# SAKARYA UNIVERSITY OF APPLIED SCIENCES
# DIPLOMA SUPPLEMENT

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DS Label

**Diploma Date** : 24/06/2019

**Diploma Number:**

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international "transparency" and fair academic and Professional recognition of qualifications (diplomas, degrees, certificates, etc.). It is designed to provide a description of the nature, level, context, content and the status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgments, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

## 1 - INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

**1.1 Family name(s)** :
**1.2 Given name(s)** :
**1.3 Date of birth** *(day/month/year)* :
**1.4 Student identIfication number or code** *(if available)* :

## 2 - INFORMATION IDENTIFYING THE QUALIFICATION

**2.1 Name of the qualification and title conferred** *(In original language):*
Elektrik ve Elektronik Mühendisliği, Lisans

**2.2 Main field(s) of study for the qualification:**
Electrical and Electronics Engineering

**2.3 Name and status of awarding institution** *(in original language):*
Sakarya Uygulamalı Bilimler Üniversitesi, Devlet Üniv.
Sakarya University of Applied Sciences, State University

**2.4 Name and status of institution** *(if different from 2.3)*
**Administrating studies** *(in original language):*
Same as 2.3

**2.5 Language(s) of instruction/examination:**
Turkish

## 3 - INFORMATION ON THE LEVEL OF THE QUALIFICATION

**3.1 Level of qualification:**
First Cycle (Bachelor's Degree)

**3.2 Official length of programme:**
Normally 4 years (240 ECTS Credits), 2 semesters per year, 14 weeks per semester.

**3.3 Access requirement(s):**
High School Diploma,
Placement through a centralized national university placement examination

## 4 - INFORMATION ON THE CONTENTS AND RESULT GAINED

**4.1 Mode of Study:**
Full Time

**4.2 Programme requirements:**
A student is required to have a minimum CGPA of 2.00/4.00 and no falling grades.

**Objectives**

To produce engineers who: Students graduating from the program, to become individuals, in a near future, in the field of Electrical and Electronics Engineering;

1. Having employment at industrial or governmental companies or institutions as research-development, product development, control, project, maintenance engineers, or initiating their own business using their entrepreneurial abilities,
2. Holding positions at academic institutions,
3. With the understanding of continual education; attending activities such as conferences, symposiums, workshops etc. for along their professional life,
4. Having responsibilities at various organizations; taking parts in different scaled projects making teamwork with personnel from other disciplines.

