Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

KAM252	Total Quality Management				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	KAM252	Total Quality Management	2	2	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Seçmeli
Goals:
Ders, bir organizasyonun rakipliliğini en üst seviyeye çıkarmak için ürünler, hizmetler, süreçler, çalışanlar ve çevreyi sürekli iyileştirme yaklaşımı olan toplam kalite yönetimi (TKY) ile ilgili konuları detaylı olarak anlatmaktır.
Teaching Methods and Techniques:
İşletmecilikte de kullanılan ortak sosyal bilimler terminolojisini ve kavramlarını tanımlayıp, kullanabilme
Prerequisites:

Course Coordinator:

Instructors:

Assistants:

Recommended Sources

Textbook	:	J. Evans and W. Lindsay, The Management and Control of Quality, West, 1993.
Resources	:	J. M., Juran, Quality Control Handbook, McGraw Hill, 1988.
Documents	:	Claude W. Burrill and Johannes Ledolter, Achieving Quality Through Continual Improvement John Wiley & Sons, Inc., 1999
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Kaliteye Giriş		
2	Kalite Hareketinin Tarihçesi		
3	Kalite İyileştirmenin Değeri		
4	Insan ve Kalite		
5	Ürünler, Süreçler ve Kalite		
6	Kalitenin Anlamının Açıklanması		
7	Üretim Sürecinin Hazırlanması		
8	Gerekliliklerin Belirlenmesinin Süreci		
9	Tasarım Süreci		
10	Ara Sınav		
11	Sürecin Oluşturulması		
12	Sürecin İncelenmesi		
13	Kalite Yönetim Sistemi		
14	Kalite Yönetim Sistemi		

Course Learning Outcomes

No	Learning Outcomes
C01	Toplam kalite yönetimi terminolojisini kullanabilmek
C02	Hizmet ve üretim süreçlerini tanımlayabilmek.
C03	Süreçler arasındaki ilişkileri kurabilme.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	0	0	0
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**46**
ECTS Credit of the Course			**2**

Course Contribution To Program
Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

İŞL452	Entrepreneurship-2				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	İŞL452	Entrepreneurship-2	2	2	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Seçmeli
Goals:
Girisimcilik ve yeni bir isletme kurma kararı nasıl alınır? konuları ele alınmaktadır. Operasyonel olarak karsılasılan zorluklar ve fırsatlar ile küçük isletmelerdeki iliskilerin yapısı bu dersin konu baslıklarıdır.
Teaching Methods and Techniques:
Dönem süresince yeni bir isletmenin nasıl kurulacağı, iş planı hazırlama, iş kurma sürecinde karşılaşılan ve alınması gereken kritik kararların ve yönetimsel gereklerin öğretilmesi hedeflenmektedir.
Prerequisites:

Course Coordinator:

Instructors:
Associate Prof. Dr. Ahmet ORHAN
Assistants:

Recommended Sources

Textbook	:	Girisimciligin Temelleri, Girisimcinin Hayalleri: Düsünceden Gerçege Uygulamalar, Stratejik Planlama, Yönetim ve Girisimci, İşletme çeşitleri ve kurul
Resources	:	
Documents	:	
Assignments	:	
Exams	:	

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	80	**Field**	:	20

Course Content

Week	Topics	Study Materials	Materials
1	İş kurma süreci, İşletmenin ana sözleşmesinin hazırlanması, Gerekli izin ve ruhsatların alınması, Yasal kuruluş işlemlerinin y		
2	İşyeri donanımının yapılması, İş fikri ve seçim nedeni		
3	Makine ekipman gereksinimleri rekabet şartlarına göre belirleme		
4	Üretim girdileri nasıl belirlenir?		
5	İş gücü ve idari örgütleme planı		
6	Pazarlama planlaması, Pazarın büyüklüğü, Hedef pazar belirleme		
7	İşyeri hukuki statüsü nasıl belirlenir? İzinler ve ruhsatlar		
8	Kısa, orta ve uzun vadeli planlama		
9	Ara sınav		
10	Rakip analizi ve stratejiler		
11	GZFT analizi		
12	Ürün üretim planı		
13	Finansal plan ve başabaş noktası		
14	Devlet destekleri		

Course Learning Outcomes

No	Learning Outcomes
C01	Disiplin içi ve çok disiplinli takımlarda etkin biçimde çalışabilme becerisi.
C02	Yaşam boyu öğrenmenin gerekliliği bilinci; bilgiye erişebilme, bilim ve teknolojideki gelişmeleri izleme ve kendini sürekli yenileme becerisi.
C03	Proje yönetimi ile risk yönetimi ve değişiklik yönetimi gibi iş hayatındaki uygulamalar hakkında bilgi; girişimcilik, yenilikçilik ve sürdürülebilir kalkınma hakkında farkındalık.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	1	%20
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%40
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	8	2	16
Assignments	1	2	2
Presentation	0	2	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**50**
ECTS Credit of the Course			**2**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P08	P09	P10
All	4	4	4
C01	4		
C02		4	
C03			4

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

İŞL256	Intellectual & Inductrial Ownership				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	İŞL256	Intellectual & Inductrial Ownership	2	2	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Seçmeli
Goals:
Teknolojik alanda yapılacak çalışmaların maddi ve manevi olarak kişilere sağlayacağı haklar ve korunmaları hususunda farkındalık yaratmak
Teaching Methods and Techniques:
Fikri ve sınai mülkiyet hakları konusunda genel bilgi, marka, patent, coğrafi işaret, ticaret ünvanları v.s. hakkında tescil, tescil örgütleri, korunmaları, ulusal ve uluslararası mevzuat ve haksız rekabet konusunu kapsamaktadır.
Prerequisites:

