Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000103	GERMAN I				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	D0000103	GERMAN I	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
Alman dilini temel düzeyde yazılı ve sözlü iletişim amaçlı kullanabilmek ve ileriye dönük dilin altyapısını güçlendirmektir
Teaching Methods and Techniques:
Almanca temel gramer eşliğinde güncel konular
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Ömer Lütfi İSPİRLİ Ömer Lütfi İSPİRLİ Ayşe ERYAMAN Ömer Lütfi İSPİRLİ Ömer Lütfi İSPİRLİ Ömer Lütfi İSPİRLİ Ömer Lütfi İSPİRLİ Ömer Lütfi İSPİRLİ Bahattin ÖZTOPRAK Yılmaz ANAS Ömer Lütfi İSPİRLİ Birsen ÖZYURT İlker ETİKAN Ömer Lütfi İSPİRLİ
Assistants:

Recommended or Required Reading

Resources

Einfach Grammatik
Übungsgrammatik Deutsch A1 bis B1
Langenscheidt
Berliner Platz 1
Langenscheidt

Course Category

Mathmatics and Basic Sciences	:	**Education**	:
Engineering	:	**Science**	:
Engineering Design	:	**Health**	:
Social Sciences	:	**Field**	:

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000106	Ataturk's Principles and History of Turkish Revolution I				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	D0000106	Ataturk's Principles and History of Turkish Revolution I	2	2	2

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
In order to understand conditions and features of the establishment of Republic of Turkey: To understand the reasons that forced Turkish nation to have Independence War, in which condition and within which terms Turkish War of Independence took place, upon which basis the state was established, and finally to educate next generations who know establishment philosophy of the state and who are respectful to Turkish state and nation.
Teaching Methods and Techniques:
Aim of the course, its scope, and basic concepts. Final period of Ottoman Empire, its problems, modernization efforts and collapse. Turkish War of Independence.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Specialist Dr. Adnan GELMEZSpecialist Dr. Sadet ALTAYSpecialist Dr. Ayşe ERYAMANSpecialist Dr. Sabri ZENGİNSpecialist Dr. İzzet Bahri ATEŞLİ
Assistants:

Recommended or Required Reading

Resources 7- Fahir Armaoğlu, 19. Yüzyıl Siyasi Tarihi, Ankara 1997.,8- Fahir Armaoğlu, 20. Yüzyıl Siyasî Tarihi,(1914-1980), Ankara 1983.,6- Bernard Lewis, Mode
Sabri ZENGİN, Atatürk İlkeleri ve İnkılâp Tarihi, 2. Baskı, Taşhan Kitap, Tokat 2016.

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	100	**Field**	:	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	The aim of the course and resources		
2	Basic concepts related to the course Revolution, reform, upheaval, rebellion, blow. The principle of Ataturk's Revolution.		
3	Internal reasons for the decline of the Ottoman Empire The problems that occurred in public administration, education, ec		
4	External reasons for the decline of the Ottoman Empire Colonialism, industrial revolution, imperialism. The Eastern Questi		
5	The basic concepts of the contemporary world Enlightenment, democracy, secularism, liberalism, socialism, nationalisn		
6	Reform movements of the Ottoman Empire Lale devri (Tulip period). Selim III and Mahmut II reforms.		
7	Reform movements of the Ottoman Empire Tanzimat and Islahat in the reform era. New Ottomans. Constitutional monar		
8	Midterm Exam		
9	Intellectual movements in the late Ottoman period Westernism, Ottomanism, Islamism, Turkism		
10	The fall of the Ottoman Empire Trablusgarb War. Balkan War. World War I. Armenian question.		
11	The fall of the Ottoman Empire The end of World War I: The Armistice of Mondros. Invasions after the Armistice. Separ		
12	Of national struggle Salvation suggestions: Protection mandate and supporters. Suggestions on regional liberation. Full i		
13	Of national struggle Atatürk's arrival to Anatolia. Conventions as mergers of the national struggle.		
14	Of national struggle The concept of the National Pact. Anatolia, pass control. The opening of Parliament. Features of the		
15	Of national struggle Anatolia, pass control. The opening of Parliament. Features of the Parliament		

Course Learning Outcomes

No	Learning Outcomes
C01	Models of change in the world to compare with the characteristics of Ottoman modernization and change is, led by Atatürk.
C02	Turkish nation the reasons for analysis of contemporary medeniyetten must remain back.
C03	After colonialism and the industrial revolution and the developments in international relations to explain the effects of these developments on Turkey.
C04	To explain the basic concepts that are effective in shaping the modern world.
C05	How to Know the stages and characteristics of Ottoman modernization.
C06	The imperialist ambitions of the states on the territory of Turkey, who want to divide Turkey to recognize the separatist elements.
C07	That the establishment of National Defence of Turkey national and spiritual values based on the knowledge of unity and togetherness, conscious of these values to take ownership of and commitme
C08	Defence of Turkey feelings of gratitude to the heroes of this struggle to have succeeded.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	15	2	30
Hours for off-the-c.r.stud	15	1	15
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	10	10
Total Work Load			**60**
ECTS Credit of the Course			**2**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1059	INFORMATION AND COMMUNICATION TECHNOLOGIES				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	EN-1059	INFORMATION AND COMMUNICATION TECHNOLOGIES	2	2	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
Gainingthe qualifications obout using effectively information communication technologies and basic computer programs.
Teaching Methods and Techniques:
Internet and Internet Browser, E-mail Management Newsgroups / Forums, Web-Based Learning, Personal Web Site Preparation, Electronic Commerce, Curriculum vitae in Word Processor Program Internet & Jobs Preparation to job interview Trading Statement Formulas and Functions Graphics Presentation Preparation Introductory Material Preparation
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Ömer Faruk GÜRBÜZ
Assistants:

Recommended or Required Reading

Resources The instructor lecture notes

Course Category

Mathmatics and Basic Sciences	:	10	**Education**	:	
Engineering	:	10	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	80

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Internet and Internet Browser		
2	E-mail Management		
3	Newsgroups / Forums		
4	Web-Based Learning		
5	Personal Web Site Preparation		
6	Electronic Commerce		
7	Curriculum vitae in Word Processor Program		
8	Internet & Jobs		
9	Preparation to job interview		
10	Trading Statement		
11	Formulas and Functions		
12	Graphics		
13	Presentation Preparation		
14	Introductory Material Preparation		

Course Learning Outcomes

No	Learning Outcomes
C01	Communicating on the Internet
C02	Doing business applications on the Internet
C03	to edit the numeric data
C04	Ready-made templates to prepare promotional material

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	3	42
Assignments	2	5	10
Presentation	2	5	10
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	1	6	6
Final examination	1	5	5
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1053	DIRECT CURRENT CIRCUIT ANALYSIS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	EN-1053	DIRECT CURRENT CIRCUIT ANALYSIS	4	4	5

