

**THE RELATIONSHIP BETWEEN THE QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION –
PROGRAMME QUALIFICATIONS - BASIC FIELD QUALIFICATIONS**

| Basic Field Qualifications (Engineering- Level 6) | | PROGRAM QUALIFICATIONS | | | | | | | | | | Qualifications Framework for Higher Education in Turkey (Level 6) | |
|---|---|---------------------------|--------|---|--------|--------|---|---|---|--------|--------|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| KNOWLEDGE | 1. Possess theory and practice in the field of mathematics, science and engineering disciplines. | X X | X X | | | X | | | | | X | 1. Possess advanced level theoretical and practical knowledge supported by textbooks with updated information, practice equipments and other resources. | KNOWLEDGE |
| | | | | | | | | | | | | | |
| SKILLS | 1. Use mathematics, science and theoretical and applied knowledge within the field to solve engineering problems. | X | X | | | X | | | | | X | 1. Use of advanced theoretical and practical knowledge within the field. | SKILLS |
| | 2. Determine, identify, define and model engineering problems; select and apply appropriate analytical methods and modeling techniques. | | | | X X | X X | | | | | X X | 2. 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. | |
| | 3. Design a system, a component or a process under restrictions subject to realistic requirements; apply modern design methods for this purpose.. | | | | X | X | | | | | | | |
| | 4. Select and use modern techniques and tools for engineering applications. | | | X | X | X | | | | | | | |
| | 5. Design and conduct experiment, collect, analyze and interpret data. | | | | X | X | | | | X | X | | |
| COMPETENCIES Work and responsibility receivable | 1. Perform efficient, individual or multidisciplinary work. | | | | | | | | | X X | | 1. Conduct studies at an advanced level in the field independently. | COMPETENCIES Work and responsibility receivable |
| | 2. Search for information and conduct research on the resources; use databases and information sources for this purpose | X | X | X | | | X | | | X | | 2. Take responsibility both as a team member and individually in order to solve unexpected complex problems faced within the implementations in the field. | |
| | | | | | | | X | | | | | 3. Planning and managing activities towards the development of subordinates in the framework of a project. | |

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|--|-------------------------------------|---|---------------------------|---|---|---|---|---|---|---|---|----|---|-------------------------------------|-------------------|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
| COMPETENCE | LEARNING COMPETENCE | 1.Search for information and conducts research on the resources, for this purpose; use databases and information sources. | X | X | X | | | | | | X | X | 1. Evaluate the knowledge and skills acquired at an advanced level in the field with a critical approach. 2. Determine learning needs and direct the learning. 3. Develop positive attitude towards lifelong learning. | LEARNING COMPETENCE | COMPETENCE |
| | | 2.Aware of lifelong learning; follow advances in science and technologies; Follow the advances and renew personal capabilities | | | | | | X | | | X | X | | | |
| | | 3.Use mathematics, science and theoretical and applied knowledge within the field to propose/design engineering solutions. | X | X | | | X | X | | | | X | | | |
| | | 4.Determine, identify, define, formulate and solve engineering problems; select and apply appropriate analytical methods and modeling techniques for this purpose | | | | X | X | | | | | X | | | |
| | | 5.Design a system, a component or a process to meet realistic requirements and restrictions; apply modern design methods for this purpose | | | | X | X | | | | | X | | | |
| | | 6.Select and use required modern techniques and tools for the engineering applications | | X | | | X | | | | | | | | |
| | | 7. Perform efficient, individual or multidisciplinary work | | | | | | | | | X | | | | |
| COMPETENCE | Communication and Social Competence | 1. Use computer software, informatics and communication technologies required in the field, at Advanced Level European Computer Use License. | | | X | | | | | | X | | 1. Inform people and institutions, transfer ideas and solution proposals to problems in written and orally on issues in the field. 2. 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. 3. Organize and implement project and activities for social environment with a sense of social responsibility. 4. 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. 5. Use informatics and communication technologies with at least a minimum level of European Computer Driving License Advanced Level software knowledge. | Communication and Social Competence | COMPETENCE |
| | | 2. Communicate verbally and in written effectively, use at least one foreign language at the level of European Language Portfolio, B1. | | | X | X | | | | X | X | | | | |
| | | 3. Use technical drawings and schematics to communicate. | | X | X | X | X | | X | X | | X | | | |
| | | 4. Search for information, conduct research on resources for this purpose, use databases and other information sources. | X | X | X | | | | | | X | | | | |
| | | 5. Aware of the effect of information technology applications at organizational, social and universal levels; aware of entrepreneurship and innovative subjects and possess information on contemporary issues. | | | X | X | | | X | X | | X | | | |

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| COMPETENCE | FIELD-SPECIFIC COMPETENCE | 1. Aware of professional and ethical responsibilities. | | | | X | X | | | X | X | | | 1. 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 | COMPETENCE |
| | | 2. Aware of project management, applications at workplace, workers health, environment and workplace security; conscious of legal aspects and results of engineering applications. | | | | | | | X | X | X | X | | 2. 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. | | |
| | | 3. Show the awareness about the effect of engineering applications on the universal and social dimensions; aware of entrepreneurship and innovative subjects and possess information on contemporary issues. | | | | | | | X | X | X | X | | | | |

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.