Course Coordinator:

Instructors:
Undefined Av. Behiç Cantürk
Assistants:

Recommended Sources

Textbook	:	Av. Behiç CANTÜRK, Fikri ve Sınai Mülkiyet Haklar Hukuku Ders Notları, 2015.
Resources	:	Yargıtay Kararları ve Yüksek Mahkeme, 2015.
Documents	:	
Assignments	:	
Exams	:	

Course Category

Mathmatics and Basic Sciences	:	80	**Education**	:	
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	20	**Field**	:	

Course Content

Week	Topics	Study Materials	Materials
1	Fikri ve Sınai Mülkiyet hakları, eserleri, eser sahibi hakları		
2	Hukuk davaları, ceza davaları, bilgisayar yazılımları, eser ve patent ile korunma hakları		
3	Ticaret unvanları ve işletme adları		
4	Sınai mülkiyet hakları		
5	Patent konusunda genel bilgiler ve sorunları		
6	Faydalı model ve sorunları		
7	Endüstriyel tasarım		
8	ARASINAV		
9	Marka ve sorunları ,Coğrafi işaret ve sorunları ,Ticari sırlar, Know-how		
10	Entegre devre topoğrafyaları		
11	İnternet alan adları, bilgisayar programları, veri tabanları		
12	Yeni teknolojiler, biyoteknolojik buluşlar, yeni bitki çeşitleri korunması ve tescili		
13	Ulusal ve uluslararası mevzuat		
14	Haksız rekabet		
15	MAZERET SINAVI		

Course Learning Outcomes

No	Learning Outcomes
C01	Fikri ve sınai mülkiyet hakkında genel bilgi
C02	Mevzuat
C03	Maddi ve Manevi hakların korunması

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	0	0	0
Presentation	0	0	0
Mid-terms	1	7	7
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	7	7
Total Work Load			**56**
ECTS Credit of the Course			**2**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P06	P07	P09	P10	P11
All	3	3	3	3	3

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

İKT252	Economy				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	İKT252	Economy	2	2	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Seçmeli
Goals:
Mechanical Engineering student will gain the ability to take 1. investment decisions, 2. project evaluation methods 3. a comparison of alternative projects.
Teaching Methods and Techniques:
Basic economic concepts, engineering economic decisions. Time value of money and various interest calculations. Cash flows. Cost-volume-profit relationships and break-even point analysis. The methods used in project evaluation: the payback period, present value, future value, net present value, net future value, internal rate of return, benefit / cost ratio, net benefit / cost ratio, equivalent annual value, annual equivalent expenditure methods. Uncertainty analysis, sensitivity analysis. Comparison of the alternatives and taking investment decisions.
Prerequisites:

Course Coordinator:

Instructors:
Prof. Dr. Ebru KAVAK AKPINAR
Assistants:

Recommended Sources

Textbook	•	Prof. Dr. Ebru Akpınar, Mühendislik Ekonomisi dersnotları.
Resources	•	Prof. Dr. Osman Okka, Mühendislik Ekonomisi, Nobel Yayınevi.
Documents	•	Prof. Dr. Osman Okka, Mühendislik Ekonomisi I, II, Nobel Yayınevi.
Assignments	•	Degarmo E. P., Sullivan W.G., Bontadelli J.A. (1990) "Engineering Economy" Macmillian Publishing Company NY.
Exams	•	Blank L.T., Tarquin A., (2002) "Engineering Economy" McGraw Hill.
	•	Prof. Dr. A.. Isık. Mühendislik Ekonomisi. Birsen Yavınevi.

Course Category

Mathmatics and Basic Sciences	:	**Education**	:
Engineering	: 80	**Science**	:
Engineering Design	: 20	**Health**	:
Social Sciences	:	**Field**	:

Course Content

Week	Topics	Study Materials	Materials
1	Introduction - the basic economic concepts		
2	Engineering economic decisions		
3	Cost-volume-profit relationships and break-even point analysis		
4	Cost-volume-profit relationships and break-even point analysis		
5	Time value of money, simple and compound interest concepts		
6	Interest formulas and uniform series of cash flows, cash flows are increasing or decreasing as the arithmetic series, geome		
7	The repayment period; present, future, and the net present and net future value analysis		
8	Mid term		
9	The repayment period; present, future, and the net present and net future value analysis		
10	Benefit / Cost ratio, net benefit / cost ratio.		
11	Internal rate of return method.		
12	Internal rate of return method.		
13	Equivalent annual value, annual equivalent expenditure methods.		
14	Uncertainty analysis, sensitivity analysis. Comparison of the alternatives and taking investment decisions.		

