

THE RELATIONSHIP BETWEEN BASIC FIELD QUALIFICATIONS - PROGRAM QUALIFICATIONS - THE QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY¹

Basic Field Qualifications (Engineering- Level 7)			PROGRAM QUALIFICATONS											Qualifications Framework for Higher Education in Turkey (Level 7)		
			1	2	3	4	5	6	7	8	9	10	11			
KNOWLEDGE	1. Possess in depth theoretical and applied knowledge in mathematics, computation, and computer science subjects.		X X			X		X						1. Based on the undergraduate studies qualifications, develop and deepen the knowledge acquired in the field as well as in other fields at the expert level.	KNOWLEDGE	
	2. Possess detailed knowledge of modeling and analysis methods used in information and/or computer science problems.						X							2. Understand the interdisciplinary interactions among associated fields.		
SKILLS	1. Identify information/computer engineering problems, develop solution methods, and apply innovative methods in their solutions.							X X						1. Use the expert level theoretical and practical knowledge in the field.	SKILLS	
	2. Design and apply analytical, model-based, and experimental research, and, solve complex problems faced during that process.						X X							2. Interpret and produce new information by integrating the knowledge acquired in the field with information generated in other fields.		
			X											3. Solve problems faced in the field using research methods.		
COMPETENCIES	Competence work independently and take responsibility	1. Show leadership in multi-discipline teams, develop solutions to complex situations and take responsibilities.						X						1. Conduct independent studies that require expertise in the field.	Competence work independently and take responsibility	
							X	X						2. Take leadership as an individual or as a team member towards solving practical problems and complex issues in the field.		
								X						3. As the leader of the team, plan and direct the members of the project team for their professional developments.		
	Competence to learn	1. Aware of the new and developing applications in the profession, investigate and learn them when needed.					X			X				1. Critical evaluation of the acquired knowledge and skills in the field and direct its learning.	Competence to learn	
	Communications and social competence	1. Master at least one foreign language at European Language Portfolio B2 level to communicate verbally and in written.										X X		1. Transfer the recent developments and own studies in the field in writing, verbally, and visually systematically to groups inside and outside the field.	Communications and social competence	
		2. Communicate, in writing and verbally, the process and outcomes of studies in the field or outside the field in national and international clearly and systematically.										X		2. Investigate, develop, and make changes as needed social relationships and norms that direct these relationships with a critical view.		

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		3. Understand the social and environmental impact of information sciences applications.									X	X		3. Speak and write at least one foreign language at European Language Portfolio Level B2.		
														4. Utilize advaced computer software and information and communication technologies in the field at the desired level of expertise.		
COMPETENCIES	Competence related to the field	1. Oversees the social, scientific and ethical values in data collection, processing, use, interpretation, and reporting.									X			1. Audit and teach collection, interpretation, application and announcements of data in the field while observing cultural, ethical, scientific, and social values.	Competence related to the field	COMPETENCIES
														2. Develop strategic, political, and application plans and evaluate produced solutions within the quality framework in the field.		
				X										3. Utilize the knowledge, problem solving and/or application skills grasped in the field in interdisciplinary studies.		

¹ Combined matrix is formed by the combination of Basic Field Qualifications (blue colored zone on left side) - Program Qualifications and Qualifications Framework for Higher Education in Turkey (pink colored zone on right side). Individual remarks (X) pertinent to each zone are given with the same color of the zones.