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
Implementation of the principles of electrical current and do all direct current electric circuits solutions to gain qualifications aimed .
Teaching Methods and Techniques:
Static electricity, current and voltage, resistance and variations Ohms Law, Power, Energy, Efficiency, and electrical power supplies Kirchhoffs laws and the parallel circuit series circuit Serial and parallel circuits, single-source solutions The circuit solution methods Circuit theorems Capacitors and DC behavior RC circuits, DC analysis, transient events Inductance and DC behavior R - L circuits, DC analysis, transient events
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Tufan DOĞRUER
Assistants:

Recommended or Required Reading

Resources Yağımlı, M., Akar, F. (2002) Doğru Akım Devreleri & Problem Çözümleri, Beta Yayınları

Course Category

Mathmatics and Basic Sciences	: 20	**Education**	:		
Engineering	:	**Science**	: 20		
Engineering Design	:	**Health**	:		
Social Sciences	:	**Field**	: 60		

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Static electricity, current and voltage, resistance and variations	Lecturer's presentation	
2	Ohms Law, Power, Energy, Efficiency, and electrical power supplies	Lecturer's presentation	
3	Kirchhoffs laws and the parallel circuit series circuit	Lecturer's presentation	
4	Serial and parallel circuits, single-source solutions	Lecturer's presentation	
5	Serial and parallel circuits, single-source solutions	Lecturer's presentation	
6	The circuit solution methods	Lecturer's presentation	
7	The circuit solution methods	Lecturer's presentation	
8	Circuit theorems	Lecturer's presentation	
9	Circuit theorems	Lecturer's presentation	
10	Capacitors and DC behavior	Lecturer's presentation	
11	RC circuits, DC analysis, transient events	Lecturer's presentation	
12	Inductance and DC behavior	Lecturer's presentation	
13	Inductance and DC behavior	Lecturer's presentation	
14	RL circuits, DC analysis, transient events	Lecturer's presentation	

Course Learning Outcomes

No	Learning Outcomes
C01	Electric current effects to apply the basic principles
C02	To solve the basic circuit
C03	Solutions to complex circuit 1
C04	Solutions to complex circuit 2
C05	Direct current to calculate the effect on the circuit elements

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	4	56
Assignments	5	4	20
Presentation	2	4	8
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	5	5
Total Work Load			**150**
ECTS Credit of the Course			**5**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000129	French I				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	D0000129	French I	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:

Teaching Methods and Techniques:

Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA Uğur KARAKAYA
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:	**Education**	:
Engineering	:	**Science**	:
Engineering Design	:	**Health**	:
Social Sciences	:	**Field**	:

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000140	English I				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	D0000140	English I	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
The objective of this course is to be able to bring the students to the A2 Level in terms of CEF.
Teaching Methods and Techniques:
Compulsory Foreign Language Courses (English)
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor H.Tüzün Paçcı
Assistants:

Recommended or Required Reading

Resources Essential Grammar in Use by Raymond Murphy (CUP),New Headway Elementary (4th Edition),English Grammar in Use by Raymond Murhpy New Headway Elementary(Fifth Edition) (Oxford University Press) + Student's Book + Workbook + iTools (Digital Teaching Res

Course Category

Mathmatics and Basic Sciences	:	**Education**	: 40
Engineering	:	**Science**	:
Engineering Design	:	**Health**	:
Social Sciences	: 60	**Field**	:

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	verb to be, subject pronouns, possessive adjectives, possessive 's		
2	personal information, introducing yourself, the family words		
3	greetings in everyday situations, expressions for short conversations in everyday situations		
4	The Simple Present Tense		
5	Adverbs of frequency , Object Pronouns		
6	Noun Plurals, Telling the time		
7	have got / has got		
8	Linking words (and, so, but, because)		
9	There is / are , prepositions (in,on,under, next to)		
10	Adjectives of quantity (some, any, alot of, lots of, many, much)		
11	Demonstrative Adjectives + PronounsAdjectives for good & bad, adverb+ adjective		
12	NumberS & Prices		
13	Can / Can't		
14	was/were/could , The Simple Past Tense		

Course Learning Outcomes

No	Learning Outcomes
C01	To understand and use basic grammatical structures in English
C02	Recognizing and using social expressions.
C03	Understanding that you hear in the target language.
C04	Ask questions and answer related to fundamental issues.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**%100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	1	14
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**58**
ECTS Credit of the Course			**2**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1051	MEASURING TECHNIQUE				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	EN-1051	MEASURING TECHNIQUE	4	4	5

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
This course aims to teach the student enrolling this class: how to perform measurement and calibration, how to perform error analysis, how to evaluate electric and electronics metrics and the operation principles of measuring devices.
Teaching Methods and Techniques:
Using a measuring instrument Measurements of electrical and electronic circuits
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Tufan DOĞRUER
Assistants:

Recommended or Required Reading

Resources Ders Notları

Course Category

Mathmatics and Basic Sciences	: 20		**Education**	:	
Engineering	: 10		**Science**	: 10	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	: 60	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Measurement, measurement errors, units and conversions		
2	Measurement, measurement errors, units and conversions		
3	The basic electrical quantities and measurements		
4	DC measurements		
5	DC measurements		
6	AC measurements		
7	AC measurements		
8	Power and Work (Energy) Measurements		
9	Power and Work (Energy) Measurements		
10	Measurements with Oscilloscope		
11	Measurements with Oscilloscope		
12	Measurements with Oscilloscope		
13	Instrument Transformers		
14	Instrument Transformers		

Course Learning Outcomes

No	Learning Outcomes
C01	The student will learn the basic and derived metrics defined by SI and the symbols of measuring devices.
C02	The student will learn the measurements of DC current and the operation principles of DC devices.
C03	The student will learn the measurements of AC current and voltage and the operation principles of AC devices.
C04	The student will make robustness tests of electronic circuit elements

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	0	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	2	28
Assignments	2	8	16
Presentation	2	10	20
Mid-terms	1	10	10
Practice	0	0	0
Laboratory	0	0	0
Project	1	10	10
Final examination	1	10	10
Total Work Load			**150**
ECTS Credit of the Course			**5**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000194	Turkish Language I				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
1	D0000194	Turkish Language I	2	2	2