Course Learning Outcomes

No	Learning Outcomes
C01	To know the methods project evaluation and properties.
C02	To understand the investment decisions by comparing the alternatives.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	1	%10
Assignment	1	%10
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%40
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	3	3
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			**61**
ECTS Credit of the Course			**2**

Course Contribution To Program
Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

ÇEK256	Management Sociology				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	ÇEK256	Management Sociology	2	2	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Seçmeli
Goals:
To be analyzed management process and organizations from a sociological perspective, to provide students the competence to be able to study objectives, structural characteristics, politics, process and culture of organizations in the integrity of social structure.
Teaching Methods and Techniques:
1 Relationship between Management and Sociology, and Relationship between Management, Organization and Society 2 Basic Concepts: Management, Manager, Organization, Organization Structure 3 Relationships between Management and Organization 4 Emergence and Historical Development of Management Thought 5 Classic and Neoclassic Management Approaches 6 Modern and Contemporary Management Approaches 7 Management Process and Functions of Management Status in Organization 8 Midterm Exam 9 Midterm Exam 10 Relationship between Intraorganizational and Out of the Organization 11 Socialization Process and Organizational Socialization 12 Relationship between Culture and Organizational Culture 13 Social Change and Organizational Change 14 The Current Approaches to Management and Organization
Prerequisites:

Course Coordinator:

Instructors:
Asist Prof. Dr. Hasan UZUN
Assistants:

Recommended Sources

Textbook	:	BAŞARAN, İbrahim Ethem (1998); Yönetimde İnsan İlişkileri: Yönetsel Davranış, Gül Yayınevi, Ankara, 1998.
Resources	:	BAŞARAN, İbrahim Ethem (1998); Yönetimde İnsan İlişkileri: Yönetsel Davranış, Gül Yayınevi, Ankara, 1998.
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Relationship between Management and Sociology, and Relationship between Management, Organization and Society		
2	Basic Concepts: Management, Manager, Organization, Organization Structure		
3	Relationships between Management and Organization		
4	Emergence and Historical Development of Management Thought		
5	Classic and Neoclassic Management Approaches		
6	Modern and Contemporary Management Approaches		
7	Management Process and Functions of Management Status in Organization		
8	Midterm		
9	Relationship between Intraorganizational and Out of the Organization		
10	Socialization Process and Organizational Socialization		
11	Relationship between Culture and Organizational Culture		
12	Social Change and Organizational Change		
13	The Current Approaches to Management and Organization		
14	Final exam		

Course Learning Outcomes

No	Learning Outcomes
C01	Being able to analyze management process and organizations from sociological perspective
C02	Being able to illustrate the theories of organization and management with examples
C03	Being able to establish relationship between social structure and organization
C04	Being able to analyze process within the organization from sociological perspective
C05	Being able to illustrate the relation of social change and management with examples

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	0	0	0
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**74**
ECTS Credit of the Course			**2**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11
All	5	5	5	5	5	5	5	5	5	5	5
C01	1	1	1	1	1	2	5	1	1	1	1
C02	1	1	1	1	1	2	5	1	1	1	1
C03	1	1	1	1	1	2	5	1	1	1	1
C04	1	1	1	1	1	2	5	1	1	1	1
C05	1	1	1	1	1	2	5	1	1	1	1

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

ÇEK252	Occupational Health and Safety				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	ÇEK252	Occupational Health and Safety	2	2	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Seçmeli
Goals:
To equip the students with the occupational regulations and rules of computer engineering.
Teaching Methods and Techniques:
Occupational principles and regulations stated by the chambers and laws are explained to the students in a discussion. Students prepare and present research homework and projects on the terminology defined in the class.
Prerequisites:

Course Coordinator:

Instructors:
Asist Prof. Dr. Hasan UZUN
Assistants:

Recommended Sources

Textbook	:	Slayt and Lecture Notes
Resources	:	Nazmi BİLİR, İş Sağlığı ve Güvenliği, Güneş Tıp Kitapevleri, 2016.,Mustafa YAĞIMLI, İş Sağlığı ve Güvenliği, Beta Yayınları, 2017.
Documents	:	Fıkri ve Sınai Haklar Kanunu Metni
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Definition of Occupational Health and Safety		
2	OHS Goal		
3	The Relationship Between Occupational Safety and Science		
4	Occupational Health and Safety Responsibilities		
5	Occupational health and safety responsibilities and cost		
6	System Approach		
7	Vize		
8	Prevention Priority		
9	Why occupational health and safety		
10	Occupational Safety Culture		
11	Historical Development of Occupational Health and Safety in the World		
12	OHS Historical Development in Turkey		
13	An overview		
14	Final		

Course Learning Outcomes

No	Learning Outcomes
C01	Students will gain applicable knowledge on occupational regulations and rules of medical.
C02	Students will learn to communicate effectively.
C03	Students learn the laws related to the profession

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	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			**88**
ECTS Credit of the Course			**3**

Course Contribution To Program
Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

TRD210	Turkish Language-2				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	TRD210	Turkish Language-2	2	0	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
Students know the properties of the Turkish language correctly and effectively be able to use and better able to express himself in the community to help. Necessary for an understanding of a text read listened to fulfill teachings. literary and scientific texts to gain the ability to take notes, with a variety of classical and contemporary texts contribute to the development of vocabulary, reading habits, to teach you the skills to give presentations in front of people. Indicating the position of Turkish language among world languages, the first works to introduce our language, to teach Turkish sound and the structure, spelling, punctuation marks used in place of the taught man, to introduce oral and written literature.
Teaching Methods and Techniques:
Petition and resume writing, commentary Disorders, Written expression (letters, essays, speeches, interviews, memoirs, criticism, travel writing, article), theater, story, novel, poetry, speech and verbal expression, prepared speeches.
Prerequisites:

Course Coordinator:
Instructor Hasan Özçam
Instructors:

Assistants:

Recommended Sources

Textbook	:	Turkish language course lecture notes
Resources	:	
Documents	:	
Assignments	:	TÜRKÇE SÖZLÜK; TDK Yayınları, Ankara, 2005,YAZIM KILAVUZU; TDK Yayınları, Ankara, 2005,ERGÜZEL,Mehdi;GÜLSEVİN,Güerer,BOZ,Erdoğan;YA
Exams	:	