### 4.3 Components, courses, modules or ubits studied and individual grades obtained

| Code | Course Name | Course Category | Credit | Grade | ECTS Credit |
|---|---|---|---|---|---|
| **1. Semester Courses** | | | | | |
| KIM111 | CHEMISTRY | Required | 3 | CB | 4 |
| TUR101 | TURKISH LANGUAGE | Required | 4 | CB | 4 |
| FIZ111 | PHYSICS I | Required | 4 | AA | 6 |
| ELM101 | INTRO. TO ELECTRICAL-ELECTRONICS ENGINEERING | Required | 4 | CB | 6 |
| MAT111 | MATHEMATICS I | Required | 4 | BA | 6 |
| TKN127 | LINEAR ALGEBRA | Required | 3 | CB | 6 |
| **2. Semester Courses** | | | | | |
| ELM102 | MATERIAL SCIENCE | Required | 3 | BB | 4 |
| FIZ112 | PHYSICS II | Required | 4 | AA | 6 |
| TKN122 | PROBABILITY AND STATISTICS | Required | 3 | BA | 5 |
| DIL102 | ENGLISH | Required | 4 | BA | 4 |
| MAT112 | MATHEMATICS II | Required | 4 | AA | 6 |
| TKN124 | INTRO. TO ALGORITHM & COMPUTER PROGRAMMING | Required | 4 | BB | 5 |
| **3. Semester Courses** | | | | | |
| ELM201 | ELECTRONICS I | Required | 5 | BB | 6 |
| ELM207 | ENGINEERING SOFTWARES | Required | 4 | BA | 4 |
| ELM205 | INTRODUCTION TO DIGITAL SYSTEMS | Required | 4 | BB | 5 |
| TKN225 | DIFFERENTIAL EQUATIONS | Required | 4 | BA | 6 |
| ELM203 | ELECTRICAL CIRCUITS I | Required | 5 | BA | 6 |
| ELM209 | ENGINEERING MATHEMATICS | Required | 3 | CB | 3 |
| **4. Semester Courses** | | | | | |
| ATA202 | PRINC. OF ATATÜRK AND HISTORY OF TURKISH REVOLUTION | Required | 4 | AA | 4 |
| ELM204 | ELECTRICAL CIRCUITS II | Required | 5 | AA | 6 |
| ELM206 | DIGITAL CIRCUIT DESIGN | Required | 4 | BA | 5 |
| ELM202 | ELECTRONICS II | Required | 5 | AA | 6 |
| ELM208 | NUMERICAL ANALYSIS | Required | 4 | BA | 5 |
| ELM210 | ELECTROMAGNETIC FIELD THEORY | Required | 3 | AA | 4 |
| **5. Semester Courses** | | | | | |
| SAU036 | THE FOURTH INDUSTRIAL REVOLUTION: INDUSTRY 4.0 | Elective | 2 | AA | 5 |
| ELM303 | ELECTRICAL MACHINES I | Required | 4 | CC | 5 |
| ELM301 | SIGNALS AND SYSTEMS | Required | 3 | CB | 4 |
| ELM307 | MICROPROCESSORS | Required | 4 | BB | 5 |
| ELM004 | HIGH VOLTAGE TECHNIQUE | Elective | 3 | CB | 5 |
| ELM305 | CONTROL SYSTEMS | Required | 5 | AA | 6 |
| **6. Semester Courses** | | | | | |
| ELM302 | FUNDAMENTALS OF COMMUNICATION | Required | 3 | AA | 4 |
| ELM304 | ELECTRICAL MACHINES II | Required | 4 | AA | 6 |
| ELM043 | COMPUTER AIDED ELECTRICITY PROJECT DRAWING | Elective | 3 | CC | 5 |
| ELM002 | MICROCOMPUTER SYSTEM DESIGN | Elective | 3 | AA | 5 |
| ELM306 | POWER ELECTRONICS | Required | 3 | BA | 5 |
| ELM016 | INTRODUCTION TO ARTIFICIAL INTELLIGENCE | Elective | 5 | AA | 5 |
| **7. Semester Courses** | | | | | |
| SAU012 | PROJECT MANAGEMENT AND ENTREPRENEURSHIP | Elective | 3 | BA | 5 |
| SAU418 | ROCK CLIMBING | Elective | 2 | AA | 5 |
| ELM027 | COMPUTER VISION | Elective | 3 | BB | 5 |
| ELM031 | POWER TRANSMISSION SYSTEMS | Elective | 3 | CB | 5 |
| ELM401 | ELECTRICAL AND ELECTRONICS ENGINEERING DESIGN | Required | 2 | AA | 5 |
| ELM034 | ELECTROMECHANIC ENERGY CONVERSION | Elective | 3 | BA | 5 |
| TKN425 | WORKPLACE APPLICATION | Required | 10 | YT | -(10)# |
| TKN421 | WORKPLACE TRAINING | Required | 5 | AA | 5 |
| TKN423 | INTERNSHIP | Required | 1 | YT | -(5)# |
| **8. Semester Courses** | | | | | |
| ELM402 | GRADUATION STUDY | Required | 4 | AA | 10 |

**Total Credits : 172**

**Total ECTS Credits : 227**

**CGPA 3,41 out of 4.00**

**# Courses which are not included in GPA (15 ECTS)**

**4.4 Grading scheme and (if available) grade distribution guidance:**
**Passing grades range from AA to DD; DF and FF grades are failing. The aquivalents of the grades are:**

| PERCENTAGE | COURSE GRADE | COEFFICIENT |
|---|---|---|
| 90-100 | AA | 4.0 |
| 85-89 | BA | 3.5 |
| 80-84 | BB | 3.0 |
| 75-79 | CB | 2.5 |
| 65-74 | CC | 2.0 |
| 58-64 | DC | 1.5 |
| 50-57 | DD | 1.0 |
| 0-49 | FF | 0.0 |