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
To make studens become familiar with the correct, beautiful and efficient use of the Turkish language to maket hem base the writen and spoken intercourse of the language on strong principals to maket hem gain their skills in correspondence, presentatations and ezplanations succesfully in their business life to make them become intellectual individuals who read, think, inquire and bring solutions.
Teaching Methods and Techniques:
To improve students' love and understanding of mother tongue who are studying in various departments in accordance with the constantly progressing conditions of the age; to emphasize the connection between language and thought; to enlighten individuals who are scientifically productive, creative, able to use their mother tongue accurately and equipped with contemporary knowledge, in language and literature history.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Asist Prof.Dr. YAVUZ GÜNEŞ
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	100	**Field**	:	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	marks of punctution. (point, comma, semicolon, double point, interjection)		
2	marks of punctution. (inverted commas, paranthesis)		
3	The rules of orthography. (Writing of capitals and numbers and compounds)		
4	The rules of orthography. (writing of idioms, dieresis, quotation words and foreign proper nouns)		
5	The rules of orthography. (The writing of abbreviation and some additions.)		
6	composition. (definition, aim, being succesful in composition)		
7	The methods of composition. (The constitutetion of assistant reflection and main reflection.)		
8	The methods of composition. (The constitutetion of paragraph, the methods of progress of reflection in paragraph)		
9	The properties of expression		
10	Failure to expression properly.		
11	The forms of expression. (collecting homeworks)		
12	varieties of expression. (oral expression)		
13	varieties of expression. (written expression- letter, petition)		
14	varieties of expression.(written expression- story, fiction, theatre, verse)		

Course Learning Outcomes

No	Learning Outcomes
C01	1. "Language" general knowledge about. This is the main title opinion on the phenomenon of language and languages??, language of the reasons for the emergence of the agreement, the issue of
C02	2. Understands the rules of writing on a topic, write activity by assimilating the basic information for it to become successful in making
C03	3. Language is accurate and effective to use it in the infrastructure all the richness comprehend, a rich culture and imagination with creative requirements of being to read texts comprehend, beaut
C04	4. Communication with public and private institutions provide accurate and effective, short equity requests, but being able to fully express, petition writing, report preparation, the rules of the unde
C05	5. Our language is Turkish comprehend its place among the world`s languages??, proud, rich and beautiful who are able to use the language.
C06	6. Will read a variety of literary genres with text information, experience, life experience and perspective on life changing moments approaching the tolerance of different opinions.
C07	7. Academic listening to a conversation, to ask questions, learn to make the necessary explanations, we found that intra-community behavior is how it should be.
C08	8. To obtain resources, reading, listening, seeing, hiking, develop their talents by making methods, intellectuals, people learn to be problem solvers.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	2	28
Hours for off-the-c.r.stud	14	1	14
Assignments	2	3	6
Presentation	2	5	10
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**60**
ECTS Credit of the Course			**2**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Program Learning Outcomes	
No	**Learning Outcome**
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1054	ALTERNATING CURRENT CIRCUIT ANALYSIS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	EN-1054	ALTERNATING CURRENT CIRCUIT ANALYSIS	4	4	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
The terms of alternating current circuits can recognize and able to make necessary alternative circuit analyze
Teaching Methods and Techniques:
The Alternative circuit terms, Obtaining an alternating current, Circuit analysis
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Tufan DOĞRUER
Assistants:

Recommended or Required Reading

Resources Alternatif Akım Devreleri & Problem Çözümleri (Mustafa Yağımlı / Fevzi Akar)

Course Category

Mathmatics and Basic Sciences	: 20		**Education**	:	
Engineering	: 10		**Science**	: 10	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	: 60	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Alternating Current and Voltage		
2	Alternating Current and Voltage		
3	Behavior of Circuit Elements and Circuit Solution Methods in AC		
4	Behavior of Circuit Elements and Circuit Solution Methods in AC		
5	Behavior of Circuit Elements and Circuit Solution Methods in AC		
6	Behavior of Circuit Elements and Circuit Solution Methods in AC		
7	Behavior of Circuit Elements and Circuit Solution Methods in AC		
8	Power and Energy in AC		
9	Power and Energy in AC		
10	Power and Energy in AC		
11	Power and Energy in AC		
12	Three-phase AC Systems		
13	Three-phase AC Systems		
14	Three-phase AC Systems		

Course Learning Outcomes

No	Learning Outcomes
C01	The terms of alternating current circuits can recognize
C02	The behavior of R-L-C alternative circuit element can comprehend
C03	R-L-C circuit elements on the spent AC to know types of power
C04	Alternating current circuits to solve
C05	Three-phase systems,current,voltage and power to comprehend the value of the accounts.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	2	28
Assignments	3	4	12
Presentation	3	4	12
Mid-terms	1	6	6
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	6	6
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

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Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000107	Ataturk's Principles and History of Turkish Revolution II				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	D0000107	Ataturk's Principles and History of Turkish Revolution II	2	2	2

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
To understand Ataturk s reforms and how basic principles of the republic came into existence in Republic of Turkey establishment period. To help Turkish youth in the way of being unified individuals as a nation and becoming effective in the contemporary world.
Teaching Methods and Techniques:
The last periods of the War of Independence. Treaties that causes the establishment of Republic of Turkey. Ataturk s principles which determine the features of Republic of Turkey and the revolutions which strenghten these principles
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Specialist Dr. İzzet Bahri ATEŞLİSpecialist Dr. Ayşe ERYAMANSpecialist Dr. Sadet ALTAYSpecialist Dr. Sabri ZENGİNSpecialist Dr. Adnan GELMEZ
Assistants:

Recommended or Required Reading

Resources 4- Komisyon, Atatürkçü Düşünce, Ankara 1992, AAM yay.,3- A. Afetinan, M. Kemal Atatürk'ten Yazdıklarım, İstanbul 1971, MEB yay.,7- Selahattin Tans
Sabri ZENGİN, Atatürk İlkeleri ve İnkılâp Tarihi, 2. Baskı, Taşhan Kitap, Tokat 2016.

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	100	**Field**	:	

Weekly Detailed Course Contents

Week	Topics		Study Materials	Materials
1	Of national struggle	Rebellions against the Parliament, The Treaty of Sevres		
2	Of national struggle	National War Fronts: The west facade, The South facade, The east facade.		
3	Of national struggle	Treaties which halted fighting: The Armistice of Mudanya, The Treaty of Lausanne.		
4	Establishment of the Republic of Turkey	Abolition of the sultanate, declaration of the republic, abolition of the caliphat		
5	The democratization of the republic	People's Party, Progressive Republican Party, Free Republican Party, Democratic Pa		
6	Secularizing of the republic	Secularizing of the state management. Secularizing of the constitution. Secularizing of the edu		
7	The principle of nationalism	National government, The national history (Turkish Historical Society), National language (Tur		
8	Midterm Exam			
9	The principle of statism	Economics Congress of Turkey, national economy, promotion of private enterprise and develo		
10	Reactions to the Reforms	The rebellion of Seyh Sait, assassination attempt on Ataturk in Izmir, The Menemen event.		
11	The constitutions of Turkish History	1876, 1909, 1921, 1924, 1960, 1982 Constitutions and their feautres.		
12	Revolutions in the field of education	Tevhid-i Tedrisat Kanunu (The Law of Teaching Unification), Alphabet revolution, H		
13	Social Reforms	The hat and attire revolution, The abolition of dervish lodges, angles, tombs and religious orders, surnam		
14	Turkish foreign policy	Turkey's strategic importance, Liberation War era foreign policy, Turkish foreign policy of the Atatürk		
15	Turkish foreign policy	Turkish foreign policy after Atatürk.		