Course Category

Mathmatics and Basic Sciences	:		**Education**	:	10
Engineering	:		**Science**	:	
Engineering Design	:		**Health**	:	
Social Sciences	:	90	**Field**	:	

Course Content

Week	Topics	Study Materials	Materials
1	petition writing, narrative disorders		
2	Structure-based expression disorders, narrative and narrative principles, internal and external elements of the composition.		
3	Written expression types (application, curriculum vitae / CV, letter)		
4	Types of written expression (Essay, Interview, interview)		
5	Types of written expression (Memoir, criticism, travel writing)		
6	Types of written expression (Article)		
7	Theatres; types of contemporary theater forms, Turkish theater, contemporary Turkish theater, the theater's elements, Poe		
8	ARASINAV		
9	Columnist (Clause); Story; elements, types, and in the history of Turkish literature.		
10	Novel; species in Turkish literature novel.		
11	Written expression types (Daily, life history) epic, legend, fairy tale, fable. Deputy types and techniques (Summarizing, not		
12	Speech and verbal expression, speech elements, principles, speech disabilities, oral narrations.		
13	Prepared speeches: Singles prepared speeches (Proceedings, conferences, speeches, briefings, seminars). Multi-prepared s		
14	Impromptu speeches.		

Course Learning Outcomes

No	Learning Outcomes
C01	Dersin amacını ve işleyiş planını görür, dilin tanımını ve insan hayatındaki yerini kavrar, konuşma ve yazı dili arasındaki farkları bilir.
C02	Türkçenin şekil yapısını bilir, imlâ-noktala a işaretlerini yerinde kullanır.
C03	Kitap okuma alışkanlığını kazanır, günlük gazete ve diğer süreli yayınları takip eder.
C04	Dilin özelliklerini, dil-toplum ve dil-kültür ilişkilerini kavrar; okuma ve anlama yöntemlerini bilir.
C05	Genel iletişimde yapılan hataları görür, topluluk önünde konuşma yapmanın inceliklerini bilir.
C06	Türk dilinin ses özelliklerini bilir, kültürün ne olduğunu ve değişip değişmeyen unsurlarını kavrar.
C07	Cümlenin öğelerini ve cümle türlerini bilir, tiyatro ve senaryo gibi kullanmalık metinler hakkında bilgi sahibi olur, yazı yazmanın ön hazırlıklarını görür.
C08	Çevresindeki dil kirliliğine yol açan kelimelerin dil üzerindeki etkilerini hesaplayabilir.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	2	28
Hours for off-the-c.r.stud	5	1	5
Assignments	0	0	0
Presentation	0	0	0
Mid-terms	1	10	10
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	20	20
Total Work Load			**63**
ECTS Credit of the Course			**2**

Course Contribution To Program
Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

İST234	Probability and Statics				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	İST234	Probability and Statics	3	3	4

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
Statistics understanding and explaining, explanation of basic concepts and issues
Teaching Methods and Techniques:
Basic concepts, data collection, summarization, data organization, frequencies, proportions, graphs, mean and variability measures, hypothesis testing, chi-square, variance, regression, correlation and time series analysis
Prerequisites:

Course Coordinator:
Prof. Sinan ÇALIK
Instructors:
Asist Prof. Nurhan HALİSDEMİR
Assistants:

Recommended Sources

Textbook	:	NecmiGÜRSAKAL (2012), Minitab ve SPSS Uygulamalı Çıkarımsal İstatistik, Dora Basın Yayın Dağıtım, BURSA.
Resources	:	NecmiGÜRSAKAL (2012), Minitab ve SPSS Uygulamalı Betimsel İstatistik, Yenilenmniş Altıncı Baskı, Dora Basın Yayın Dağıtım, BURSA.
Documents	:	Kemal POYRAZ(2013), İstatistik,Birinci baskı, Üç mart baskı evi, KÜTAHYA.
Assignments	:	Nevin UZGÖREN (2012), Bilimsel Araştırmalarda Kullanılan Temel İstatistik Yöntemler ve SPSS Uygulamaları, Genişletilmiş İkinci Baskı, Ekin Basın Y
Exams	:	Neill A. WEISS (2002), Elementary Statistics, Pearson Education, USA. Olasılık ve İstatistik

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	The basic concepts of statistics		
2	Statistical functions		
3	Compilation of data, arranging		
4	Frequencies, ratios, percentages		
5	Measures of central tendency: the average of		
6	Measures of central tendency: the average of		
7	Calculation of measures of variability		
8	For large sample hypothesis testing and confidence intervals		
9	For large sample hypothesis testing and confidence intervals		
10	For large sample hypothesis testing and confidence intervals		
11	Small sample hypothesis testing and confidence intervals for		
12	Small sample hypothesis testing and confidence intervals for		
13	Chi-square analysis		
14	Regresyon Analizi		

Course Learning Outcomes

No	Learning Outcomes
C01	The basic concepts of statistics, the function Learning
C02	Data and descriptive statistics to determine the organization of learning
C03	Data to analyze, evaluate and interpret
C04	Computer software, etc.. methods, techniques, tools to use in solving real life problems

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	0	0	0
Presentation	0	0	0
Mid-terms	1	12	12
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	12	12
Total Work Load			**108**
ECTS Credit of the Course			**4**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P01	P02
All	4	4

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

EEM242		Analog Electronic-1			
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	EEM242	Analog Electronic-1	3	3	4

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
The objective of this course is to provide information about basic electronic circuit design, application circuits and circuits building failures
Teaching Methods and Techniques:

Prerequisites:

Course Coordinator:

Instructors:
Prof. Dr. Mustafa TÜRKAsist Prof. Dr. Sencer ÜNAL
Assistants:

Recommended Sources

Textbook	:	
Resources	:	MICROELECTRONICS: Digital and Analog Circuits and Systems, Jacob MILLMAN, McGraw-Hill.,Electronic Devices and Circuit Theory, Prentice Hall,.
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	p and n-type semiconductors.		
2	Examination of the p-n junction.		
3	Diode, diode equivalent circuits and diode testing.		
4	zener diodes. Application of diodes.		
5	Clipper circuits, rectifiers		
6	Introduction to BJT and transistor structure.		
7	biasing of transistors		
8	Transistor switching circuits.		
9	PNP transistors.Transistor operating point and to examine the thermal stability.		
10	field effect transistors		
11	Examining of voltage-current self-curve in FET.		
12	Examining enhancement MOSFET		
13	Examining Depletion MOSFET		
14	Examining CMOS		

Course Learning Outcomes

No	Learning Outcomes
C01	Gain skills about electronic circuits.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	5	8	40
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**114**
ECTS Credit of the Course			**4**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P01	P02
C01	4	3

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

EEM240		Electromechanic Energy Conversion			
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	EEM240	Electromechanic Energy Conversion	3	3	4

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
To learn magnetic equivalent circuits, structures of electromechanical systems and electromechanical systems used for electromechanical energy conversion. To analyze transformers and permanent magnet circuits.
Teaching Methods and Techniques:
The introduction of electrical engineering and the current issues of electrical engineering. Basic prenciples of electromagnetic systems. Solution of electromagnetic circuit problems. The development of permanent magnet materials. Permanent magnet magnetic circuits. Solution of permanent magnet circuit problems. Energy balance equation for a electromechanic system. Correlation between energy, co-energy and torque. Energy, self and mutual inductances, torque in a linear electromechanic system. Solution of problems related to electromechanical systems. Analysis of reluctance motor. Single phase and three phases transformers. Auto transformers and instrument transformers.
Prerequisites:

Course Coordinator:

Instructors:
Associate Prof. Dr. Mehmet ÖZDEMİR
Assistants:

Recommended Sources

Textbook	:	
Resources	:	Elektrik Makinalarının Temelleri, Prof. Dr. M. Kemal SARIOĞLU, İTÜ, 1990. ,Enerji Dönüşümünün Temelleri, Prof. Dr. Cemil GÜRÜNLÜ, KTÜ, 1989.
Documents	:	
Assignments	:	
Exams	:	

Course Category

Mathmatics and Basic Sciences	:	25	**Education**	:	
Engineering	:	25	**Science**	:	
Engineering Design	:	50	**Health**	:	
Social Sciences	:		**Field**	:	

Course Content

Week	Topics	Study Materials	Materials
1	The introduction of electrical engineering and the current issues of electrical engineering.		Lecture Notes
2	Basic prenciples of electromagnetic systems		Lecture Notes
3	Solution of electromagnetic circuit problems.		Lecture Notes
4	The development of permanent magnet materials.		Lecture Notes
5	Permanent magnet magnetic circuits		Lecture Notes
6	Solution of permanent magnet circuit problems		Lecture Notes
7	Energy balance equation for a electromechanic system.		Lecture Notes
8	Correlation between energy, co-energy and torque		Lecture Notes
9	Correlation between energy, co-energy and torque		Lecture Notes
10	Energy, self and mutual inductances, torque in a linear electromechanic system.		Lecture Notes
11	Solution of problems related to electromechanical systems.		Lecture Notes
12	Analysis of reluctance motor.		Lecture Notes
13	Single phase and three phases transformers		Lecture Notes
14	Auto transformers and instrument transformers		Lecture Notes

Course Learning Outcomes

No	Learning Outcomes
C01	To analyse and design a electromechanical system.
C02	To analyse and design a transformer.
C03	To learn self inductance and mutual inductance of a electromechanical system

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	3	42
Hours for off-the-c.r.stud	14	3	42
Assignments	5	5	25
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**113**
ECTS Credit of the Course			**4**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P01	P02
All	5	5
C01	5	5
C02	5	5
C03	5	5

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

EEM236	Circuit Analysis				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	EEM236	Circuit Analysis	3	3	4

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
The aim of this module is to provide an introduction to the basic concepts and techniques used in circuit analysis described in the module contents.
Teaching Methods and Techniques:
Week Theoretical Subjects 1 Classes and properties of electrical circuits. 2 State Equations and appropriate tree concept. 3 Obtaining State Equations. 4 Constant Coefficients Linear Circuits (CCLC) solution method. 5 Natural response of (CCLC) State Equation. 6 Forced response of (CCLC) State Equation. 7 Full solution of (CCLC) State Equation. 8 Mid term 9 Description of electrical circuit elements in s-domain and solutions of electrical circuits. 10 Solution of State Equations using s-domain. 11 Finding State transition matrix by taking advantage of the s-domain and core solution. 12 Solution of switched circuits by taking advantage of the s-domain. 13 S-plane zero-pole distribution and response relationship. 14 Transfer functions. 15 Fourier series implementation of the electrical circuit.
Prerequisites:

Course Coordinator:

Instructors:
Associate Prof. Dr. Vedat ÇelikProf. Dr. Arif Gülten
Assistants:

Recommended Sources

Textbook	:	Elektrik Devrelerine Giriş Ders Notları, Prof. Dr. Ahmet DERVİŞOĞLU, İTÜ. Elektrik Devrelerinin Analizi, Prof. Dr. Cevdet ACAR, İTÜ Yayını, 1995. De
Resources	:	
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Classes and properties of electrical circuits.		
2	State Equations and appropriate tree concept.		
3	Obtaining State Equations		
4	Constant Coefficients Linear Circuits (CCLC) solution method.		
5	Natural response of (CCLC) State Equation.		
6	Forced response of (CCLC) State Equation		
7	Full solution of (CCLC) State Equation.		
8	Description of electrical circuit elements in s-domain and solutions of electrical circuits		
10	Solution of State Equations using s-domain.		
11	Solution of switched circuits by taking advantage of the s-domain.		
12	S-plane zero-pole distribution and response relationship.		
13	Transfer functions.		
14	Fourier series implementation of the electrical circuit.		

