EUROPEAN UNIVERSITY OF LEFKE

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

PROGRAMME HANDBOOK

2026

PROGRAM INFORMATION

Program Name and Degree Awarded: Electrical & Electronics Engineering / Bachelor of Science (B.Sc.)

Duration of Studies: 4 years / 8 semesters

Total Credits / ECTS: 143 credits / 240 ECTs

Language of Instruction: English

Mission and Vision:

The mission of European University of Lefke's (EUL) Electrical & Electronics Engineering program is to educate competent, creative, and innovative engineers who possess both theoretical knowledge and practical skills, with a strong emphasis on problem-solving, analytical thinking, and adherence to ethical principles.

Our vision is to become one of the most prestigious engineering departments in our region by training engineers who can keep up with global developments, are aware of contemporary problems, produce creative solutions to these problems, and are able to work effectively in-group work and take part in national and international projects.

Program Objectives:

The objectives of the European University of Lefke (EUL) Electrical & Electronics Engineering program are to cultivate competent, innovative, and ethical engineers who possess strong theoretical knowledge and practical skills to address complex problems in the field.

Program Learning Outcomes:

(i) Engineering Knowledge: Knowledge of mathematics, science, basic engineering, computer computing and subjects specific to the relevant engineering discipline; Ability to use this information in solving complex engineering problems.

(ii) Problem Analysis: The ability to define, formulate and analyze complex engineering problems using basic science, mathematics and engineering knowledge and taking into account the UN Sustainable Development Goals* relevant to the problem under consideration.

(iii)Engineering Design: Ability to design creative solutions to complex engineering problems; The ability to design complex systems, processes, devices or products to meet current and future requirements, taking into account realistic constraints and conditions.

(iv)Use of Techniques and Tools: The ability to select and use appropriate techniques, resources and modern engineering and informatics tools, including estimation and modeling, for the analysis and solution of complex engineering problems, while being aware of their limitations.

(v) Research and Investigation: Ability to use research methods, including literature research, designing and conducting experiments, collecting data, analyzing and interpreting results, to investigate complex engineering problems

(vi)Part(s):

a. Global Impact of Engineering Practices: Information about the effects of engineering practices on society, health and safety, economy, sustainability and environment within the scope of the UN Sustainable Development Goals.
b. Awareness of the legal consequences of engineering solutions.

(vii) Ethical Behavior: Acting in accordance with engineering professional principles, knowledge about ethical responsibility; Awareness of acting impartially, without discrimination on any issue, and being inclusive of diversity

(viii) Individual and Team Work: Ability to work effectively individually and as a team member or leader in intradisciplinary and multidisciplinary teams (face-to-face, remote or hybrid).

(ix) Oral and Written Communication: The ability to communicate effectively verbally and in writing on technical issues, taking into account the various differences of the target audience (such as education, language, profession).

(x) Part(s):

a. Project Management: Knowledge of business practices such as project management and economic feasibility analysis.
b. Awareness about entrepreneurship and innovation.

(xi) Lifelong Learning: Lifelong learning skill that includes being able to learn independently and continuously, adapting to new and developing technologies, and thinking inquisitively about technological changes.

ELECTRICAL & ELECTRONICS ENGINEERING - Curriculum							
1st Year Fall				**1st Year Spring**			
	COURSE CODE AND NAME	**CREDIT**	**ECTS**		**COURSE CODE AND NAME**	**CREDIT**	**ECTS**
1	COM101 ENGLISH I	(3,0) 3	5	9	COM108 HISTORY	(2,0) 2	4
2	COM111 CHEMISTRY	(3,0) 3	4	10	COM110 ENGLISH II	(3,0) 3	5
3	COMP117 COMPUTING FOUNDATIONS	(3,1) 4	5	11	COM122 PHYSICS II	(3,0) 3	4
4	EEE119 INTRODUCTION TO PROFESSION	(2,0) 0	2	12	COMP124 COMPUTER PROGRAMMING	(3,2) 4	5
5	ENG111 CHEMISTRY LAB	(0,2) 1	2	13	ENG122 PHYSICS II LAB	(0,2) 1	2
6	ENG121 PHYSICS I LAB	(0,2) 1	2	14	MATH109 LINEAR ALGEBRA	(3,0) 3	4
7	ENG131 PHYSICS I	(3,0) 3	4	15	MATH110 CALCULUS II	(3,2) 4	6
8	MATH101 CALCULUS I	(3,2) 4	6				
		19	**30**			**20**	**30**
2nd Year Fall				**2nd Year Spring**			
	COURSE CODE AND NAME	**CREDIT**	**ECTS**		**COURSE CODE AND NAME**	**CREDIT**	**ECTS**
16	COM106 TURKISH	(2,0) 2	4	22	EE214 ELECTROMAGNETIC THEORY I	(3,0) 3	5
17	EE203 DIGITAL CIRCUITS I	(2,2) 3	6	23	EE216 CIRCUIT THEORY II	(3,2) 4	6
18	EEE215 CIRCUIT THEORY I	(3,2) 4	6	24	EE228 ELECTRONICS I	(3,2) 4	5
19	EE227 ELECTRICAL MATERIALS	(3,0) 3	4	25	EE252 TECHNICAL DRAWING	(3,0) 3	4
20	LEUXX1 FREE ELECTIVE I	(3,0) 3	5	26	MATH224 ENGINEERING MATHS	(3,0) 3	5
21	MATH201 ORDINARY DIFFERENTIAL EQUATIONS	(3,2) 4	5	27	MATH226 PROBABILITY & STATISTIC METHODS	(3,0) 3	5
		19	**30**			**20**	**30**
3rd Year Fall				**3rd Year Spring**			
	COURSE CODE AND NAME	**CREDIT**	**ECTS**		**COURSE CODE AND NAME**	**CREDIT**	**ECTS**
28	EE315 ELECTROMAGNETIC THEORY II	(3,0) 3	6	33	EE320 MICROPROCESSOR SYSTEMS	(3,2) 4	6
29	EE317 SIGNALS AND SYSTEMS	(3,1) 3	6	34	EE322 CONTROL SYSTEMS	(3,0) 3	6
30	EE337 ELECTRONICS II	(3,2) 4	7	35	EE342 COMMUNICATION SYSTEMS I	(2,2) 3	7
31	EE339 ELECTRONIC INSTRUMENTATION	(3,0) 3	5	36	EE348 ELECTROMECHANICAL ENERGY CONVERSION II	(3,0) 3	6
32	EE341 ELECTROMECHANICAL ENERGY CONVERSION I	(3,0) 3	6	37	LEUXX2 FREE ELECTIVE II	(3,0) 3	5
		16	**30**			**16**	**30**
4th Year Fall				**4th Year Spring**			
	COURSE CODE AND NAME	**CREDIT**	**ECTS**		**COURSE CODE AND NAME**	**CREDIT**	**ECTS**
38	BUSN461 STRATEGIC PLANNNING AND MANAGEMENT	(3,0) 3	5	45	EE452 GRADUATION PROJECT II	(0,9) 5	10
39	ECON413 ENGINEERING ECONOMICS	(3,0) 3	5	46	EEXX4 TECHNICAL ELECTIVE IV	(3,3) 3	5
40	EE310 SUMMER TRAINING	(0,0) 0	2	47	EEXX5 TECHNICAL ELECTIVE V	(3,0) 3	5
41	EE410 GRADUATION PROJECT I	(0,2) 1	3	48	EEXX6 TECHNICAL ELECTIVE VI	(3,0) 3	5
42	EEXX1 TECHNICAL ELECTIVE I	(3,0) 3	5	49	ENGG434 ENGINEERING ETHICS	(3,0) 3	5
43	EEXX2 TECHNICAL ELECTIVE II	(3,0) 3	5				
44	EEXX3 TECHNICAL ELECTIVE III	(3,0) 3	5				
		16	**30**			**17**	**30**

Laboratory and Equipment Capacity (if applicable):
Students have access to several up-to-date and well-resourced facilities, such as our Physics Laboratory, General Computer Laboratories, Electronics Laboratory, Control Laboratory, Communication Systems Laboratory, Digital Electronics and Microprocessor Laboratory, Computer-Aided Design Laboratory and Computer Networks Laboratory.