Course Learning Outcomes

No	Learning Outcomes
C01	Determines that the establishment of agreements with Turkey and to analyze international law.
C02	That the reforms of Ataturk founded modern Turkey in order to bring the level of contemporary civilizations, the basic principles (Principles) to explain.
C03	Youth in Turkey's national, democratic, secular, social and individual values depending on the organization to be based on the principles of modern law.
C04	Youth who follow developments in the world, state and nation in the contemporary world that individuals can apply to be effective, needs to be done.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	15	2	30
Hours for off-the-c.r.stud	15	1	15
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	10	10
Total Work Load			**60**
ECTS Credit of the Course			**2**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1004	COMPUTER AIDED CIRCUIT DESIGN				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	EN-1004	COMPUTER AIDED CIRCUIT DESIGN	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
To make computer-aided circuit simulation and computer-aided design of electronic cards
Teaching Methods and Techniques:
Electronic circuit design, Simulation of electronic circuits, Electronic card design
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor B.Okan İÇMEZ
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	: 10		**Education**	:	
Engineering	: 10		**Science**	: 10	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	: 70	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Introduction to Simulation Program		
2	Basic Circuit Simulation		
3	Basic Circuit Simulation		
4	Simulation of Analog Circuits		
5	Simulation of Analog Circuits		
6	Simulation of Digital Circuits		
7	Simulation of Digital Circuits		
8	Introduction to Printed Circuit program		
9	Circuit drawing program environment		
10	Circuit drawing program environment		
11	Circuit drawing program environment		
12	Creating Printed Circuit Scheme		
13	Creating Printed Circuit Scheme		
14	Creating Printed Circuit Scheme		

Course Learning Outcomes

No	Learning Outcomes
C01	Understand the working logic of electronic circuit elements
C02	Design of electronic circuit diagram
C03	Performs the simulation of electronic circuits
C04	To make electronic card design

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**%100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	1	14
Assignments	1	5	5
Presentation	1	5	5
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	5	5
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1008	ELECTRONICS-I				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	EN-1008	ELECTRONICS-I	4	4	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
The active and passive electronic components and properties
Teaching Methods and Techniques:
Electronic circuit components, semiconductor materials, the structure and types of diodes, rectifier circuits, transistor definition, structure and types, JFET definition, structure and types, MOSFET
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Tufan DOĞRUER
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	: 10		**Education**	:	
Engineering	: 20		**Science**	: 10	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	: 60	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Overview and introduction to electronics		
2	Semiconductor materials		
3	Semiconductor materials		
4	Structure and types of diodes		
5	Structure and types of diodes		
6	Filter and regulated circuit		
7	Filter and regulated circuit		
8	Rectifier circuits		
9	Rectifier circuits		
10	Description of the transistor ,structure and the kinds		
11	Description of the transistor ,structure and the kinds		
12	Description of the transistor ,structure and the kinds		
13	Description of JFET, structure and types		
14	Description of MOSFET, structure and types		

Course Learning Outcomes

No	Learning Outcomes
C01	Measuring semiconductor materials
C02	Establish diode circuits I
C03	Establish diode circuits II
C04	To use transistors to use as switching and amplifier elements
C05	JFET and MOSFET 's is to establish circuits

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	0	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	4	56
Assignments	2	5	10
Presentation	2	9	18
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	5	5
Total Work Load			**150**
ECTS Credit of the Course			**5**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000141	English II				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	D0000141	English II	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
As a result of this lesson, students will be able to use the basic structures to express themselves. This course aims at giving the students basics of English at a beginner level.
Teaching Methods and Techniques:
Compulsory Course
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Osman Öncü
Assistants:

Recommended or Required Reading

Resources

English For Life Beginner Oxford University Press (Course Book)

Course Category

Mathmatics and Basic Sciences	:	**Education**	:
Engineering	:	**Science**	:
Engineering Design	:	**Health**	:
Social Sciences	:	**Field**	:

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	talking about jobspresent simple questionstalking about interests		
2	simple adjectives (big, small, old, ..)have got / has gotwriting e-mails		
3	asking for a seatparts of the bodyhave got / has got questions		
4	describing illnessesasking for thingsfree time activities		
5	can / can'tinviting somebody to somewhere		
6	parts of a housethere is / there aredescribing a house		
7	ordinal numbersasking where places areclothes		
8	Mid term exam		
9	present continuous tensedescribing clothessaying goodbye		
10	transportpresent continuous questionsprepositions: in / on		
11	talking about future plansfuture time expressionsplaces and prepositions		
12	past simple and past time expressionsexpressing feelings		
13	emergency servicespast simple regular verbs		
14	expressing reasontalking about dates		

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	3	42
Assignments	1	4	4
Presentation	0	0	0
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1042	VOCATIONAL MATHEMATICS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	EN-1042	VOCATIONAL MATHEMATICS	2	2	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
our goal is provide students with clear understanding of the ideas of mathematics as a solid foundation for subsequent courses in math and other disciplines.
Teaching Methods and Techniques:
The concept of function, quadratic equations, and Trigonometrik functions, complex numbers, the limit of a function and its derivative, Matrices and Determinants
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Mehmet EROĞLU
Assistants:

Recommended or Required Reading

Resources GENERAL MATHEMATİCS, PROF.DR. MUSTAFA BALCI, BALCI YAYINLARI
Lecture and books

Course Category

Mathmatics and Basic Sciences	:	75	**Education**	:	
Engineering	:	10	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	15

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Analytical and numerical solutions		
2	Matrices		
3	The error analysis		
4	Methods of numerical solution of equation systems and linear systems of equations		
5	Methods of numerical solution of systems of linear equations		
6	Methods of numerical solution of systems of linear equations		
7	Methods of numerical solution of systems of linear equations		
8	Curve fitting methods		
9	Interpolation techniques		
10	Polygons, angles, circles and geometric applications in circulus		
11	Geometric objects		
12	Coordinate systems		
13	Coordinate systems		
14	Basic trigonometry and trigonometric functions		

Course Learning Outcomes

No	Learning Outcomes
C01	To make basic geomtric drawings
C02	Able to solve basic trigonometric problems
C03	To learn basic geometric shapes
C04	To solve basic math problems which related to comptur programs
C05	Able to solve graphically and numerically function.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**%100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	3	42
Assignments	5	4	20
Presentation	0	0	0
Mid-terms	1	1	1
Practice	7	2	14
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-1028	DIGITAL DESIGN				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	EN-1028	DIGITAL DESIGN	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
Able to circuits design using flip-flops, Able to circuits design using IC, Able to make A / D and D / A converter
Teaching Methods and Techniques:
Flip flops, Counters, Registers, A / D and D / A converters
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Burak KARA
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:	30	**Health**	:	
Social Sciences	:		**Field**	:	50