Other grades; No Attendance (D2) is given upon failure to attend classes or complete practical or applied components of a course. DZ configures in CPGA as FF. In non-credit course Satisfactory (G) accorded to successful and Unsatisfactory (K) to unsuccessful students, Incomplete (E) accorded to students who, although otherwise successful, have failed to complete the required assignments for a course. A student receiving an incomplete grade for any course must complete the missing assignments. Otherwise, the grade (E) automatically becomes FF. The grade (V) is issued if a student withdraws from a course after the add/drop period within the permitted time and with the approval of the lecturer and board of directors. A student can only withdraw two courses which included the 3rd or 4th semester. Preconditioned and failed courses cannot be withdrawn. The grade (T) is given to students who previously attended another higher education institution and entered the vocational school with the Student Selection Exam (YGS) held by ÖSYM, and to those who transfer to this school from another, after the equivalence of courses they have taken before is approved by the board of directors. The grade (M) is given to students who success the exemption exams of English and Computer lessons. Grade Point Average (GPA) AND Cumulative Grade Point Average (CGPA): A student's academic performance is determined at the end of each semester by computing an average of the grades she/he has received during that semester. For each course, the grade point equivalent of the letter grade received by the student is multiplied by the credit units for that course; the sum of these products is then divided by the total credit units taken in that semester to yield the Grade Point Average (GPA) for that semester. The Cumulative Grade Point Average (CGPA) is calculated by multiplying the grade point equivalent of the letter coefficient by the credit units for each course and then dividing the total sum by the total credit units taken in the program.

**4.5 Overall classification of the qualification (In original language):**

**Ağırlıklı Not Ortalaması** : 3.41
**Cumulative Grade Point Average** : 3.41

## 5 - INFORMATION ON THE FUNCTION OF THE QUALIFICATION

**5.1 Access to further study:**

May apply to second or third cycle programs

**5.2 Professional Status:**

**This degree enables the holder to exercise the profession.**

## 6 - ADDITIONAL INFORMATION

**6.1 Additional information** : N/A

**6.2 Further information sources**

**University web site** : www.subu.edu.tr/en
**Online Course Catalogue** : https://ebs.sabis.subu.edu.tr
**The Council of Higher Education web site** : www.yok.gov.tr
**Turkish ENIC-NARIC web site** : https://www.enic-naric.net/turkey.aspx

## 7 - CERTIFICATION OF THE SUPPLEMENT

**7.1 Date** : 16.12.2019
**7.2 Name and signature** : Hasan TÜRK
**7.3 Capacity** : Registrar of Sakarya University of Applied Sciences
**7.4 Official stamp or seal** :

## 8 - INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

### Structure and Degree System

The basic structure of the Turkish National Education System consists of stages of noncompulsory pre-school education; compulsory primary (elementary and middle school) and secondary (high school) education; and higher education. Primary education begins at the age of 5.5 (66 months), lasts eight years and comprises elementary and middle school education, four years each. Secondary education is also four years and divided into two categories as "General High School Education" and "Vocational and Technical High School Education". The entry into these categories is through composite scores obtained from a centralized exam for secondary schools.

Higher education system in Turkey is managed by the Council of Higher Education (CoHE, Yükseköğretim Kurulu-YÖK) which is an autonomous public body responsible for the planning, coordination, governance and supervision of higher education within the provisions set forth in the Constitution of the Turkish Republic and the Higher Education Law. Both state and non-profit foundation universities are founded by law and subjected to the Higher Education Law and to the regulations enacted in accordance with it.

Higher education in Turkey comprises all post secondary higher education programmes, consisting of short, first, second, and third cycle degrees in terms of the terminology of the Bologna Process. The structure of Turkish higher education degrees is based on a two-tier system, except for dentistry, pharmacy, medicine and veterinary medicine programmes which have a one-tier system. The duration of these one-tier programmes is five years (300 ECTS) except for medicine which lasts six years (360 ECTS). The qualifications in these one-tier programmes are equivalent to the first cycle (bachelor's) plus second cycle (master's) degree. Undergraduate level of study consists of short cycle (associate's)-(önlisans derecesi) and first cycle (bachelor's)-(lisans derecesi) degrees which are awarded after successful completion of full-time two-year (120 ECTS) and four-year (240 ECTS) study programmes, respectively.