Course Learning Outcomes

No	Learning Outcomes
C01	To learn Moddelling sloving and analizing of electricsl circuits
C02	To learn obtaning and sloving of state equations
C03	Description of electrical circuit elements in s-domain and solutions of electrical circuits.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	8	%0
Attendance	0	%0
Practice	2	%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	6	84
Assignments	8	4	32
Presentation	0	0	0
Mid-terms	1	3	3
Practice	1	3	3
Laboratory	0	0	0
Project	0	0	0
Final examination	1	3	3
Total Work Load			**167**
ECTS Credit of the Course			**6**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P01	P02	P03	P04	P05	P09
All	4	5			3	
C01	4	4	5			
C02	4		4			4
C03	5	5		5		

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

EEM232	English For Profession				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	EEM232	English For Profession	3	3	3

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
The students will be able to translate the technical texts from English to Turkish. They will know the meaning of the technical words. They will improve their English Grammar.
Teaching Methods and Techniques:
The students will make translation on the subjects of: Shapes, Physical Descriptions, Matter , Molecules in Motion, Acids, Bases and Salts, Wave Motion, Generators and Faraday Magnets and Magnetism Conductors, semi-conductors and Insulators Electrolysis DC Motor
Prerequisites:
(YDİ110) and (YDİ109)
Course Coordinator:

Instructors:
Associate Prof. Dr. Hasan Güler
Assistants:

Recommended Sources

Textbook	:	Pamela Edis, TEKNİK INGİLİZCE, Okuma Parçaları ve Alıştırmaları (Readings and Exercises in Technical English) ITÜ, 1986.
Resources	:	Erik H. Glendinning, English in Focus: English in Electrical Engineering and Electronics, Oxford University Press, 1992. ,A. J. Herbert, The Structure
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Shapes, Physical Descriptions		Pamela Edis, TECHNICAL ENGLISH
2	Shapes, Physical Descriptions		Pamela EDIS, TECHNICAL ENGLISH
3	Matter,		Pamela EDIS, TECHNICAL ENGLISH
4	Molecules in Motion. Acids, Bases and Salts		Pamela EDIS, TECHNICAL ENGLISH
5	Acids, Bases and Salts,		Pamela EDIS, TECHNICAL ENGLISH
6	Generators and Faraday		Pamela EDIS, TECHNICAL ENGLISH
7	Generators and Faraday,		Pamela EDIS, TECHNICAL ENGLISH
8	Magnets and Magnetism		Pamela EDIS, TECHNICAL ENGLISH
9	Conductors, semi-conductors and Insulators		Pamela EDIS, TECHNICAL ENGLISH
10	Conductors, semi-conductors and Insulators		Pamela EDIS, TECHNICAL ENGLISH
11	Electrolysis		Pamela EDIS, TECHNICAL ENGLISH
12	Electrolysis		Pamela EDIS, TECHNICAL ENGLISH
13	DC Motor		Pamela EDIS, TECHNICAL ENGLISH
14	DC Motor		Pamela EDIS, TECHNICAL ENGLISH

Course Learning Outcomes

No	Learning Outcomes
C01	Increasing the technical words capacity of the students about their proffesion.
C02	Gaining practically ability to use advanced English grammer structures.
C03	Improving the student's writing ability.
C04	Improving translation ability of the students translation (from English to Turkish).

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	2	%10
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%50
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	4	8
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**96**
ECTS Credit of the Course			**3**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P06	P08
C01	2	2
C02	3	2
C03	3	2
C04	2	2

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

EEM228	Measurement Lab.				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	EEM228	Measurement Lab.	2	1	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
Identify the basic circuit elements in laboratory, learning to use, making an circuit connection, making an measurement via using ammeters,voltmeters and oscilloscopes, viewing basic information, methods, theorems as experimental, and comparison of theories.
Teaching Methods and Techniques:
1 Creation of experimental groups and making the announcements 2 Laboratory courses related to the laboratory rules and fuctioning 3 1. Week: Conducting to relevant groups of Experiment 1- Experiment 8 4 2. Week: Conducting to relevant groups of Experiment 1- Experiment 8 5 3. Week: Conducting to relevant groups of Experiment 1- Experiment 8 6 4. Week: Conducting to relevant groups of Experiment 1- Experiment 8 7 5. Week: Conducting to relevant groups of Experiment 1- Experiment 8 8 6. Week: Conducting to relevant groups of Experiment 1- Experiment 8 9 7. Week: Conducting to relevant groups of Experiment 1- Experiment 8 10 8. Week: Conducting to relevant groups of Experiment 1- Experiment 8 11 Doing make-up exam
Prerequisites:

Course Coordinator:
Prof. Dr. Hasan KÜRÜM
Instructors:

Assistants:
Research Assist. Muhammed Sefa ÇETİNResearch Assist. İrem GÖRGÖZResearch Assist.Dr. Bircan ÇALIŞIRResearch Assist. Ezgi TAŞKINResearch Assist. Kıvanç DOĞANResearch Assist. Merve YILDIRIMResearch Assist. Sertaç YAMANResearch Assist. Abdulcelil KÜLEKÇİOĞLU

Recommended Sources

Textbook	:	Ölçme Tekniği, Prof. Dr. Sefa AKPINAR, KTÜ Yayını,1992. Ölçme Tekniği, Hasan ÖNAL, İTÜ Yayını, 1993. Elektrik ve Elektronik Ölçmeleri, Doç. Dr.
Resources	:	
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Deney gruplarının oluşturulması ve ilgili duyuruların yapılması		
2	Laboratuvar kurallarına ve işleyişine ilişkin ders yapılması		
3	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
4	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
5	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
6	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
7	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
8	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
9	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
10	Deney 1-Deney 8'in ilgili gruplara yaptırılması		Lab. Föyleri
11	Telafi deneylerinin yapılması		Lab. Föyleri
12	Gruplar tarafından hazırlanan deney raporlarının değerlendirilmesi		Deney raporları
13	Gruplar tarafından hazırlanan deney raporlarının değerlendirilmesi		Deney raporları
14	Gruplar tarafından hazırlanan deney raporlarının değerlendirilmesi		Deney raporları

Course Learning Outcomes

No	Learning Outcomes
C01	Öğrenciler analog/sayısal ölçü aletlerini ve osiloskobu kullanma becerisi kazanacaklardır.
C02	Öğrenciler grup ve takım çalışmasını öğreneceklerdir.
C03	Öğrenciler teorik bilgilerini kullanarak deneysel sonuçları yorumlama ve analiz etme yeteneğini kazanacaklardır.

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment

In-Term Studies	Quantity	Percentage
Mid-terms	1	%0
Quizzes	8	%10
Assignment	0	%0
Attendance	0	%0
Practice	8	%40
Project	0	%0
Final examination	1	%50
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	8	2	16
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**62**
ECTS Credit of the Course			**2**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P04	P05	P08
C01	4		
C02			4
C03		5	

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

EEM226	Electromagnetic Fields-II				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	EEM226	Electromagnetic Fields-II	2	2	3

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
Magnetic field concept under static and dynamic conditions with the aim to the basic of Electrical and Electronic Engineering, Learning the Faraday, Lenz, Amper laws. Obtaining information about magnetic materials and properties of them. Learning the Maxwell, Laplace ve Poisson equations, and solutions.
Teaching Methods and Techniques:
1 Magnetic field concept, flux density. 2 Lorentz force. Force acting on the current 3 The torque acting on any current loop. 4 Amper's Law. Magnetic force on loads. 5 The force acting on parallel conductors. 6 Faraday's induction law, Lenz's law. 7 Electromotor force inducted in a circuit. 8 Vector potential 9 Static and dynamic field concepts 10 Magnetic materials, magnetization 11 Magnetic sensitivity and permeability. 12 Hall effect. 13 Maxwell equations 14 Laplace ve Poisson equations.
Prerequisites:

Course Coordinator:

Instructors:
Prof. Dr. Hasan KÜRÜM
Assistants:

Recommended Sources

Textbook	:	Electromagnetism, I. S. GRANT etc., John Willey, 1990. Electromagnetism for Engineers, P. HAMMOND, Pergamon Press, 1997. Electromagnetic Fie
Resources	:	
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Manyetik alan kavramı, akı yoğunluğu		Ders Notları
2	Lorentz kuvveti. Akım üzerine etkiyen kuvvet		Ders Notları
3	İçinden akım geçen bir halka devreye etkiyen moment		Ders Notları
4	Amper yasası. Yükler üzerindeki manyetik kuvvet		Ders Notları
5	Paralel iletkenlere etkiyen kuvvet		Ders Notları
6	Faraday indüksiyon yasası. Lenz yasası		Ders Notları
7	Bir devrede indüklenen elektromotor kuvveti		Ders Notları
8	Vektör potansiyel		Ders Notları
9	Statik ve dinamik alan kavramları		Ders Notları
10	Manyetik malzemeler, mıknatıslanma		Ders Notları
11	Manyetik duyarlılık ve geçirgenlik		Ders Notları
12	Hall etkisi		Ders Notları
13	Maxwell denklemleri		Ders Notları
14	Laplace ve Poisson denklemleri		Ders Notları

Course Learning Outcomes

No	Learning Outcomes
C01	The skills such as defining engineering problems about electromagnetic, modeling, formulation, and solving. The skills such as using modern tools, techniques, and methods required for engineerinc

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
In-Term Studies	**Quantity**	**Percentage**
Mid-terms	1	%40
Quizzes	0	%0
Assignment	6	%10
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	2	%50
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	7	3	21
Presentation	0	0	0
Mid-terms	1	2	2
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	2	2
Total Work Load			**81**
ECTS Credit of the Course			**3**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P01	P02
All	4	4
C01	4	4

Firat University

FACULTY OF ENGINEERING
ELECTRICAL-ELECTRONICS ENGINEERING

AİT202	Princ. of Atatürk and Rev. Hist. -2				
Semester	**Course Code**	**Course Name**	**L+P**	**Credit**	**ECTS**
4	AİT202	Princ. of Atatürk and Rev. Hist. -2	2	0	2