The Department of Electrical & Electronics Engineering uses the laboratories listed in the Table below. Depending on the nature of the work done in the laboratory, the instruction during a lab session is performed by the Course Instructor and/or the appointed Teaching Assistants. High-quality equipment and apparatus are used in our laboratories. The equipment that is made available in the laboratory is experiment-oriented, i.e. only equipment that is prescribed to be used in certain experiments are made available for students.

Table - The Faculty of Engineering Laboratories used by the EEE Department

Laboratory Name	Student Capacity	Area (m2)
Electrical, Electronics and Digital Laboratory	**40**	**100**
Electric Machinery and Power Laboratory	**20**	**100**
Microwave and Antennas Laboratory	**20**	**70**
Communications Laboratory	**24**	**80**
Microprocessors Laboratory	**24**	**70**
Control Systems Laboratory	**20**	**70**
Computer Laboratory	**30**	**42**
Research Laboratory	**20**	**60**
Chemistry Laboratory	**30**	**100**
Physics Laboratory	**30**	**75**
3D Design Laboratory	**15**	**80**
Macintosh Laboratory	**30**	**70**

Career Opportunities:
Electrical & Electronics Engineering careers offer diverse opportunities across multiple sectors, including power and energy, telecommunications, aerospace, automotive, robotics, IoT and embedded systems, and electronics manufacturing. Key career paths include roles like Design Engineer, Controls Engineer, Test Engineer, Project Engineer, Hardware Engineer, Sales

Engineer, and Electrical Engineer. The demand for EEE graduates is high globally, supporting fields from consumer goods to defense and IT.

Contact Information:

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EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Economics & Administrative Sciences"

"Department of Business Administration"

SYLLABUS

2025-26 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
BUSN 461	Strategic Planning & Management		3	0	0	3	5	Thursday, 9:00-11:50
Prerequisite			**Prerequisite to**					

Course Lecturer	Assist. Prof. Dr. Hüseyin Karşılı	**Office Hours Schedule**	Tursday, 09:00-11:50
E-mail	hkarsili@eul.edu.tr		
Phone	3601	**Office / Room No**	FEAS 06
Teaching Assistant	-	**Phone**	
E-mail	-	**Office / Room No**	-

Catalogue Descriptions	The course covers the nature of management, management theories and perspectives, organizational environment, social responsibility and ethics. Course discusses the basic management functions. Planning: decision making, organizational goals, strategic management and implementation. Organizing: organizational structure, organizational design, change and innovation. Leading: engagement and motivation, leadership in organizations, groups in organizations, management and communication. Controlling: primarily focuses on corporate strategic planning process, strategy formulation, impact of micro and macro environment on strategic decision-making.
Course Objectives	The course aims at providing the advanced insights of strategic management perspective on key business decisions. The course
Learning Outcomes	1-Ability to understand the concept of strategy and the basic model of strategic management and its components. 2-Competency in conducting environmental and internal scanning to be transformed into strategies. 3-Ability to possess conceptual and analytical skills required to be developed business, corporate and functional strategies. 4-Ability to work in teams to examine real life cases with an analytical manner and competency in making presentations in front of audiences.
Textbooks and/or References	1-Wheelen, T.L. and Hunger, D. J., (2012) Concepts in Strategic Management and Business Policy, Towards Global Sustainability, Boston: Pearson. 2-Grant, R. M. And Jordan, J. (2012) Foundations of Strategy. West Sussex: Wiley. 3-Kourdi, J. (2015) Business Strategy : A Guide to Effective Decision-making, London: The Economist. 4- Schilling, M. (2016) Strategic Management of Technological Innovation, 5th Edition, Kindle Edition.

WEEK	Date	TOPICS	Reference No - Section
Week 1	**25/09/2025**	Introduction & Course Overview	
Week 2	**02/10/2025**	Basic Concepts of Strategic Management	2:1; 1:1; 3:1; 4.3
Week 3	**09/10/2025**	Corporate Governance	2:1; 1:1; 3:1; 4.3
Week 4	**16/10/2025**	Social Responsibility and Ethics in Strategic Management	1:4
Week 5	**23/10/2025**	Environmental Scanning and Industry Analysis	1:5; 1:6
Week 6	**30/10/2025**	Organizational Analysis and Competitive Advantage	1:5; 1:6
week 7	**06/11/2025**	Midterm Revision	
week 8	**8-16 NOVEMBER**	**Midterm Examination**	1:6
Week 9	**20/11/2025**	Strategy Formulation: Business Strategy	1:7; 3:8
week 10	**27/11/2025**	Strategy Formulation: Corporate Strategy	1:8
week 11	**04/12/2025**	Strategy Formulation: Functional Strategy and Strategic Choice	
week 12	**11/12/2025**	Project Report	5:4; 5,7
week 13	**18/12/2025**	Strategic Analysis	4:6
week 14	**25/12/2025**	Final Examination Revision	4.7
Week 15 and 16	**3-11 JANUARY 2026**	**Final Examination**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Semester Evaluation			100	
Final Exam	1	03-11 January, 2026	60	60,0
Midterm(s)	1	8-16 NOVEMBER	40	40,0
Quizzes & Class				
Project(s)				
Homework				
Other				

ECTS Evaluation — Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	12	36,0	Applied Hours		
Midterm	1	1,0	Final	1	1,0
Midterm Study	1	33,0	Final Study	1	49,0
Quiz			Project		
Quiz Study			Homework		
Laboratory			Seminar		
Atelier			Presentation		
Field Study			Other	6	38,0
			TOTAL :		158,0
			Recommended ECTS Credit (Total Hours / 30) :		5.26 ≅ 5

EUROPEAN UNIVERSITY OF LEFKE

COM 106 - TURKISH

SYLLABUS

Course Code	Course Name	Course Type	Weekly Course Hours			Credits	ECTS	Weekly Time Schedule
			T	A	L			
COMN106	TURKISH (For International Students)		2	0	0	2	2	
Prerequisite		Prerequisite to						

Course Lecturer	Assoc. Prof. Dr. Elnur Ağayev	Office Hours Schedule	
E-mail	eagayev@eul.edu.tr		
Phone		Office / Room No	
Teaching Assistant(s)	-	Phone	
E-mail	-	Office / Room No	

Catalogue Descriptions	Basic structure and sound features of Turkish, Turkish pronunciation, vowel harmony, Turkish sentence structure, frequently used words in Turkish, types of dialogue, English-Turkish translation studies, Turkish text reading exercises.
Course Objectives	For students whose mother tongue is not Turkish, to make them comprehend the basic features of Turkish and to enable students to use Turkish at a basic level in oral and written form through frequently used vocabulary/dialogue studies.
Learning Outcomes	1. Comprehends the basic phonetic and structural features of Turkish 2. Applies the pronunciation features of Turkish 3. Acquires the basic vocabulary of Turkish 4. Develops Turkish text reading skills 5. Can use Turkish dialogues that are frequently used in daily life.

Textbooks and/or References		
	1	Birsen Çankaya ve diğerleri. Easy Turkish Course. İstanbul: Fono Yayınları, 2006.
	2	Kurtuluş Öztopçu. Elementary Turkish. İstanbul, 2006.
	3	COM106 Turkish lecture notes/slides
	4	Doğan Günay, Özdan Fidan ve diğerleri, Yabancılar İçin Türkçe Ders Kitabı + Alıştırma Kitabı, Papatya Yay., Ankara: 2013.