Graduate level of study consists of second cycle (master's)-(yüksek lisans derecesi) and third cycle (doctorate)-(doktora derecesi) degree programmes. Second cycle is divided into two sub-types named as master without thesis and master with thesis. Master programmes without thesis require 60 to 90 ECTS credits and consist of courses and a semester project. 60 ECTS non-thesis master programmes are exceptional, and exist in a few disciplines. The master programmes with a thesis require 90 to 120 ECTS credits, which consists of courses, a seminar, and a thesis. Third cycle (doctorate) degree programmes are completed having earned a minimum of 180 ECTS credits, which consists of completion of courses, passing a proficiency examination and a doctoral thesis. Specialization in medicine, accepted as equivalent to third cycle programmes are carried out within the faculties of medicine, university hospitals and the training hospitals operated by the Ministry of Health.

Universities consist of graduate schools (Institutes) offering second cycle (master's) and third cycle (doctorate) degree programmes, faculties offering first cycle (bachelor's degree) programmes, four-year higher schools offering first cycle (bachelor's) degree programmes with a vocational emphasis and two-year vocational schools offering short cycle (associate's) degree programmes of a strictly vocational nature.

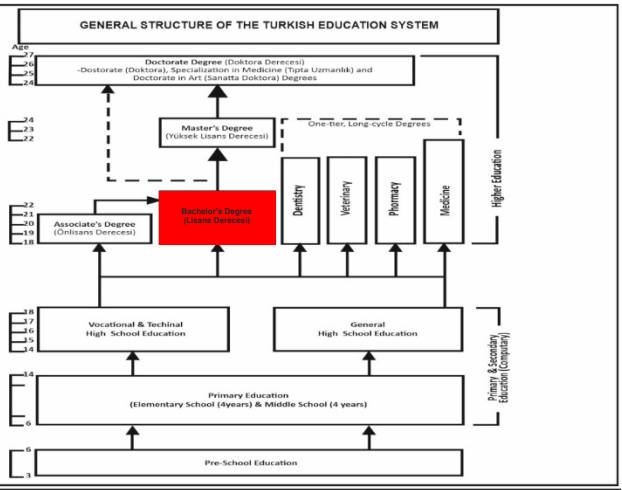
Since 2003, first cycle degree holders may apply directly to third cycle (doctorate) programmes if their performance at the first cycle degree level is exceptionally high and their national central Graduate Education Entrance Examination (ALES) score is also high and their application is approved. For these students, theoretical part of the programmes requires additional courses of 60 ECTS credits.

Admission of national students to short and first cycle degree programmes is centralized and based on a nationwide one/two-stage examination(s) conducted by an autonomous public body (Assessment, Selection and Placement Centre-ÖSYM). Candidates gain access to institutions of higher education based on their composite scores consisting of the scores on the selection examination and their high school grade point averages. Admission to graduate programmes is directly conducted by the higher education institutions (HEIs) within the frameworks of the publicly available national and institutional regulations. Admission of foreign students to programmes at all levels of higher education can be done by direct applications of candidates to HEIs based on publicly available national and institutional regulations.

**The Turkish National Qualifications Framework for Higher Education (TYYÇ)**: The National Qualifications Framework for Higher Education in Turkey (TYYÇ) developed with reference to the QF for European Higher Education Area and the EQF for lifelong learning was adopted by the CoHE in 2010. The framework has been developed as a part of a single national qualifications framework, which would eventually consists of 8 level national framework covering all levels of educations on completion of the ongoing work at the national level, in which the higher education levels lie on levels between 5 to 8. The levels of the TYYÇ with reference to the European overarching qualifications frameworks as well as that to ECTS credits and student workload are shown below.

**TYYC LEVELS, QUALIFICATION TYPES AND ECTS CREDITS**

| Higher Education Levels Cydes | | | AWARDS/ DEGREES | LENGTH | TOTAL ECTS CREDITS | TOTAL STUDENT WORKLOAD (h) |
|---|---|---|---|---|---|---|
| QF. EKEA | EQF. LLL | TYYÇ LEVELS | | (Year) | (Year x 60 ECTS) | (1 ECTS=25-30h) |
| 3 | 8 | 8 | Doctorate / Specialization in Medicine / Doctorate in Art | 3 (min.) | 180 (min.) | 4.500-5.400 |
| 2 | 7 | 7 | Master's Degree | 1-2 | 60-120 | 1.500-3.600 |
| 1 | 6 | 6 | Bachelor's Degree | 4 | 240 | 6.000-7.200 |
| Short Cycle | 5 | 5 | Associate's Degree | 2 | 120 | 3.000-3.600 |





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