Language of Instruction:
Turkish
Course Level:
Faculty
Work Placement(s):
No
Department / Program:
ELECTRICAL-ELECTRONICS ENGINEERING
Course Type:
Zorunlu
Goals:
Öğrencilerin Tarih ve vatandaşlık şuurunu kazanması. Genel Kültür bilgileri bakımından donanımı.
Teaching Methods and Techniques:
Teorik: OsmanlI imparatorluğundan Türkiye Cumhuriyetl'ne geçiş ve Cumhuriyetin temellerinin tanınması ve değerlendirilmesi.
Prerequisites:

Course Coordinator:

Instructors:
Associate Prof. Dr. Füsun KARAProf. Dr. Yüksel ARSLANTAŞ
Assistants:

Recommended Sources

Textbook	:	Prof..Dr. Rahmi DOĞANAY-Prof. Dr. Erdal AÇIKSES ve Diğer Türkiye Cunhuriyeti Tarihi ve Atatürk İlkeleri. Ders kitapları
Resources	:	Nutuk, Söylev ve Demeçler
Documents	:	
Assignments	:	
Exams	:	

Course Category

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

Course Content

Week	Topics	Study Materials	Materials
1	Milli Mücadele Dönemi Cepheler; Güney ve Güneydoğu Cephesi(Urfa, Antep, Maraş ve Adana Cepheleri), Doğu cephesi (T(		
2	İtilaf Devletlerinin Türkiye'yi Paylaşma Projeleri, San Remo Konferansı ve Sevr Antlaşmaları		
3	Düzenli Ordunun Kurulması ve Batı Cephesi. I. İnönü Savaşı, Londra Konferansı, Afganistan ile Dostluk Antlaşması, Moskov.		
4	II. İnönü Savaşı. Afyon-Eskişehir-Kiitahya Savaşları, Mustafa Kemal'in Başkomutan Seçilmesi, Tekalif-i Milliye Emirleri, Saka		
5	Savaş Sırasında Bazı Siyasi Gelişmeler (Kars Antlaşması, Ankara İtilafnamesi), Türk-İngiliz Esir Mübadelesi, 22 Mart Ateşke		
6	Mudanya Mütarekesinin Hazırlıkları, Hükümleri Onemi İmzalanması, Saltanatın Kaldırılması ve Abdiilmecit'in Hali Seçilmesi L		
7	Türk Inkılabı ; Siyasi Alandaki Inkılaplar ve Gelişmeler (Saltanatın Kaldırılması, Halifeliğin Kaldırılması, Ankara'nın Başkent O		
8	ARASINAV		
9	Hukuk Alanındaki inkılaplar (Ilk Anayasalar, Medeni Kanun ,Ceza Kanunu v.d.), 1924 Anayasası. Eğitim ve Kültür Alanındak		
10	Ekonomik Alandaki Inkılaplar(İzmir Iktisat Kong, Teşvik-ı Sanayi Kanunu, 5 Yıllık Kalkınma Planları İş Bankası ve ^ Sanayi I		
11	Sosyal Alanda Yapılan Inkılaplar (Kadın Hakları, Milletlerarası Rakam ve Ölçülerin Kabulü, Milletlerarası Saat ve Takvimin Ka		
12	Atatürk Dönemi Türk Dış Politikası (Milletler Cemiyetine Giriş, Balkan Paktı, Sadabat Paktı, Montrö Boğazlar Sözleşmesi, Hat		
13	Atatürk Ilkeleri ve Anayasaya Giriş Süreci, Cumhuriyetçilik, Milliyetçilik, Halkçılık, Laiklik, Inkılapçılık Temel ilkeleri ve Bütünl		
14	II. Dünya Savaşı ve Türk Dış politikası. Savaş Öncesi ve Sonası Gelişmeler, Türkiye'nin Nato'ya girmesi. (Cento, Bağdat Pak		
15	Final Sınavı		

Course Learning Outcomes

No	Learning Outcomes
C01	Öğrencilerin Tarih Şuuru ve Bilinci Kazanması
C02	Milli Mücadele ve Türkiye Cumhuriyeti'nin Kuruluşu
C03	II. Dünya Savaşı'mn Sebep ve Sonuçlarıyla Öğrenilmesi
C04	Öğrencilerin Vatandaşlık Şuuru ve Bilinci Kazanması

Program Learning Outcomes

No	Learning Outcome
P08	Ability to work effectively in disciplinary and multi-disciplinary teams.
P02	Ability to define, formulate and solve complex engineering problems; ability to select and apply appropriate modeling and analysis methods for this purpose.
P07	Professional and ethical responsibility
P06	Ability to communicate effectively in Turkish orally and in writing; knowledge of at least one foreign language.
P01	Sufficient knowledge in mathematics, science and electrical and electronic engineering; ability to apply theoretical and applied knowledge in these fields to engineering problems.
P05	Ability to design and conduct experiments, collect data, analyze and interpret results for the study of engineering problems.
P03	Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; for this purpose, the ability to apply modern design methods
P11	Information about the effects of engineering practices on health, environment and safety in universal and social dimensions and the problems of the age; awareness of the legal consequences of er
P09	Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.
P10	Information on project management and business practices such as risk management and change management; awareness of entrepreneurship, innovation and sustainable development.
P04	Ability to develop, select and use modern techniques and tools necessary for engineering practice; Ability to use information technologies effectively.

Assessment		
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	0	0	0
Presentation	0	0	0
Mid-terms	1	4	4
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	4	4
Total Work Load			**64**
ECTS Credit of the Course			**2**

Course Contribution To Program

Contribution: 1: Very Slight 2:Slight 3:Moderate 4:Significant 5:Very Significant

	P06	P11
All	2	3