WEEK	Date	TOPICS	Reference No - Section
Week 1	02/02/2026	Turkish alphabet, translation exercises examples, Turkish sounds	
Week 2	09/02/2026	Turkish sentence structure, translation exercises, vocabulary examples	
Week 3	16/02/2026	Frequently used expressions, daily language sentences 1, translation exercises	
Week 4	23/02/2026	Days, colours, numbers, months, seasons, adjectives, Frequently used verbs 1	
Week 5	02/03/2026	Turkish alphabet and its pronunciation, this/that (bu/şu/o)	
Week 6	09/03/2026	Plural suffix (-lar/-ler), interrogative particle	
Week 7	16/03/2026	How many, how much (kaç?), ordinal numbers (kaçıncı?), Frequently used verbs 2	
Week 8	23/03/2026	There is/isn't (var/yok) cont., opposite adjectives, translation exercises, vocabulary	
Week 9	30/03/2026	Present continuous, daily routine, free time activities	
Week 10	4-12/04/2026	Midterm(s)	
Week 11	13/04/2026	Reading practice, want to (-mak istemek), my family, possesive suffixes	
Week 12	20/04/2026	Countries, nationalities, languages, away from my family, kendi+possesive pronoun	
Week 13	27/04/2026	Hours, special days, translation exercises, reading practice	
Week 14	04/05/2026	Our body, permission and request sentences, revision	
Week 15	11/05/2026	Our body, permission and request sentences, revision	
Week 16	16-25/05/2026	Final Exam	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	16-25/05/2026	60	
	Semester Evaluation				
	Midterm(s)	1	4-12/04/2026	40	
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory				
	Other				

*** *Lifelong Learning Programme (LLP)* *** | Language of Instruction:

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	14	28.0	Applied Hours		
Midterm	1	1.0	Final	1	1.0
Midterm Study	2	6.0	Final Study	2	6.0
Laboratory			Homework		
Atelier			Seminar		
Field Study			Presentation		
Other			Self Study	7	21.0
			TOTAL :	63	2.0

EUROPEAN UNIVERSITY OF LEFKE

COMN 108 - HISTORY

SYLLABUS

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COM108/COMN108	HISTORY (For International Students)	Compulsory	2	0	0	2	2	
Prerequisite		Prerequisite to						

Course Lecturer	Assoc. Prof. Dr. Elnur AĞAYEV	Office Hours Schedule	Monday: 09:00-12:00
E-mail	eagayev@eul.edu.tr		
Phone		Office / Room No	
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	The course provides a detailed exposure on the history of the construction of the Turkish Republic under the light of Kemal Atatürk's principles this course is designed for Turkish speaking students. COM108 is designed for non-Turkish speaking foreign students. The aim of the course is to introduce a brief history of Turkish Republic and Cyprus. Social, economic and political aspects and effects of Western Civilization on Turkey and Cyprus. Relations with Middle East.
Objectives	In this course the students who have been studying at different departments of our university will learn how the Ottoman Empire collapsed and a new Turkish Republic was found in the early 20 th. century. At the same time the students will learn the Eastern Question, Armenian Question and Cyprus Question which were created by different policy powers in the historical period. By the end of the semester the students will be able to understand why Mustafa Kemal is an important figure in the history of Turkey and the world. Besides, they will learn the Turkish Revolution and the estabilishment philosphy of the Turkish Republic and the principles of Mustafa Kemal
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: 1. Analyzes the developments after World War I and the attitude of Mustafa Kemal and his friends in the face of these developments. 2. Understanding the Turkish Foreign Policy of the Atatürk Era. 3. They will have basic information about the political developments in Turkey and the world during and after the Second World War. 4. To have general information about the History of Cyprus.

Textbooks and/or References	1	Lewis, Bernard, **The Emergence of Modern Turkey**, London, 1967.
	2	Kinross, Patrick, **Atatürk The Rebirth of a Nation**, A Phoenix Giant Paperback Publishing, London, 1998.
	3	Luke, Harry, **Cyprus Under The Turks**
	4	COM108 History lecture notes/slides
	5	Denktash, Rauf R, **The Cyprus Triangle**, The Office of the Turkish Republic of Northern Cyprus, New York, 1988.

WEEK	Date	TOPICS	Reference No - Section
Week 1	04/02/2026	Introduction of the Bibliography	
Week 2	11/02/2026	The First World War and the Ottoman Empire	
Week 3	18/02/2026	The First World War and the Ottoman Empire	
Week 4	25/02/2026	The Turkish War of Independence and Turkish Victory (First Phase)	
Week 5	04/03/2026	The Turkish War of Independence and Turkish Victory (First Phase)	
Week 6	11/03/2026	The Turkish War of Independence and Turkish Victory (Second Phase)	
Week 7	18/03/2026	Lausanne Agreement and Proclamation of the Republic of Turkey	
Week 8	25/03/2026	The Strategical Importance of Cyprus	
Week 9	01/04/2026	Cyprus Under the Ottoman Rule	
Week 10	4-12/04/2026	**Midterm Exam**	
Week 11	15/04/2026	Cyprus Under the Ottoman Rule	
Week 12	22/04/2026	National Struggle of Turkish Cypriots	
Week 13	29/04/2026	National Struggle of Turkish Cypriots	
Week 14	06/05/2026	Cyprus Question	
Week 15	13/05/2026	Cyprus Question	
Week 16	16-25/05/2026	Cyprus Question	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		60	50.0
	Semester Evaluation				
	Midterm(s)	1		40	50.0
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory work(s)				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	28	Homework		
TLH self study	7	21	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	1	Final exam (FE)	1	1
ME preparation self study	2	6	FE preparation self study	2	6
				TOTAL :	63
				Recommended ECTS Credit (Total Hours / 30) :	2.00

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 FALL SEMESTER

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMN111	CHEMISTRY	Compulsory	3	0	0	3	4	Thursday 12:00-14:50 (HK000)
Prerequisite		Prerequisite to						

Course Lecturer	Assist. Prof. Dr. Devrim ÖZDAL	Office Hours Schedule	Tuesday 11:00-12:00
E-mail	devrimozdal@eul.edu.tr		
Phone	2516	Office / Room No	Faculty of Engineering / Room No : AS307
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	The aim of this course is to describe students how substances interact with one another. Students will be informed on how the atom is made up, how atoms come together to make molecules and how molecules can interact, chemical compounds, chemical bonds, chemical equations and reactions, aqueous solutions, periodic table, gases, the electronic structure of the atom.
Objectives	The aim of this course is to deliver basic general chemistry content and introduce students to the chemistry laboratory. Matter, atomic structure, periodic table, mole concept. stoichiometry, aqueous solutions, and gasses.
Learning Outcomes	On successful completion of the course, the student will be able to: (1) understand and carryout calculations on properties of Substances (2) learn atomic structure and naming of compuounds (3) learn mole concept, balancing equations, stoichiometry (4) carry out calculations on aqueous reactions (5) learn ideal gasses, gas mixtures and gas properties (6) understand electronic configurations and covalent bonding (7) understand concentration units of solutions, principles of solubility and colligative properties of nonelectrolytes

Programme Outcome Relations			
PO1: 5	PO7: 1	(1) Strongly disagree;	
PO2: 1	PO8: 1	(2) Disagree;	
PO3: 1	PO9: 1	(3) Neither agree nor disagree;	
PO4: 1	PO10: 1	(4) Agree;	
PO5: 1	PO11: 1	(5) Strongly agree.	
PO6: 1			

Textbooks and/or References		
	1	William L. Masterton, Cecile N. Hurley, Chemistry Principles and Reactions, 8th edition, Cengage Learning, 2016.
	2	Nivaldo J. Tro, Chemistry: A Molecular Approach, 5th ed., Pearson Education Limited, 2021.
	3	K.M.Whitten, R.E.Davis, M.L.Pech, G.G.Stanley, Chemistry, 10th ed., Brooks/Cole CENGAGE Learning, 2014.

