Electrical and Electronic Engineering (English)			
Bachelor	TR-NQF-HE: Level 6	QF-EHEA: First Cycle	EQF-LLL: Level 6

Program Qualifications / Outcomes

Classified | Conjoined | Program Kazanımları Program Düzeyi

Classified

1 - Knowledge
Theoretical - Conceptual
1) Adequate knowledge in mathematics, science and Electrical and Electronics engineering; the ability to use theoretical and practical knowledge in these areas in complex engineering problems.
2 - Skills
Cognitive - Practical
1) Ability to identify, formulate, and solve complex electrical and electronics engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose.
2) Ability to design a complex circuit, device or system to meet specific requirements under realistic constraints and conditions; ability to apply modern design methods for this purpose.
3 - Competences
Communication and Social Competence
1) Ability to work effectively within and multidisciplinary teams; individual study skills.
2) Awareness of the necessity of lifelong learning; ability to access information, to follow developments in science and technology and to renew continuously.
3) To act in accordance with ethical principles, professional and ethical responsibility; information on the standards used in electrical and electronics engineering applications.
Learning Competence
1) Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in electrical and electronics engineering applications; ability to use information technologies effectively.
2) Ability to communicate effectively orally and in writing; knowledge of at least one foreign language; ability to

write effectice reports and understand written reports, to prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions.
3) Information on business practices such as project management, risk management and change management; awareness of entrepreneurship and innovation; information about sustainable development.
Field Specific Competence
1) Ability to design, conduct experiments, collect data, analyze and interpret results for the study of complex engineering problems or electrical and electronics engineering research topics.
Competence to Work Independently and Take Responsibility
1) Knowledge of the effects of electrical and electronics engineering practices on health, environment and safety in the universal and social scale and the problems of the era reflected in electrical and electronics engineering; awareness of the legal consequences of electrical and electronics engineering solutions.

Program Kazanımları Program Düzeyi

Program Outcomes	TR-NQF-HE 6 (Bachelor) Level Descriptors	TR-NQF-HE Main Field Descriptors 52 - Engineering and Engineering Trades
1 - Knowledge		
Theoretical - Conceptual		
1) Adequate knowledge in mathematics, science and Electrical and Electronics engineering; the ability to use theoretical and practical knowledge in these areas in complex engineering problems.	1) Possess advanced level theoretical and practical knowledge supported by textbooks with updated information, practice equipments and other resources.	1) Matematik, fen bilimleri ve kendi dalları ile ilgili mühendislik konularında yeterli altyapıya sahiptir.
2 - Skills		
Cognitive - Practical		
1) Ability to identify, formulate, and solve complex electrical and electronics engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose. 2) Ability to design a complex circuit, device or	1) Use of advanced theoretical and practical knowledge within the field. 2) Interpret and evaluate data, define and analyze problems, develop	1) Matematik, fen bilimleri ve kendi alanlardaki kuramsal ve uygulamalı bilgileri mühendislik çözümleri için beraber kullanır. 2) Mühendislik problemlerini saptar, tanımlar, formüle eder

system to meet specific requirements under realistic constraints and conditions; ability to apply modern design methods for this purpose.	solutions based on research and proofs by using acquired advanced knowledge and skills within the field.	ve çözer, bu amaçla uygun analitik yöntemler ve modelleme tekniklerini seçer ve uygular. 3) Bir sistemi, sistem bileşenini ya da süreci analiz eder ve istenen gereksinimleri karşılamak üzere gerçekçi kısıtlar altında tasarlar; bu doğrultuda modern tasarım yöntemlerini uygular. 4) Mühendislik uygulamaları için gerekli olan modern teknik ve araçları seçer ve kullanır. 5) Deney tasarlar, deney yapar, veri toplar sonuçları analiz eder ve yorumlar.
3 - Competences		
Communication and Social Competence		
1) Ability to work effectively within and multidisciplinary teams; individual study skills. 2) Awareness of the necessity of lifelong learning; ability to access information, to follow developments in science and technology and to renew continuously. 3) To act in accordance with ethical principles, professional and ethical responsibility; information on the standards used in electrical and electronics engineering applications.	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	1) Alanının gerektirdiği en az Avrupa Bilgisayar Kullanma Lisansı İleri Düzeyinde bilgisayar yazılımı ile birlikte bilişim ve iletişim teknolojilerini kullanır. 2) Sözlü ve yazılı etkin iletişim kurar; bir yabancı dili en az Avrupa Dil Portföyü B1 Genel Düzeyinde kullanır. 3) Teknik resim kullanarak iletişim kurar. 4) Bilgiye erişir ve bu amaçla kaynak araştırması yapar, veri tabanları ve diğer bilgi kaynaklarını kullanır. 5) Mühendislik çözümlerinin ve uygulamalarının evrensel ve toplumsal boyutlardaki etkilerinin bilincinde olur; girişimcilik ve yenilikçilik konularının farkında olur ve çağın sorunları hakkında bilgiye

