of theoretical and practical knowledge on mathematics, natural sciences and their own field concurrently for engineering solutions.	X	X			X	X					Develop positive attitude towards lifelong learning		
						X	X	X		X	X				
		identify, define, formulate and solve engineering problems; select and apply analytical methods and modeling techniques appropriate for this purpose.	X	X	X		X		X						
		analyze a system, a system component or a process; make a design in consideration of realistic constraints in order to meet the needs expected; and apply modern design methods.	X	X	X	X		X							
		select and use modern techniques and devices required for engineering applications.	X	X		X	X	X							
		assume active responsibility in individual work or multi-disciplinary team work.		X		X		X			X				
	Communication and Social Competence	use computer software and communication and information technologies required in the field at the advanced level, as defined by the European Computer Driving Licence.	X					X					Inform people and institutions, transfer ideas and solution proposals to problems in written and orally on issues in the field.	Communication and Social Competence	
				X	X				X	X		X			
		communicate in oral and written form in a foreign language at minimum B1 level, as defined by the European Language Portfolio.						X					Share the ideas and solution proposals to problems on issues in the field with professionals and non-professionals by the support of qualitative and quantitative data.		
				X			X	X	X	X					

THE RELATIONSHIP BETWEEN NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY-PROGRAMME KEY LEARNING OUTCOMES- BASIC FIELD QUALIFICATIONS

COMPETENCES		Qualifications of Fields of Education (Engineering - Academically Oriented)	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY (NQF-HETR) 6. Level (Associate's) Qualifications		COMPETENCES
COMPETENCES	Communication and Social Competence	establish technical communication through technical drawing.											Organize and implement project and activities for social environment with a sense of social responsibility.	Communication and Social Competence	COMPETENCES
								X		X	X	X			
		have access to information and do literature survey; and make use of databases and other information resources.	X	X		X	X	X	X			X	Monitor the developments in the field and communicate with peers by using a foreign language at least at a level of European Language Portfolio B1 General Level.		
		have awareness of universal and social influences of their solution proposals to environmental problems; are conscious about entrepreneurship and innovation; and have knowledge about problems of the age in which they live.						X		X	X		Use informatics and communication technologies with at least a minimum level of European Computer Driving License Advanced Level software knowledge.		
				X	X	X	X	X							
	Field Specific Competence	have sense of professional and ethical responsibility.						X			X	X	Act in accordance with social, scientific, cultural and ethical values on the stages of gathering, implementation and release of the results of data related to the field.	Field Specific Competence	
								X	X		X	X			
		have consciousness about project management, workplace practices, workers' health, environmental risk evaluation, environmental and work safety; and have awareness about legal consequences of engineering applications.										X	Possess sufficient consciousness about the issues of universality of social rights, social justice, quality, cultural values and also, environmental protection, worker's health and security.		
								X			X	X			
		have awareness of universal and social influences of their solution proposals to environmental problems; are conscious about entrepreneurship and innovation; and have knowledge about problems of the age in which they live.									X				
											X				

THE RELATIONSHIP BETWEEN NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY- PROGRAMME KEY LEARNING OUTCOMES- BASIC FIELD QUALIFICATIONS

Qualifications of Fields of Education (Computing - Academically Oriented)	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY (NQF-HETR) 6. Level (Associate's) Qualifications
Qualifications that signify completion of the sixth cycle are awarded to students who											Qualifications that signify completion of the sixth cycle are awarded to students who
KNOWLEDGE — have theoretical and practical knowledge on mathematics, computing and computer sciences.	X	X		X		X					Possess advanced level theoretical and practical knowledge supported by textbooks with updated information, practice equipments and other resources.
	X			X	X	X					
SKILLS — identify, define and model problems related with informatics and/or computer sciences; select and apply analysis and modeling methods appropriate for this purpose.	X	X		X	X		X				Use of advanced theoretical and practical knowledge within the field
	X	X	X	X	X	X	X				
design and use interactive experimental settings in order to define and obtain first solutions to problems related with informatics and/or computer sciences; and evaluate these settings.		X		X	X		X				Interpret and evaluate data, define and analyze problems, develop solutions based on research and proofs by using acquired advanced knowledge and skills within the field.
		X	X		X		X				
realize all stages of life cycle in computer-based systems.			X	X	X	X					
select and use relevant knowledge in computing, mathematics and theoretical computer sciences, and information and communication technologies in order to solve problems in informatics and/or computer sciences.	X	X	X	X	X	X			X		
COMPETENCES — Competence to Work Independently and Take Responsibility — assume active responsibility in individual work or multi-disciplinary teamwork.		X				X	X	X	X	X	Conduct studies at an advanced level in the field independently.
	X	X	X		X	X	X	X	X	X	
			X		X	X		X	X	X	Take responsibility both as a team member and individually in order to solve unexpected complex problems faced within the implementations in the field.
							X	X		X	Planning and managing activities towards the development of subordinates in the framework of a project.
Learning Competence — keep up with recent developments in informatics and computer sciences and in information and communication technologies with the awareness of the need for continuous professional development.				X	X	X			X	X	Evaluate the knowledge and skills acquired at an advanced level in the field with a critical approach
							X		X		
						X		X	X		Determine learning needs and direct the learning.
				X	X	X		X	X		Develop positive attitude towards lifelong learning

THE RELATIONSHIP BETWEEN NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY- PROGRAMME KEY LEARNING OUTCOMES- BASIC FIELD QUALIFICATIONS

Qualifications of Fields of Education (Computing - Academically Oriented)			PROGRAM QUALIFICATIONS										NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY (NQF-HETR) 6. Level (Associate's) Qualifications		
			PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10			
COMPETENCES	Communication and Social Competence	establish written and oral communication; keep up with the knowledge in the field of informatics and computer sciences and communicate with their colleagues in at least one foreign language at minimum B1 level, as defined by the European Language Portfolio.				X	X	X		X		X	Inform people and institutions, transfer ideas and solution proposals to problems in written and orally on issues in the field.	Communication and Social Competence	COMPETENCES
				X	X		X		X	X		X			
		are aware of individual, institutional, social and universal effects of applications in informatics; and are conscious about entrepreneurship and innovation.						X			X		Share the ideas and solution proposals to problems on issues in the field with professionals and non-professionals by the support of qualitative and quantitative data.		
				X			X	X	X	X					
													Organize and implement project and activities for social environment with a sense of social responsibility.		
								X		X	X	X			
													Monitor the developments in the field and communicate with peers by using a foreign language at least at a level of European Language Portfolio B1 General Level.		
								X							
													Use informatics and communication technologies with at least a minimum level of European Computer Driving License Advanced Level software knowledge.		
				X	X	X	X	X							
	Field Specific Competence	have awareness about legal consequences of applications in informatics, with the sense of professional and ethical responsibility.						X			X	X	Act in accordance with social, scientific, cultural and ethic values on the stages of gathering, implementation and release of the results of data related to the field.	Field Specific Competence	
								X	X		X	X			
													Possess sufficient consciousness about the issues of universality of social rights, social justice, quality, cultural values and also, environmental protection, worker's health and security.		
								X			X	X			