WEEK	Date	TOPICS	Reference No - Section
Week 1	22-26.09.2025	Matter and Measurements; Classifications of matters and Units in measurements	1: 1.1-1.2
Week 2	29.09.-03.10.2025	Matter and Measurements; Properties of Substances and Density	1: 1.3
Week 3	06-10.10.2025	Atoms, Molecules and Ions; Atom theories and Subatomic particles	1: 2.1-2.4
Week 4	13-17.10.2025	Atoms, Molecules and Ions; Properties of Periodic table and Structural formulas	1: 2.4, 2.6
Week 5	20-24.10.2025	Atoms, Molecules and Ions; Naming of Ionic and Covalent Compounds	1: 2.7
Week 6	27-31.10.2025	Mass Relations in Chemistry: Stoichiometry ; Moles, mole-gram conversions and Reactions	1: 3.1-3.3
Week 7	03-07.11.2025	Mass Relations in Chemistry; Writing and Balancing Chemical equations, Limiting Reactant, Theoretical and Experimental Yield, Percent Yield	1: 3.3-3.7
Week 8	***10-14.11.2025***	***Midterm Exam Week***	
Week 9	17-21.11.2025	Mass Relations in Chemistry; Writing and Balancing Chemical equations, Limiting Reactant, Theoretical and Experimental Yield, Percent Yield	1: 3.3-3.7
Week 10	24-28.11.2025	Reactions in Aqueous Solutions	1:4.1-4.7
Week 11	01-05.12.2025	Gases; Measurements of gases, Ideal gas law, Gas mixtures	1: 5.1-5.7
Week 12	08-12.12.2025	Electronic Structure and Periodic Table	1: 6.1-6.7
Week 13	15-19.12.2025	Solutions; Concentration Units, Properties of Solubility	1: 10.1-10.7
Week 14	22-26.12.2025	Revision	All Topics
Week 15	29-31.12.2025	*Public Holiday*	
Week 16	05.09.01.2026	***Final Exam Week***	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	03-11.01.2026	50	
Semester Evaluation			50	
Midterm(s)	1	08-16.11.2025	50	100,0
Quiz(zes)				
Project(s)				
Homework(s)				
Laboratory works				
Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	39	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	12	FE preparation self study	1	16
			TOTAL :		110
			Recommended ECTS Credit (Total Hours / 25) :		4,4

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COM122	PHYSICS II	Compulsory	3	0	0	3	5	Mondays 12.00-14.50 (ASA100)
Prerequisite		Prerequisite to						

Course Lecturer	Assist. Prof. Dr. Semih OĞUZCAN	Office Hours Schedule	Monday 10.00-11.50 /Tuesday 13.00-14.50 /Friday 14.00-14.50
E-mail	soguzcan@eul.edu.tr		
Phone		Office / Room No	AS310
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course aims to introduce fundamental concepts of physics for engineering science and to provide essential background for engineering students. The course provides deep understanding of thermodynamics, electricity and magnetism. Also, the course aims to show the students the engineering applications of the course material.
Objectives	The main aim of this course is to introduce the fundamental concepts of thermodynamics, electricity and magnetism necessary for engineering science and to provide essential background for engineering students.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) An ability to translate, interpret and extrapolate important scientific models and laws governing thermodynamics, (2) An ability to translate, interpret and extrapolate important scientific models and laws governing electricity (3) An ability to translate, interpret and extrapolate important scientific models and laws governingelectricitymagnetism. (4)An ability to demonstrate critical thinking and problem solving skills in the area of physics (5) An ability to perform mathematical modeling of basic problems and establish their analytic solutions in field of thermodynamics, electric and magnetism

Programme Outcome Relations			
	PO1: 5 **PO2: 4** **PO3: 1** **PO4: 1** **PO5: 1** **PO6: 1**	**PO7: 1** **PO8: 1** **PO9: 1** **PO10: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Serway, Physics for Scientists and Engineers with Modern Physics, 9/e
	2	Halliday and Resnick, Fundamentals of Physics
	3	Sears and Freedman, University Physics, 10/e
	4	Gettys, Keller and Skove, Physics: Classical and Modern

WEEK	Date	TOPICS	Reference No - Section
Week 1	02/02/2026	Introduction & Temperature and Thermal Expansion of Solids and Liquids, Macroscopic Description of Ideal Gas	1:19.1,19.2,19.3,19.4,19.5
Week 2	09/02/2026	The First Law of Thermodynamics	1:20.1,20.2,20.3,20.4,20.5,20.6,20.7
Week 3	16/02/2026	The Kinetic Theory of Gases	1:21.1,21.2,21.3,21.4,21.5
Week 4	23/02/2026	Heat Engines,Entropy and Second Law of Thermodynamics	1:22.1,22.2,22.3,22.4,22.6,22.7
Week 5	02/03/2026	Electric Force and Electric Field, Coloumb's Law for point charges	1:23.1,23.2,23.3,23.4,23.5,23.6
Week 6	09/03/2026	Electric Field of Continuous Uniform Charge distributions and applications of Gauss Law	1:24.1, 24.2,24.3, 24.4
Week 7/8/9/10	14-12/03-04/2026	**MIDTERM**	
Week 11	13/04/2026	Electric Potential Energy, Electric Potential and derivation of Electric Field from Electric Potential	1:25.1,25.2,25.3,25.4
Week 12	20/04/2026	Magnetic Fields, Magnetic Force on a point charge and a current carring wire	1:29.1,29.2,29.3,29.4,29.5
Week 13	27/04/2026	Sources of Magnetic Fields, Magnetic Field crated by point charges and current carring wires	1:30.1,30.2,30.3
Week 14	04/05/2026	Gauss Law in magnetism and Magnetism in Matter	1:30.5,30.6
Week 15	11/05/2026	Faraday's Law and Induced Current	1:31.1,31.2,31.3,31.4, 31.4,31.5
Week-16/17	16-25/05/2026	**FINAL**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	16-25/05/2026	50	50.0
	Semester Evaluation			50	
	Midterm(s)	1	14-12/03-04/2026	40	40.0
	Quiz(zes)	1	27/04/2026	10	10.0
	Project(s)				
	Homework(s)				
	Laboratory work(s)				
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	50	Project		
Quiz (Q)	1	2	Presentation		
Q preparation self study	1	10	Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	25	FE preparation self study	1	25
				TOTAL :	155
				Recommended ECTS Credit (Total Hours / 30) :	5.17

EUROPEAN UNIVERSITY OF LEFKE

SYLLABUS

2020-2021 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COM 101	English I	Compulsory	3	0	0	3	3	
Prerequisite		Prerequisite to						

Course Lecturer	Mehmet Mert	Office Hours Schedule	Friday 08:30-11:30
E-mail	mmert@eul.edu.tr		
Phone		Office / Room No	
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course is intended for academically oriented students and it aims to bridge the gap between general and academic English. The course aims at developing the skills required for academic study, including note-taking, essay writing, as well as teaching strategies for undertaking research and dealing with unfamiliar academic vocabulary. The course also aims at teaching the features of guided writing, reading strategies such as predicting, skimming, and scanning. At the end of this course the students are expected to be able to; develop strategies, to improve the ability to comprehend complex academic texts, to develop strategies to produce more coherent writing and, make clear, appropriate, relevant notes from academic texts, and to adopt various approaches to deal with new or unknown vocabulary by practising effective use of dictionaries, and through making effective vocabulary records.
Course Objectives	This course introduces the main grammatical structures to the students and helps them to develop their listening, speaking , reading and writing skills as well as vocabulary and pronunciation. The students are provided with clear rules and example sentences. The lessons contain high frequency vocabulary that the students are likely to come across during their studies and future their future careers.
Learning Outcomes	On successful completion of the course, the students will be able to: (1) understand and use English structures accurately to express themselves, (2) learn and use the vocabulary learnt during the lessons in real-life contexts.