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Multivibrators		
2	Flip Flops		
3	Flip Flops		
4	Circuit Design with Flip Flops		
5	Circuit Design with Flip Flops		
6	Circuit Design with Flip Flops		
7	Asynchronous Counters		
8	Asynchronous Counters, Synchronous counters		
9	Synchronous counters		
10	Synchronous counters, Registers		
11	Registers		
12	Analog to Digital Converters		
13	Analog to Digital Converters, Digital to Analog Converters		
14	Digital to Analog Digital Converters		

Course Learning Outcomes

No	Learning Outcomes
C01	Recognizes the flip flop circuits
C02	Makes asynchronous and synchronous counter using flip flops
C03	Makes different structured registers using flip flops
C04	Uses counter and register integrated circuits
C05	Makes Digital to Analog Converters-Analog to Digital Converters

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	3	42
Assignments	2	5	10
Presentation	2	5	10
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Program Learning Outcomes	
No	**Learning Outcome**
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

D0000195	Turkish Language II				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
2	D0000195	Turkish Language II	2	2	2

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
To make studens become familiar with the correct, beautiful and efficient use of the Tuekish language to maket hem base the writen and spoken intercourse of the language on strong principals to maket hem gain their skills in correspondence, presentatations and ezplanations succesfully in their business life to make them become intellectual individuals who read, think, inquire and bring solutions.
Teaching Methods and Techniques:
According to their subjects, reading, listening, writing, presentation, discussion, sampling, question and answer techniques will be used.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Yalçın KULAÇ
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	100	**Field**	:	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	marks of punctution. (point, comma, semicolon, double point, interjection)		
2	marks of punctution. (inverted commas, paranthesis)		
3	The rules of orthography. (Writing of capitals and numbers and compounds)		
4	The rules of orthography. (writing of idioms, dieresis, quotation words and foreign proper nouns)		
5	The rules of orthography. (The writing of abbreviation and some additions.)		
6	composition. (definition, aim, being succesful in composition)		
7	The methods of composition. (The constitutetion of assistant reflection and main reflection.)		
8	The methods of composition. (The constitutetion of paragraph, the methods of progress of reflection in paragraph)		
9	The properties of expression		
10	Failure to expression properly.		
11	The forms of expression. (collecting homeworks)		
12	varieties of expression. (oral expression)		
13	varieties of expression. (written expression- letter, petition)		
14	varieties of expression.(written expression- story, fiction, theatre, verse)		

Course Learning Outcomes

No	Learning Outcomes
C01	Understands the rules of writing on a topic, improves writing skills.
C02	Oral presentation and communication skills are gained.
C03	Written and oral expression and to communicate accurate and effective use of language is to understand, short equity requests, but being able to fully express, petition writing, report preparation t
C04	Understand that our language is Turkish its place among the world`s languages??.
C05	Using the word in sentences comprehend the wrongs done in establishing the rules of spelling, punctuation, gains the ability to use correct and appropriate.
C06	Apart from textbooks, information texts to be read from a variety of genres, manners, life changing experience and perspective on life, the habit of seeing nice gains different opinions.
C07	Academic listening to a conversation, to ask questions, learn to make the necessary explanations, so how it should be understood that behavior within society and apply.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	2	28
Hours for off-the-c.r.stud	14	2	28
Assignments	1	2	2
Presentation	0	0	0
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**60**
ECTS Credit of the Course			**2**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Program Learning Outcomes	
No	**Learning Outcome**
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2041	COMPUTER AIDED DESIGN				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
3	EN-2041	COMPUTER AIDED DESIGN	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
With this course, it is aimed to make two dimensional drawing with CAD package program.
Teaching Methods and Techniques:
General introduction, opening files, saving output, select objects, delete and undo, capture points, drawing commands, editing commands, block commands, dimensioning, text, layers, screen editing commands.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Yasemin İÇMEZ
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	: 10		**Education**	:	
Engineering	: 30		**Science**	:	
Engineering Design	: 50		**Health**	:	
Social Sciences	:		**Field**	: 10	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	To run the CAD package program.with screen editing and drawing commands.		
2	To make screen settings and drawing setting and to close the CAD package program.		
3	To use coordinate systems and to make technical drawing by using basic drawing commands.		
4	To make technical drawing and to add the text		
5	To make technical drawing and to add the text.		
6	Using the editing commands.		
7	Modify the properties of drawing elements.		
8	Reproducing of drawing elements.		
9	To adjust the setting of dimensioning		
10	To use the dimensioning commands.		
11	To add the surface quality marks.		
12	To add the tolerances		
13	To make the data transfers between the CAD packages.		
14	To print the output		

Course Learning Outcomes

No	Learning Outcomes
C01	to be able to use the screen editing and help commands for drawing.
C02	to be able to use basic drawing commands.
C03	to be able to use edit commands.
C04	to be able to use dimensioning, the surface quality marks and tolerance commands.
C05	to be able to make data conversions from CAD programs.
C06	to be able to print the output.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	1	14
Assignments	1	6	6
Presentation	0	0	0
Mid-terms	1	1	1
Practice	14	1	14
Laboratory	0	0	0
Project	1	12	12
Final examination	1	1	1
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2043	ELECTRONICS-II				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
3	EN-2043	ELECTRONICS-II	4	4	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
With this course, electronic circuits and printed circuit board that can be drawn with the program will be able to process.
Teaching Methods and Techniques:
operational amplifiers and applications
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Volkan KARACA
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	: 20		**Education**	:	
Engineering	: 20		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	: 60	

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Used as elements of the transistor amplifier		
2	Used as elements of the transistor amplifier		
3	Operational amplifiers		
4	Operational amplifiers and their use as inverting amplifier		
5	Operational amplifier used as noninverting amplifiers		
6	Use of voltage follower amplifier		
7	Using the operational amplifier as a comparator		
8	Operational amplifier is used as a level detector		
9	Operational amplifier is used as a level detector		
10	Operational amplifier is used as a filter		
11	Operational amplifier is used as a filter		
12	The use of transistor oscillator		
13	The use of transistor oscillator		
14	The use of the operational amplifier oscillator		

Course Learning Outcomes

No	Learning Outcomes
C01	To use as switching elements and transistor amplifiers
C02	Operational amplifier, inverting and non-inverting amplifiers and to use it as the difference
C03	To establish collector and comparator circuits with operational amplifiers
C04	Establish operational amplifier filter circuit
C05	Establish oscillators circuit

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	3	42
Assignments	1	4	4
Presentation	1	4	4
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	1	4	4
Final examination	1	5	5
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2053	HOME DEVICES				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
3	EN-2053	HOME DEVICES	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
In this course; promote home appliance aimed to gain the knowledge and skills
Teaching Methods and Techniques:
Washer and dryer to introduce devices. Heating and cooking equipment to promote. To introduce cooling devices.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor M.Taner TUNCAY
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:	20	**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	60