	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.	sahiptir.
Learning Competence		
1) Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in electrical and electronics engineering applications; ability to use information technologies effectively. 2) Ability to communicate effectively orally and in writing; knowledge of at least one foreign language; ability to write effectice reports and understand written reports, to prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions. 3) Information on business practices such as project management, risk management and change management; awareness of entrepreneurship and innovation; information about sustainable development.	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.	1) Bilgiye erişir ve bu amaçla kaynak araştırması yapar, veri tabanları ve diğer bilgi kaynaklarını kullanır. 2) Yaşam boyu öğrenmenin gerekliliği bilincindedir; bilim ve teknolojideki gelişmeleri izler ve kendini sürekli yeniler. 3) Matematik, fen bilimleri ve kendi alanlardaki kuramsal ve uygulamalı bilgileri mühendislik çözümleri için beraber kullanır. 4) Mühendislik problemlerini saptar, tanımlar, formüle eder ve çözer, bu amaçla uygun analitik yöntemler ve modelleme tekniklerini seçer ve uygular. 5) Bir sistemi, sistem bileşenini ya da süreci analiz eder ve istenen gereksinimleri karşılamak üzere gerçekçi kısıtlar altında tasarlar; bu doğrultuda modern tasarım yöntemlerini uygular. 6) Mühendislik uygulamaları için gerekli olan modern teknik ve araçları seçer ve kullanır. 7) Bireysel olarak ve çok disiplinli takımlarda etkin olarak çalışır.
Field Specific Competence		

1) Ability to design, conduct experiments, collect data, analyze and interpret results for the study of complex engineering problems or electrical and electronics engineering research topics.	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. 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.	1) Mesleki ve etik sorumluluk bilincine sahiptir. 2) Proje yönetimi, işyeri uygulamaları, çalışanların sağlığı, çevre ve iş güvenliği konularında bilinç; mühendislik uygulamalarının hukuksal sonuçları hakkında farkındalığa sahiptir. 3) Mühendislik çözümlerinin ve uygulamalarının evrensel ve toplumsal boyutlardaki etkilerinin bilincinde olduğunu gösterir; girişimcilik ve yenilikçilik konularının farkındadır ve çağın sorunları hakkında bilgi sahibidir.
Competence to Work Independently and Take Responsibility		
1) Knowledge of the effects of electrical and electronics engineering practices on health, environment and safety in the universal and social scale and the problems of the era reflected in electrical and electronics engineering; awareness of the legal consequences of electrical and electronics engineering solutions.	1) Conduct studies at an advanced level in the field independently. 2) Take responsibility both as a team member and individually in order to solve unexpected complex problems faced within the implementations in the field. 3) Planning and managing activities towards the development of subordinates in the framework of a project.	1) Bireysel olarak ve çok disiplinli takımlarda etkin olarak çalışır. 2) Bilgiye erişir ve bu amaçla kaynak araştırması yapar, veri tabanları ve diğer bilgi kaynaklarını kullanır.

Conjoined

1) Adequate knowledge in mathematics, science and Electrical and Electronics engineering; the ability to use theoretical and practical knowledge in these areas in complex engineering problems.
2) Ability to identify, formulate, and solve complex electrical and electronics engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose.
3) Ability to design a complex circuit, device or system to meet specific requirements under realistic constraints

and conditions; ability to apply modern design methods for this purpose.

4) Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in electrical and electronics engineering applications; ability to use information technologies effectively.

5) Ability to design, conduct experiments, collect data, analyze and interpret results for the study of complex engineering problems or electrical and electronics engineering research topics.

6) Ability to work effectively within and multidisciplinary teams; individual study skills.

7) Ability to communicate effectively orally and in writing; knowledge of at least one foreign language; ability to write effectice reports and understand written reports, to prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions.

8) Awareness of the necessity of lifelong learning; ability to access information, to follow developments in science and technology and to renew continuously.

9) To act in accordance with ethical principles, professional and ethical responsibility; information on the standards used in electrical and electronics engineering applications.

10) Information on business practices such as project management, risk management and change management; awareness of entrepreneurship and innovation; information about sustainable development.

11) Knowledge of the effects of electrical and electronics engineering practices on health, environment and safety in the universal and social scale and the problems of the era reflected in electrical and electronics engineering; awareness of the legal consequences of electrical and electronics engineering solutions.