Programme Outcome Relations			
	PO1: 1	PO7: 5	(1) Strongly disagree;
	PO2: 1	PO8: 3	(2) Disagree;
	PO3: 1	PO9: 1	(3) Neither agree nor disagree;
	PO4: 1	PO10: 1	(4) Agree;
	PO5: 1	PO11: 1	(5) Strongly agree.
	PO6: 4		

Textbooks and/or References		
	1	English File, Intermediate Plus, Student's Book, Christina Latham- Koenig, et al, Oxford University Press, Third Edition
	2	English File, Pre-Intermediate Plus, Workbook, Christina Latham- Koenig, et al, Oxford University Press, Third Edition
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1		Pronouns	1.2
Week 2		Making adjectives	1.2
Week 3		Adjectives	1.2
Week 4		Adjective Suffixes	1.2
Week 5		Modals of deduction	1.2
Week 6		Holidays	1.2
Week 7		Possessives, shops, services	1.2
Week 8		Past Simple / Continuous, used to, stages of life	1.2
Week 9	10-18/04/21	**Midterms**	
Week 10		Passives	1.2
Week 11		kinds of films	1.2
Week 12		future forms, rubbish and recycling	1.2
Week 13		1st-2nd conditionals, applying for a job-course	1.2
Week 14		Present Perfect Simple, TV (phrasal verbs)	1.2
Week 15		Present Perfect Continuous, Types of TV prog.	1.2
Week 16	12-20/06/21	**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		50	
	Semester Evaluation			50	
	Midterm(s)	1		50	100.0
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	39	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	10	FE preparation self study	1	10
				TOTAL :	102
				Recommended ECTS Credit (Total Hours / 30) :	3.40

EUROPEAN UNIVERSITY OF LEFKE

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COM 110	English II	Compulsory	3	0	0	3	3	
Prerequisite	COM 101	Prerequisite to						

Course Lecturer	Mehmet Mert	Office Hours Schedule	Friday 08:30-11:30
E-mail	mmert@eul.edu.tr		
Phone		Office / Room No	
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course is the continuation of the COM101 English I course. Similar issues are focused on as in the former course with a higher tone of language. This course integrates all four language skills and teaches students how to integrate skills and content in real-world academic contexts. High-interest and intellectually-simulating authentic materials are used to familiarize students with academic content. The course also aims at developing the ability to participate in exchanges of information and opinions in the context of the specific field, and to write instructions, descriptions and explanations about topics in the related field. Extra importance is put on teaching students terminology related to the specific field.
Course Objectives	This course introduces the main grammatical structures to the students and helps them to develop their listening, speaking , reading and writing skills as well as vocabulary and pronunciation. The students are provided with clear rules and example sentences. The lessons contain high frequency vocabulary that the students are likely to come across during their studies and future their future careers.
Learning Outcomes	On successful completion of the course, the students will be able to: (1) understand and use English structures accurately to express themselves, (2) learn and use the vocabulary learnt during the lessons in real-life contexts.

Programme Outcome Relations			
	PO1: 1	**PO7: 5**	**(1) Strongly disagree;**
	PO2: 1	**PO8: 3**	**(2) Disagree;**
	PO3: 1	**PO9: 1**	**(3) Neither agree nor disagree;**
	PO4: 1	**PO10: 1**	**(4) Agree;**
	PO5: 1	**PO11: 1**	**(5) Strongly agree.**
	PO6: 4		

Textbooks and/or References		
	1	English File, Intermediate Plus, Student's Book, Christina Latham- Koenig, et al, Oxford University Press, Third Edition
	2	English File, Pre-Intermediate Plus, Workbook, Christina Latham- Koenig, et al, Oxford University Press, Third Edition
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1		Obligation, Necessity	1.2
Week 2		Prohibition, advice, DIY	1.2
Week 3		can, could, be able to	1.2
Week 4		vocabulary, things on the table	1.2
Week 5		Phrasal verbs	1.2
Week 6		verb patterns	1.2
Week 7		have something done	1.2
Week 8		at the hairdresser's	1.2
Week 9	10-18/04/21	**Midterms**	
Week 10		Passive	1.2
Week 11		Reported Speech	1.2
Week 12		Past Perfect	1.2
Week 13		be,do,have	1.2
Week 14		Auxiliary + main verbs	1.2
Week 15		Question tags	1.2
Week 16	12-20/06/21	**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		50	
	Semester Evaluation			50	
	Midterm(s)	1		50	100.0
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	39	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	10	FE preparation self study	1	10
			TOTAL :		102
			Recommended ECTS Credit (Total Hours / 30) :		3.40

EUROPEAN UNIVERSITY OF LEFKE

Computer Engineering - Faculty of Engineering

SYLLABUS

2024-2025 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP 117	Computing Foundations	Compulsory	3	0	2	4	6	Friday 12:00-14:50
Prerequisite		Prerequisite to				COMP 124		

Course Lecturer	Asst. Prof. Dr. Zafer Erenel	Office Hours Schedule	
E-mail	zerenel@eul.edu.tr		
Phone	2521	Office / Room No	AS-312
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Introduction to general problem-solving concepts, algorithms and its applications. Computer terminology, units, and number systems. Steps in problem-solving. Problem solution, pseudocode, algorithms, flowcharts, data types, and control structures. History of computers and programming. A simple C program layout, syntax and rules. C language basics, native types, identifiers, declarations, variables, expressions, and assignments. Basic console input/output functions. Operators, unary, binary, mathematical, relational, equality and logical, precedence and associativity rules, type conversions and casting. Statements, flow of control. Sequential structure. Selective structure, if-else statement. Repetitive structure, while loop, do-while loop, break/continue statements and functions. Tracing C code.
Course Objectives	This course is designed to be taught prior to Computer Programming course to students with little or no prior experience with computer programming. In addition to an introduction to flowcharts, it aims to provide basic problem-solving strategies relevant to computer programming, by exploring the definition and use of algorithms to achieve a certain task using an input data.
Learning Outcomes	1) Understanding flowcharts 2) Producing algorithms for simple problems 3) Ability to trace programs 4) Knowledge of the basics of C programming language 5) Awareness of computer terminology

Programme Outcome Relations			
	PO1: 5	**PO7: 1**	**(1) Strongly disagree;**
	PO2: 1	**PO8: 1**	**(2) Disagree;**
	PO3: 1	**PO9: 4**	**(3) Neither agree nor disagree;**
	PO4: 1	**PO10: 1**	**(4) Agree;**
	PO5: 1	**PO11: 1**	**(5) Strongly agree.**
	PO6: 1		

Textbooks and/or References		
	1	Maureen Sprankle, "Problem Solving and Programming Concepts", Pearson Prentice Hall, 2006, ISBN: 0-13-119459-3
	2	Marshall Brain, "The Basics of C Programming", 2013.
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	4.10	Introduction to computers and programming	
Week 2	11.10	Computers in general, terminology, units and numbers.	1: 1
Week 3	18.10	Steps of problem solving, pseudo code	1: 1, 5
Week 4	25.10	Formalizing an algorithm, flow chart	1: 5
Week 5	1.11	Problem solving with computers, control structures.	1: 6, 7
Week 6	8.11	Problem solving with computers, control structures.	1: 5
Week 7	15.11	HOLIDAY	
Week 8	16-11/24-11	**MIDTERMS**	
Week 9	29.11	Brief history of computers and programming.	
Week 10	6.12	Introduction to C programming, first C program, variables and statements	2: 1, 2
Week 11	13.12	Data types, operators, details of printf and scanf formatting instructions	2: 2, 4
Week 12	20.12	Functions,Libraries, Tracing Programs	
Week 13	27.12	Conditional keywords, if, else, else if, switch/case/break.	2: 3, 5, 6
Week 14	3.1	Loops using for, while, and do/while.	2: 3
Week 16	10.1/19.1	**FINALS**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	10.1/19.1	50	
Semester Evaluation			50	
Midterm(s)	1	16.11/24.11	40	90
Quiz(zes)				
Project(s)				
Homework(s)	2	TO BE ANNOUNCED	10	10
Laboratory works				
Attendance				

**** Lifelong Learning Programme (LLP) ****

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	12	36	Homework	2	24
TLH self study	12	36	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	36	FE preparation self study	1	36
				TOTAL :	166
			Recommended ECTS Credit (Total Hours / 30) :		5.73

EUROPEAN UNIVERSITY OF LEFKE

Computer Engineering - Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS
COMP 124	Computer Programming	Compulsory	3	0	2	4	6

Prerequisite	COMP 117	**Prerequisite to**	COMP 217 / COMP 218
Course Lecturer	Dr. Ferhun Yorgancıoğlu	**Office Hours Schedule**	Tuesday 15:00-16:00 Wednesday 10:00-11: Thursday 14:00-16:00
E-mail	fyorgancioglu@eul.edu.tr		
Phone	2508	**Office / Room No**	AS-314
Teaching Assistant	Mr. Ferhat Cemoğlu	**Phone**	
E-mail		**Office / Room No**	

Catalogue Descriptions

This course introduces the C programming language with an emphasis on structured programming principles and fundamental programming techniques. To operators, and control structures such as if–else, switch–case, and iterative loops. The course covers function design, parameter passing, and scope rules, fo within functions. Pointers are studied in relation to arrays, pointer arithmetic, and function arguments. User-defined data types—including structures, unio support modular program design. The course also presents preprocessing directives and standard header files, providing a foundation for writing efficient a

Objectives

To equip students with structured programming skills in C by developing proficiency in control-flow constructs, functions, and derived data types—including effective problem solving.