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Washers and Dryers Devices		
2	Washers and Dryers Devices, Use of Washer and Dryer device		
3	Use of Washer and Dryer Device, Heating and Cooking Device		
4	Heating and Cooking Device		
5	Use of Heating and Cooking Device		
6	Use of Heating and Cooking Device		
7	Use of Heating and Cooking Device		
8	Cooling Devices		
9	Cooling Devices		
10	Cooling Devices, Use of Cooling Devices		
11	Cooling Devices, Use of Cooling Devices		
12	Cooling Devices, Use of Cooling Devices		
13	Use of Cooling Devices, Cleaner and Aerating Device		
14	Use of Cooling Devices, Cleaner and Aerating Device		

Course Learning Outcomes

No	Learning Outcomes
C01	To introduce Washers and dryers devices
C02	To introduce Heating and cooking devices
C03	To introduce cooler devices

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	10	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	1	14
Assignments	2	10	20
Presentation	2	6	12
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	1	1
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2001	POWER ELECTRONICS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
3	EN-2001	POWER ELECTRONICS	4	4	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
In this course; semiconductor switching elements, rectifier and chopper circuits for applications aimed to gain knowledge and skills.
Teaching Methods and Techniques:
semiconductor switching elements
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Burak KARA
Assistants:

Recommended or Required Reading

Resources	Güç Elektroniği (Hacı Bodur)

Course Category

Mathmatics and Basic Sciences	:	20	**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	60

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Thyristors	Presentation of lecturer	
2	Thyristor Trigger Circuit	Presentation of lecturer	
3	Triac and diac, MOSFETs	Presentation of lecturer	
4	IGBTs	Presentation of lecturer	
5	Single Phase Uncontrolled Rectifier Circuits	Presentation of lecturer	
6	Single Phase controlled Rectifier Circuits	Presentation of lecturer	
7	Three-Phase Uncontrolled Rectifier Circuits	Presentation of lecturer	
8	Three-Phase Controlled Rectifier Circuits	Presentation of lecturer	
9	A phase AC choppers	Presentation of lecturer	
10	Three-phase AC choppers	Presentation of lecturer	
11	Lowering and raising choppers	Presentation of lecturer	
12	Current-fed inverter	Presentation of lecturer	
13	Voltage-fed inverter	Presentation of lecturer	
14	Direct frequency converters	Presentation of lecturer	

Course Learning Outcomes

No	Learning Outcomes
C01	To select the semiconductor switching element
C02	Single Phase Rectifier build circuits
C03	Establish a three-phase rectifier circuits
C04	Establish a chopper circuit
C05	Inverters and frequency inverter circuits set up

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	4	56
Assignments	2	5	10
Presentation	2	5	10
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	1	8	8
Final examination	1	5	5
Total Work Load			**150**
ECTS Credit of the Course			**5**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2023	CONTROL CIRCUITS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
3	EN-2023	CONTROL CIRCUITS	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
In this course, students will be able to assemble electromechanical control equipments and control one phase, three-phase asynchronous and direct current motors running, change the direction of the speed, braking operations using electromechanical components.
Teaching Methods and Techniques:
Lecture, Practice, Homework, Project
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Mehmet Taner TUNCAY
Assistants:

Recommended or Required Reading

Resources

Elektrik kumanda devreleri,2008, İlhami Çolak, Seçkin yayınları

Course Category

Mathmatics and Basic Sciences	:	20	**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	60

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Control Gear and Protection Relays		
2	Three-Phase Asynchronous Motors cuts and Continuous Operation		
3	Three-Phase Asynchronous Motors from Two Different Things (Remote) Operating		
4	Three-Phase Asynchronous Motor Speed ??Direction Change in		
5	Three-phase asynchronous motor resistance, to give way, Wound Rotor Induction Motor give way to		
6	Three-phase asynchronous motor to give way to the reactance and Auto Transformers		
7	Three-phase asynchronous motor with star delta starting		
8	Braking in Three-Phase Asynchronous Motors		
9	In dual speed motor control		
10	Single Phase Induction Motor Control Circuits		
11	In a Phase Asynchronous Motor changing direction of rotation		
12	Direct current motors give way to		
13	Changing the direction of rotation of dc motors		
14	Direct current motors with brake		

Course Learning Outcomes

No	Learning Outcomes
C01	Make the installation of the control element, three-phase asynchronous motors cuts, continuous and remote run
C02	Give way to a phase asynchronous motor, change the direction of rotation, to give way to wound rotor induction motor and double-speed asynchronous motors run.
C03	Three-phase asynchronous motors with various methods give way to change the direction of rotation and braking make

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	1	14
Assignments	6	1	6
Presentation	2	7	14
Mid-terms	1	1	1
Practice	6	1	6
Laboratory	0	0	0
Project	2	3	6
Final examination	1	1	1
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2047	MICROCONTROLLERS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
3	EN-2047	MICROCONTROLLERS	4	4	5

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
Explains microprocessor and microcontroller features, structure, operation
Teaching Methods and Techniques:
Lecture, Question and Answer, and computer assisted instruction management and techniques will be used.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Umut SARAY
Assistants:

Recommended or Required Reading

Resources

ATMEL AVR Programming.
ALTAŞ book publishing

Course Category

Mathmatics and Basic Sciences	:	20	**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:	0	**Health**	:	
Social Sciences	:		**Field**	:	60

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Historical development of the microprocessor and microcontrollers, application areas and microcomputer architecture.		
2	Examining AVR instruction set and addressing modes, data transferring, logic, arithmetic process, boolean and conditional		
3	Writing programs in assembly language, the usage of assembly instructions		
4	Stack memory organization of AVR, example usage of stack memory writing delay subroutines in measurement cycles.		
5	The usage of the parallel port by AVR LED, relays, opto-coupler, shift register, writing programs via connections		
6	The usege of the LCD display		
7	The use of the LCD display		
8	Serial communication and programming the UART unit on AVR.		
9	Structure of cutting controlling unit , monitoring interrupt sources, priority and writing sample interrupt control program		
10	Keyboard usage, simple push-buttons connectivity, programming, usage of high and low tensile strength resistors and mat		
11	Designing a simple system using the AVR and at least two peripheral stages ,circuit installation, the writing an operation pr		
12	Examples of applications and programming		
13	Examples of applications and programming		
14	Examples of applications and programming		

Course Learning Outcomes

No	Learning Outcomes
C01	To install the program to the microcontroller
C02	flow diagram of the algorithm for solving the problem to create
C03	Microcontroller to use commands
C04	Write programs for basic input output with microcontroller
C05	To compile the program and fix errors
C06	make applications

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	14	4	56
Hours for off-the-c.r.stud	14	2	28
Assignments	5	4	20
Presentation	0	0	0
Mid-terms	1	20	20
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	26	26
Total Work Load			**150**
ECTS Credit of the Course			**5**