Learning Outcomes

Upon successful completion of the course, students will be able to:
(1) explain fundamental C language concepts, including data types, operators, expressions, and evaluation order;
(2) apply control structures such as if–else, switch–case, while, for, and do–while loops to solve programming problems;
(3) implement procedural programs using C functions, including parameter passing, scope rules, and storage classes;
(4) use arrays, strings, and pointers effectively, including implementing custom string-processing functions;
(5) define and apply user-defined data types, particularly structures, within modular C programs.

Programme Outcome Relations

PO1: 5	**PO7: 1**	**(1) Strongly disagree;**
PO2: 5	**PO8: 3**	**(2) Disagree;**
PO3: 3	**PO9: 2**	**(3) Neither agree nor disagree;**
PO4: 4	**PO10a: 1**	**(4) Agree;**
PO5: 1	**PO10b: 1**	**(5) Strongly agree.**
PO6a: 1	**PO11: 2**	
PO6b: 1		

Textbooks and/or References

1	SG Kochan, Programming in C, 4th ed., Addison-Wesley, 2015.
2	S Prata, C Primer Plus, 6th ed., Addison-Wesley, 2014.
3	P Prinz, T Crawford, C in a Nutshell: The Definitive Reference, 2nd ed., O'Reilly Media, 2016.

WEEK	Date	TOPICS
Week 1	02-06/02/26	Introduction to C, Console I/O Operations
Week 2	09-13/02/26	Expressions, Data Types, and Type Conversions
Week 3	16-20/02/26	Selection Statements: if–else, switch–case, Nesting
Week 4	23-27/02/26	Iteration Statements: Loops, break, continue, Nesting
Week 5	02-06/03/26	Writing Functions: Return Statements, Function Calls, Parameters vs Arguments, Call by Value
Week 6	09-13/03/26	Writing Functions: Modular Function Design and Program Decomposition
Week 7	16-20/03/26	Scope Rules, Storage Classes, Function Prototypes
Week 8	23-27/03/26	Arrays: Declaration, Initialization, Arrays as Function Arguments, Multi-dimensional Arrays
Week 9	30/03-03/04/26	Strings: Character Arrays, Standard String-Handling Functions, String Manipulation
Week 10	04-12/04/26	**Midterms**
Week 11	13-17/04/26	Pointers: Pointer Arithmetic, Array–Pointer Relationship, Pointer Notations
Week 12	20-24/04/26	Pointers as Function Arguments, Arrays of Pointers, Dynamic Memory Allocation
Week 13	27/04-01/05/26	Structures and Enumerations, Structures in Functions
Week 14	04-08/05/26	Structures vs Unions, Preprocessing Directives, Review of Pointers and Structures
Week 15	11-15/05/26	Course Review and Revision
Week 16-17	16-25/05/26	**Finals**

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)
Final Exam	1	23/05-02/06/25	40
Semester Evaluation			60
Midterm(s)	1	12-20/04/25	35
Quiz(zes)			
Project(s)			
Homework(s)			
Laboratory works	8		25
Attendance			

**** Lifelong Learning Programme (LLP) ****

Language of Instruction:

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity
Theoretical lecturing hours (TLH)	14	42	Homework	
TLH self study	14	63	Project	
Quiz (Q)			Presentation	
Q preparation self study			Seminar	
Laboratory (L)	8	16	Tutorial	
L preparation work	8	24		

EUROPEAN UNIVERSITY OF LEFKE

Computer Engineering - Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP 415	Artificial Intelligence	Compulsory	3	0	0	3	5	Friday: 09:00 - 11:50 ASA100
Prerequisite	-	Prerequisite to				-		

Course Lecturer	Asst.Prof.Dr. Yusuf KARTAL	Office Hours Schedule	Monday: 09:00 - 10:00
E-mail	ykartal@eul.edu.tr		
Phone	-	Office / Room No	AS-308
Teaching Assistant	-	Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course offers a rigorous introduction to the fundamental concepts, techniques, and real-world applications of Artificial Intelligence. Students will explore the core pillars of the field, moving from classical logic and knowledge representation to modern machine learning and heuristic search algorithms. Through a blend of theoretical study and hands-on implementation, participants will learn how to model complex problems and engineer intelligent systems capable of autonomous decision-making. By the end of the term, students will have the practical skills necessary to design and deploy AI solutions, providing a solid foundation for further specialization in neural networks, robotics, or natural language processing.
Objectives	This course introduces the fundamental concepts, techniques, and applications of Artificial Intelligence. Students will learn problem-solving, knowledge representation, machine learning, and search algorithms, and apply these in practical AI systems.
Learning Outcomes	Upon successful completion of the course, students will be able to: (1) gain an understanding of the key components of the artificial intelligence (AI). (2) define a problem and environmental factors (3) use the appropriate search method in achieving desired goals. (4) represent knowledge using various techniques. (5) awareness of the legal and ethic consequences of AI solutions.

Programme Outcome Relations			
	PO1: 5 **PO2: 4** **PO3: 2** **PO4: 5** **PO5: 4** **PO6a: 1** **PO6b: 1**	**PO7: 3** **PO8: 4** **PO9: 4** **PO10a: 1** **PO10b: 1** **PO11: 5**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	S. Russell, P. Norvig, "Artificial Intelligence: A Modern Approach", Prentice-Hall, 2003.
	2	
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	26/09/2025	Introduction to AI	1:1
Week 2	3/10/2025	Intelligent Agents & Environments	1:1
Week 3	10/10/2025	Problem-Solving by Search	1:2
Week 4	17/10/2025	Informed Search & Heuristics	1:2
Week 5	24/10/2025	Adversarial Search & Games	1:3
Week 6	31/10/2025	Knowledge Representation & Reasoning	1:3
Week 7	7/11/2025	Planning & Decision Making	1:3
Week 8	8-16/11/2025	**Midterms**	
Week 9	21/11/2025	Probability & Uncertainty	1:3
Week 10	28/11/2025	Probabilistic Reasoning	1:3
Week 11	5/12/2025	Fundamentals of Machine Learning	1:4
Week 12	12/12/2025	Neural Networks & Deep Learning	1:4
Week 13	19/12/2025	Reinforcement Learning	1:4
Week 14	26/12/2025	Natural Language Processing & AI Applications	1:6
Week 15	2/01/2026	Ethics, Future of AI, and Project Presentations	
Week 15-16	03-11.01.2026	**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	03-11/01/26	45	
	Semester Evaluation			55	
	Midterm(s)	1	08-16/11/25	20	36.4
	Quiz(zes)	2	07/11/2025-26/12/2025	5	9.1
	Project(s)	1	31/12/2025	30	54.5
	Homework				
	Laboratory works				
	Attendance				

**** Lifelong Learning Programme (LLP) ****

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	42	Project	1	40
Quiz (Q)	2	0.5	Presentation		
Q preparation self study	2	4	Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	1.5	Final exam (FE)	1	1.5
ME preparation self study	1	8	FE preparation self study	1	16
				TOTAL :	155.5
			Recommended ECTS Credit (Total Hours / 30) :		5.18

EUROPEAN UNIVERSITY OF LEFKE

Computer Engineering - Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP 448	ARTIFICIAL NEURAL NETWORKS	Compulsory	3	0	0	3	5	Tuesday: 09:00-11:50 ASA100
Prerequisite	-	Prerequisite to				-		

Course Lecturer	Asst.Prof.Dr. Yusuf KARTAL	Office Hours Schedule	Monday: 13:00 - 14:00
E-mail	ykartal@eul.edu.tr		
Phone	-	Office / Room No	AS-308
Teaching Assistant	-	Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course offers an intensive exploration of Artificial Neural Networks (ANNs), tracing the evolution of machine learning from foundational mathematical models to state-of-the-art deep learning architectures. Students will navigate the transition from the basic logic of perceptrons to the design of complex systems, including Feedforward, Convolutional (CNNs), and Recurrent Neural Networks (RNNs).
Objectives	This course aims to provide students with a comprehensive understanding of Artificial Neural Networks (ANNs), bridging the gap between theoretical foundations and practical application. Students will explore the mathematical underpinnings of basic perceptrons and advance to designing complex architectures, including feedforward, convolutional (CNNs), and recurrent neural networks (RNNs). A primary objective is to master the mechanics of training deep learning models, with a specific focus on backpropagation, loss functions, and optimization algorithms. Ultimately, by the end of the course, students will be equipped to autonomously design, implement, train, and evaluate neural networks to solve real-world problems in domains like computer vision and natural language processing using industry-standard frameworks such as TensorFlow or PyTorch.
Learning Outcomes	Upon successful completion of the course, students will be able to: (1) Explain the Mathematical Foundations (2) Implement Training Algorithms (3) Construct and configure appropriate neural network architectures (4) Develop Models Using Industry Frameworks (5) Evaluate and Troubleshoot Performance

Programme Outcome Relations			
	PO1: 5 **PO2: 5** **PO3: 1** **PO4: 1** **PO5: 1** **PO6a: 1** **PO6b: 1**	**PO7: 1** **PO8: 1** **PO9: 1** **PO10a: 1** **PO10b: 1** **PO11: 5**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Deep Learning by Ian Goodfellow, Yoshua Bengio, and Aaron Courville
	2	Deep Learning with Python by François Chollet
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1		The Perceptron & The Neuron	
Week 2		Multi-Layer Perceptrons (MLP) & Forward Propagation	
Week 3		Backpropagation & Optimization	
Week 4		Convolutional Neural Networks (CNNs) - Basics	
Week 5		Advanced CNN Architectures	
Week 6		Regularization & Training Dynamics	
Week 7		Computer Vision Applications	
Week 8		**Midterms**	
Week 9		Recurrent Neural Networks (RNNs)	
Week 10		Gated Architectures (LSTM & GRU)	
Week 11		Attention Mechanisms	
Week 12		The Transformer Architecture	
Week 13		Generative Adversarial Networks (GANs)	
Week 14		Variational Autoencoders (VAEs) & Diffusion	
Week 15		Large Language Models (LLMs)	
Week 15-16		**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	16-25.05.2026	50	
	Semester Evaluation			50	
	Midterm(s)	1	4-12.04.2026	40	80.0
	Quiz(zes)	2	31.03.2026-12.05.2026	10	20.0
	Project(s)				
	Homework				
	Laboratory works				
	Attendance				

**** Lifelong Learning Programme (LLP) ****

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	42	Project		
Quiz (Q)	2	5	Presentation		
Q preparation self study	2	10	Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	1.5	Final exam (FE)	1	1.5
ME preparation self study	1	20	FE preparation self study	1	30
				TOTAL :	152
				Recommended ECTS Credit (Total Hours / 30) :	5.07

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
ECON 413	Engineering Economy	Compulsory	3	0	0	3	5	THIRSDAY @ 12:00-16:50
Prerequisite		Prerequisite to						

Course Lecturer	Aslı BARDAK	Office Hours Schedule	thursday 10:00-11:50
E-mail	abardak@eul.edu.tr		
Phone		Office / Room No	AS-304
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Engineering economy principles. Cash-flow diagrams. Time effect on money. Formulas for reflecting time effect on money. How to value money that was spent before and how to value if it will be spent in the future while comparing different alternatives at present. Interest rate, simple interest rate, compound interest rate and compounding periods. How different compounding periods affecting the total amount of interest earned from the deposit. Why different alternatives need to be compared on economical basis. What is feasibility? Comparing different alternatives, examples. Minimum rate of return, attractive rate of return. Replacement and economic life concepts and problems about replacement concept by following different evaluation techniques.
Objectives	The main purpose of this course is to introduce some of the basic concepts of economy for engineering students. Effect of time on money, methods for comparing different alternative, Benefit-Cost Analysis, Replacement and Depreciation concepts are discussed.
Learning Outcomes	At the end this course, the student will be able to: (1) understand the some of the basic principles of economy, (2) understand and analyze the methods of comparing engineering projects' alternatives, (3) understand and analyze time effect on money by introducing interest rate, (4) evaluate how to make depreciation analysis, (5) evaluate how to investigate replacement concept.
Textbooks and/or References	1 Leland T. Blank, Anthony Tarquin, Engineering Economy 8th Edition, Mc Graw Hill (2018) (Textbook) 2 William G. Sullivan, Elin M. Wicks, C. Patrick Koelling, Engineering Economy 16th Edition Pearson (2015) (Reference)

WEEK	Date	TOPICS	Reference No - Section
Week 1	22-26.09.2025	Introduction to Engineering Economy Concept, basic concepts, basic and compound interest rates	1: 1.1-1.10
Week 2	29.09.-03.10.2025	Time and Interest Effect of Money : Single Amount Factors, Uniform Series, Sinking Fund Factors	1: 2.1-2.3
Week 3	06-10.10.2025	Time and Interest Effect of Money : Untabulated factor values. Arithmetic, Geometric Gradient Series	1: 2.4-2.7
Week 4	13-17.10.2025	Non Uniform Cashflow: Shifted Uniform Series, Randomly Placed Single Amounts, Shifted Gradients	1: 3.1-3.4
Week 5	20-24.10.2025	Nominal and Effective Interest Rates: Definitions, Effective IR.(annual, different periods) , Equivalance	1: 4.1-4.4
Week 6	27-31.10.2025	Nominal and Effective Interest Rates: Calculations for Equivalance Relations, Continious Compounding	1: 4.5-4.9
Week 7	03-07.11.2025	Nominal and Effective Interest Rates: Calculations for Equivalance Relations, Continious Compounding	1: 5.1-5.3
Week 8	10-14.11.2025	MIDTERM I	
Week 9	17-21.11.2025	Present Worth Analysis : Formulating,Equal and Different Life Alternatives	1- 1-5
Week 10	24-28.11.2025	Rate of Return Analysis: Interpretation, Calculations, Special Considerations	1: 7.1-7.3
Week 11	01-05.12.2025	Benefit Cost Analysis: Public Sector, Analysis Methods, Ethical Considerations	1: 9.1-9.6
Week 12	08-12.12.2025	Replacement and Retention Decisions: Basics, Economic Service Life, Performing Study	1: 7, 9
Week 13	15-19.12.2025	Depreciation Methods: Terminology, Depreciation Calculations	1: 11.1-11.4
Week 14	22-26.12.2025	Depreciation Methods: Terminology, Depreciation Calculations	1: 16.1-16.4
Week 15	29-31.12.2025	Review	
Week16	05.09.01.2026	Finals	all topics above

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	03-11/01/2026	50	
Semester Evaluation			50	
Midterm(s)	1	TBA	50	100.0
Quiz(zes)				
Project(s)				
Homework(s)				
Laboratory work(s)				
Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	15	45	Homework		
TLH self study	15	60	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	4	16	FE preparation self study	4	16
				TOTAL :	141
				Recommended ECTS Credit (Total Hours / 30) :	5

EUROPEAN UNIVERSITY OF LEFKE

EE/ECE - Faculty of Engineering

SYLLABUS

2025-2026-FALL Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN119	Introduction to Profession	Compulsory	2	0	0	0	2	Tuesday-12:00-12:50, AS114
Prerequisite		Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Burçin Özmen	Office Hours	Monday 15:00-16:00
E-mail	bozmen@eul.edu.tr	Schedule	Tuesday 14:00-15:00
Phone		Office / Room No	AS-306
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	A series of seminars are held in current topics and areas of specialization in Electrical and Electronics Engineering. The course introduces EUL Organisation, EUL policy Electrical and Electronics Engineering undergraduate program, EEE curriculum, definition of Engineering, definition of Electrical and Electronics Engineering, basic concepts of charge, voltage, current, power, Ohm's law, current and voltage relation with cable cross sectional areas and the insulation, legal responsibilities, Awareness about entrepreneurship and innovation, and code of ethics for EEE. Specialisation areas speakers are invited from different departments of EUL including Electronics & Communication Engineering, Computer Engineering and Software Engineering Department or other International Universities, Industry and Consulting firms, to deliver seminars in all aspects of engineering that are not normally covered in lectures.
Course Objectives	The basic objective of this course is to introduce students to introduce the student to the field of Electronics and Communication Engineering and the fundamental concepts behind electronic devices and systems.
Learning Outcomes	On successful completion of the course, students should be able to: (1) An ability to show understanding of the University organisation and policy, (2) An ability to demonstrate appreciation of the concepts of engineering and the future of EEE/ECE, (3) An ability to show understanding for legal responsibilities and code of ethics for EEE/ECE. (4) An ability to show an awareness about entrepreneurship and innovation. (5) An ability to show a familiarity with the basic electronic component models and basic electronic circuits. basic concepts of Ohm's Law and Kirchhoff's Voltage and Current Laws, and also understanding and ability to apply basic circuit analysis,