Contribution of Learning Outcomes to Programme Outcomes
bbb

Program Learning Outcomes	
No	**Learning Outcome**
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2002	FAILURE ANALYSIS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2002	FAILURE ANALYSIS	3	3	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
Comprehension of measurement and diagnosis logic, development maintenance and trouble shooting capability
Teaching Methods and Techniques:
Diagnosis (troubleshooting) and maintenance by using measurement and test devices
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor B. Okan İÇMEZ
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:	10	**Education**	:	
Engineering	:	10	**Science**	:	10
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	70

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Introduction to measurement and safety Unit systems		
2	Electrical symbols and circuit components		
3	Measurement devices		
4	Electrical measurements		
5	Principles of fault diagnosis		
6	Switches, circuit breakers, panels and faults of these		
7	Semiconductor Componet Failures		
8	Semiconductor Componet Failures		
9	Failure to onboard and test devices		
10	Failure to onboard and test devices		
11	Fault control circuits		
12	Protection in low voltage		
13	Maintenance Protection		
14	Hydraulic Pneumatic equipments and faults		

Course Learning Outcomes

No	Learning Outcomes
C01	Comprehend measurement terms and concepts
C02	Comprehend and convert unit systems
C03	Recognize and use measurement devices
C04	Able to diagnose faults
C05	Recognize electrical components, acknowledge electrical symbols and read circuit schemes
C06	Comprehend need of protection
C07	Diagnose electrical devices
C08	Diagnose hydraulic-pneumatic devices
C09	Comprehend importance of maintenance and protection maintenance

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**%100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	2	28
Assignments	1	5	5
Presentation	1	5	5
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	5	5
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2046	ELECTRIC MOTORS AND DRIVES				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2046	ELECTRIC MOTORS AND DRIVES	4	4	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
In this course, all kinds of asynchronous and synchronous ends of the presence of electrical machines, commissioning and operation of binding to and is intended to gain qualifications.
Teaching Methods and Techniques:
Lecture, Practice, Homework, Project
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Burak KARA
Assistants:

Recommended or Required Reading

Resources

DC ELECTRICAL MACHINES BİRSEN YAYINEVİ Yrd. Doç. Dr. M. Cihat Özgenel
Yayın Yılı: 2011
ASYNCHRONOUS MOTORS SEÇKİN YAYINCILIK İlhami Çolak
Yayın Yılı: 2008;

Course Category

Mathmatics and Basic Sciences	:	20	**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	0	**Field**	:	60

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	DC Motors		
2	DC Motors		
3	Direct current motors, brushless direct current motors		
4	Brushless DC Motors		
5	Three-Phase Motors		
6	Three-Phase Motors		
7	An AC Motors		
8	An AC Motors		
9	Stepper Motors		
10	Stepper Motors, Servo Motors		
11	Servo Motors		
12	Universal Motors		
13	Universal Motors, Linear Motors		
14	Linear Motors		

Course Learning Outcomes

No	Learning Outcomes
C01	To run direct current shunt and series motors
C02	To run three-phase asynchronous motors
C03	to run universal single-phase asynchronous motors
C04	To run Step motors
C05	To run servo motors

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	4	56
Assignments	1	6	6
Presentation	1	6	6
Mid-terms	1	1	1
Practice	1	4	4
Laboratory	1	4	4
Project	0	0	0
Final examination	1	1	1
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2034	ELECTRONIC SECURITY SYSTEMS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2034	ELECTRONIC SECURITY SYSTEMS	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
Each student, closed-circuit cameras and access control system to control the system, install your system, fire detection, alarm system wiring and robbery alarm system will learn to harness.
Teaching Methods and Techniques:
To check the connection and installation elements Off-circuit camera systems. To repair the connection and installation elements Off-circuit camera systems. Elements access control system, access control systems and installation of the connection elements. Transition to maintenance and repair of control systems. Fire and fire alarm control panel and installation, alarm detectors connections. Installing burglar alarm systems. Repairing burglar alarm systems
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor Burak KARA
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:	30	**Health**	:	
Social Sciences	:		**Field**	:	70

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Control elements of closed circuit camera systems		
2	Control elements of closed circuit camera systems		
3	To check the connection and installation elements Off-circuit camera systems		
4	To check the connection and installation elements Off-circuit camera systems		
5	To repair the connection and installation elements Off-circuit camera systems		
6	access control system		
7	Connection and installation of access control systems, components		
8	Transition to maintenance and repair of control systems		
9	Fire and fire alarm control panel and installation, alarm detectors connections		
10	Repairing voice connections, and light the fire alarm devices, fire alarm buttons, links, sign-posted fire emergency		
11	Connections and installation of fire extinguishing and alarm systems, maintenance and repairing		
12	Installing burglar alarm systems Repairing burglar alarm systems		
13	Installing burglar alarm systems Repairing burglar alarm systems		
14	Installing burglar alarm systems Repairing burglar alarm systems		

Course Learning Outcomes

No	Learning Outcomes
C01	To make connections of control systems and the installation of closed circuit camera
C02	To check the connections and the installation of closed circuit camera systems, maintenance and repairing
C03	To make,Connections and installation of access control systems, maintenance
C04	To repair burglar alarm systems installation project, the connections do maintenance
C05	Fire detection and alarm systems installation project, installation and connections, making maintenance and repair of

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	2	28
Assignments	2	6	12
Presentation	2	5	10
Mid-terms	1	1	1
Practice	2	6	12
Laboratory	0	0	0
Project	1	14	14
Final examination	1	1	1
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2022	CONTROL SYSTEMS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2022	CONTROL SYSTEMS	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
In this course, open-loop and closed-loop proportional-integral-derivative control systems are intended to gain qualifications on.
Teaching Methods and Techniques:
Open and closed loop control systems, electromechanical control systems, microcontroller based control systems
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Umut SARAY
Assistants:

Recommended or Required Reading

Resources otomatik kontrol sistemleri, Benjamin C. Kuo,The instructor's notes

Course Category

Mathmatics and Basic Sciences	:	20	**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:		**Field**	:	60

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Open Loop Control System and Automated Manufacturing		
2	Implementation of Open Loop Control System		
3	Implementation of Open Loop Control System		
4	Implementation of Open Loop Control System		
5	Closed Loop Control System		
6	Closed Loop Control System		
7	Create a simple mathematical model in Closed Loop Control Systems		
8	Open-Closed Control System		
9	Proportional-Integral Control System		
10	Proportional-Derivative Control System		
11	Proportional-Integral-Derivative Control System		
12	With Proportional Proportional-Integral-Derivative Control System Differences Between		
13	Proportional-Integral-Derivative Control System Uses		
14	Proportional-Integral Derivative Control System Control Devices		

Course Learning Outcomes

No	Learning Outcomes
C01	Open-loop control system set up to perform the
C02	closed-loop control system installation
C03	Proportional (P), integral (I) and derivative (D) control systems perform the install

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**%100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	3	42
Hours for off-the-c.r.stud	14	2	28
Assignments	1	5	5
Presentation	1	5	5
Mid-terms	1	5	5
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	5	5
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes

bbb

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2048	PROGRAMMABLE CONTROLLERS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2048	PROGRAMMABLE CONTROLLERS	4	4	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
Programmable logic controllers understand the structure and working, ladder diagram and PLC programming, PLC programming interpret existing programs with a solution to a problem, interpret and develop the skills to win.
Teaching Methods and Techniques:
Programmable controllers, PLCs basic units, logic operations, programming, ladder diagram and ladder diagram programming instructions, set-reset commands, timer-counter applications, comparison instructions, PLC automation systems design using
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor M.Taner TUNCAY
Assistants:

Recommended or Required Reading

Resources
KURTULAN SALMAN,PLC and industrial automation, 2005yon, Birsen Publishing, ISBN: 975-511-200-6, Istanbul
KURTULAN SALMAN,PLC and industrial automation, 2005yon, Birsen Publishing, ISBN: 975-511-200-6, Istanbul
Kurtulan Salman, 2005; PLC ile Endüstriyel Otomasyon , Birsen Yayınevi, ISBN: 975-511-200-6, İstanbul

Course Category

Mathmatics and Basic Sciences	: 5	**Education**	:
Engineering	: 30	**Science**	:
Engineering Design	: 30	**Health**	:
Social Sciences	:	**Field**	: 5

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Programmable device structure and mode of operation	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
2	PLC yazılımını kullanma	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
3	Ladder Diagram and programming commands	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
4	Basic PLC instructions	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
5	Timers	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
6	Sayıcılar	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
7	Using the Self-Timer and Counters to produce solutions	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
8	Sequential function blocks use programs	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
9	Authoring and simulation software to make the PLC program	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
10	Compare Instructions	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
11	Project	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
12	Arithmetic operations	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
13	Industrial applications with PLC	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	
14	Industrial applications with PLC	Extracurricular work, lecture notes, LessLecture notes and KURTULAN SALMAN,I	

Course Learning Outcomes

No	Learning Outcomes
C01	The basic principles of PLCs, the PLC knows and can recognize the structure and components.
C02	PLC, the working principle, knows PLC, programming methods
C03	Logic operations acquired as a result of the reduction of a system does and understand programming technique with ladder diagram.
C04	Basic commands in the PLC, the concept of the timer and the timer function in the commands; PLCs and programs that may function to counter the concept and use counter commands.
C05	Analyze the structure of a given electro-mechanical control system using PLC system and at the same
C06	Perform a process control with PLC programming.

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%40
Total		**%80**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	4	56
Hours for off-the-c.r.stud	0	0	0
Assignments	2	5	10
Presentation	2	5	10
Mid-terms	1	1	1
Practice	14	2	28
Laboratory	7	2	14
Project	0	0	0
Final examination	1	1	1
Total Work Load			**120**
ECTS Credit of the Course			**4**

Contribution of Learning Outcomes to Programme Outcomes

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Program Learning Outcomes	
No	**Learning Outcome**
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
P05	Knows that lifelong learning and development are essential.
P06	When faced with unexpected situations in practice to produce solutions related to the field, take responsibility for the team to win the individual work ability.
P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes

Program Learning Outcomes	
No	**Learning Outcome**
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
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P07	It provides self-confidence and good communication with colleagues in new business environments.
P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes

Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2004	SENSORS AND TRANSDUCERS				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2004	SENSORS AND TRANSDUCERS	3	3	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Required
Objectives of the Course:
In this course, each kind of sensor, the corresponding circuit is aimed to gain the knowledge and skills to use.
Teaching Methods and Techniques:
Sensor and transducer concepts, homes, work places and the sensors used in industry recognition, to use the work, make the appropriate selection of sensors is discussed.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Instructor M.Taner TUNCAY
Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:	20	**Science**	:	
Engineering Design	:	30	**Health**	:	
Social Sciences	:		**Field**	:	50

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Temperature sensors		
2	Temperature sensors		
3	Light intensity sensors		
4	Color sensors		
5	Approach sensors		
6	Level sensors		
7	Humudity sensors		
8	Position sensors		
9	Flow sensors		
10	Stroke/Force sensors		
11	Velocity sensors		
12	Vibration sensors		
13	Acceleration sensors		
14	Biomedical sensors		

Course Learning Outcomes

No	Learning Outcomes
C01	Istallation of temperature and humudity sensors
C02	Installation of location and approach sensors
C03	Installation of velocity/vibration sensors
C04	Installation of flow and level sensors

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
P04	Provides the ability to follow developing technologies with its knowledge.
P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
P02	It provides the ability to be an individual who can plan and organize work related to his profession, take risks, observe and make decisions.
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P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**% 100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	14	2	28
Hours for off-the-c.r.stud	14	1	14
Assignments	2	8	16
Presentation	2	8	16
Mid-terms	1	1	1
Practice	0	0	0
Laboratory	7	2	14
Project	0	0	0
Final examination	1	1	1
Total Work Load			**90**
ECTS Credit of the Course			**3**

Contribution of Learning Outcomes to Programme Outcomes

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Tokat Gaziosmanpaşa University

Tokat Vocational School
Elektronik Teknolojisi

EN-2066	MEDICAL DEVICES				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
4	EN-2066	MEDICAL DEVICES	3	3	3

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Associate
Work Placement(s):
No
Department / Program:
Elektronik Teknolojisi
Type of Course Unit:
Elective
Objectives of the Course:
Bu derste; Tıbbi çihazların elektrik montajı yapabilme bilgi ve becerilerinin kazandırılması amaçlanmaktadır.
Teaching Methods and Techniques:

Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:

Assistants:

Recommended or Required Reading

Resources

Course Category

Mathmatics and Basic Sciences	:	**Education**	:
Engineering	:	**Science**	:
Engineering Design	:	**Health**	:
Social Sciences	:	**Field**	:

Course Learning Outcomes

No	Learning Outcomes
C01	Biolojik işaretleri elde etmek
C02	Biyolojik (Bio potansiyel) sinyallerini ölçmek
C03	Hücre, Kas, Kalp ve Dolaşım Parametrelerini Kullanan Biyomedikal Cihazlarını kurmak

Program Learning Outcomes

No	Learning Outcome
P03	Electronic systems design and planning, provides strategy development skills related to the solution of emerging problems.
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P01	Safety and professional tools, equipment, etc. provides sufficient knowledge and skills on the effective use of equipment.
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P08	Ability to use computer software and hardware required level of skills of the field wins.

Assessment Methods and Criteria		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	0	%0
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	0	%0
Total		**%0**

ECTS Allocated Based on Student Workload			
Activities	**Quantity**	**Duration**	**Total Work Load**
Course Duration	0	0	0
Hours for off-the-c.r.stud	0	0	0
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	0	0	0
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	0	0	0
Total Work Load			**0**
ECTS Credit of the Course			**0**

Contribution of Learning Outcomes to Programme Outcomes
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