Programme Outcome Relations			
	PO1: 2 **PO2: 2** **PO3: 2** **PO4: 1** **PO5: 2** **PO6 a-b: 4**	**PO7: 5** **PO8: 5** **PO9: 4** **PO10a-b: 3** **PO11: 4**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	E. D. Gates, Introduction to Electronics, 5th Edition, Thomson Delmar Learning, 2007, ISBN: 978-1-4018-8900-5
	2	
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	22/09/2025	Introduction to course, objectives of the course	
Week 2	29/09/2025	University organisation and the ECE curriculum	
Week 3	06/10/2025	General problem solving	
Week 4	13/10/2025	Teamwork appreciation	
Week 5	20/10/2025	Engineering basics	
Week 6	27/10/2025	Ethics in engineering (IEEE standards)	
Week 7	03/11/2025	Ethics in engineering (IEEE standards)	
Week 8	10/11/2025	**Midterms**	
Week 9	17/11/2025	Entrepreneurship and business aspects of engineering, Law in engineering; health and safety	
Week 10	24/11/2025	Basic circuits and sources, Voltage, current, Ohm's law	1: 5.2; 5.5-5.6; 5.9
Week 11	01/12/2025	Kirchoff's current and voltage laws	1: 5.2; 5.5-5.6; 5.9
Week 12	08/12/2025	Basic mesh and nodal analysis	1: 6.4-6.6
Week 13	15/12/2025	Basic didgtal electronic circuits and logic gates	1: 7.1-7.3
Week 14	22/12/2025	Basic didgtal electronic circuits and logic gates	1: 7.3; 7.6-7.8
Week-15	29/12/2025	**Revisons**	
Week-16	03-11/01/2026	**Final Exams**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam				
	Semester Evaluation			100	
	Midterm(s)				
	Quiz(zes)				
	Project(s)	2-3		100	100.0
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	28	Homework	2	28
TLH self study	14	1	Project		
Quiz			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)			Final exam (FE)		
ME preparation self study			FE preparation self study		
			TOTAL :		57
			Recommended ECTS Credit (Total Hours / 30) :		1.90

EUROPEAN UNIVERSITY OF LEFKE

Electrical & Electronics Engineering Departments, Faculty of Engineering

SYLLABUS

2025-2026 Fall Term

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN203	Digital Circuits I/Digital Circuits/Digital Logic Design	Compulsory	2	0	2	3	7	Course: Tuesday at 12:00 - 14:50 Room: ASA100 Labs: ATC building. Digital Electronics LAB
Prerequisite		**Prerequisite to**						

Course Lecturer	Assoc. Prof. Dr. Ahmet Yaşlı	**Office Hours Schedule**	
E-mail	ayasli@eul.edu.tr		
Phone	2525	**Office / Room No**	AS314
Teaching Assistant		**Phone**	
E-mail		**Office / Room No**	

Catalogue Descriptions	Number systems, binary, octal and hexadecimal systems, conversions. Boolean algebra –- logic gates. Postulates, Laws and Theorems, truth tables, simplifications of Boolean functions using Boolean laws, map method and tabular method, product- of - Sums and Sums - of - Products expressions, Universal gates. Multiplexers and de-multiplexers, encoders and decoders, combinational logic design using logic gates, multiplexers, PROM array and PAL, Half adder/subtractor, full adder/subtractor, 4-bit parallel binary adder, NAND/NOR Latcehes, Flip Flops, Binary counters (Up-Down), Shift registers (parallel-Serial shift)
Course Objectives	This course introduces the fundamental principles of digital logic design, essential for electrical and computer engineering. Students will learn to design, analyse, and implement digital systems using combinational and sequential logic. Key topics include number systems, Boolean algebra, logic gates, combinational and sequential circuit design, simplification procedures and implementing them with different schemes. Practical skills will be developed through hands-on laboratory work.
Learning Outcomes	On successful completion of the course, students should be able to understand: (1) Boolean functions and their minimisation (2) Design a combinational logic circuit, (3) Design a Sequential logic circuits, (4) Analyse a given logic circuit to assess its function and its performance

Programme Outcome Relations			
	PO1: 3 **PO2: 3** **PO3: 4** **PO4: 1** **PO5: 4** **PO6a: 1** **PO6b: 1**	**PO7: 1** **PO8: 4** **PO9: 1** **PO10a: 1** **PO10b: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	M. Morris Mano, Digital Design, 5th Ed, Prentice Hall, 2012. ISBN-10: 0-13-277420
	2	J. F. Wakerly, Digital Design: Principles and Practices, 4th Ed, Prentice Hall, 2019. ISBN-10: 013446009X
	3	Thomas LFloyd, Digital fundamentals, Prentice Hall International.

WEEK	Date	TOPICS	Reference No - Section
Week 1	22-26/09/25	Number systems	1: 1.1-1.8
Week 2	29-03/09-10/25	Boolean algebra – Laws and Theorems, Truth tables	1: 2.1-2.5
Week 3	06-10/10/25	Logical gates	1: 2.8-2.9
Week 4	13-17/10/25	Realisation structures for product- of - Sums and Sums - of - Products expressions	1: 3.4
Week 5	20-24/10/25	Simplifications of Boolean functions using Boolean laws, map method and tabular method	1: 3.1-3.3
Week 6	27-31/10/25	Comperators, Universal Gates	1: 4.8-3.6
Week 7	03-07/11/25	Quiz, Practical examples	-
Week 8	08-16/11/25	Midterm Exam	-
Week 9	17-21/11/25	Combinational Logis Circuits, Multiplexers and de-multiplexers	1: 4.1-4.4
Week 10	24-28/11/25	Encoders and decoders	1:4.111: 4.9-4.10
Week 11	01-05/12/25	Artihmetic Circuits, Adder and Subtractor	1: 4.5-4.6
Week 12	08-12/12/25	Sequential logic circuits, Various type of Flip flops	1: 5.1-5.4
Week 13	15-19/12/25	Counters - Shift registers	1: 6.1-6.2
Week 14	22-26/12/25	PROM, PAL	1: 6.3-6.5
Week 15	29-31/12/25	Review	
Week 16	03-11/01/26	Final Exam	

Evaluation Tools	**Evaluation Tool**	**Quantity**	**Date**	**Weight in Total (%)**	**Weight in Semester Evaluation (%)**
	Final Exam	1		40	
	Semester Evaluation			60	
	Midterm(s)	1		25	41.7
	Quiz(zes)	1		10	16.7
	Project(s)				
	Homework(s)	1		5	8.3
	Laboratory works	11		20	33.3
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***			Language of Instruction:		English
Theoretical lecturing hours (TLH)	14	42	Homework	1	5
TLH self study	14	28	Project		
Quiz (Q)	1	1	Presentation		
Q preparation self study	1	10	Seminar		
Laboratory (L)	11	22			
L preparation work	11	24			
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	25	FE preparation self study	1	35
			TOTAL :		196
			Recommended ECTS Credit (Total Hours / 30) :		6.53

EUROPEAN UNIVERSITY OF LEFKE

"Electrical & Electronics Engineering"

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN214	ELECTROMAGNETICS THEORY 1	Compulsory	3	0	0	3	5	Tuesday :15:00-17:50
Prerequisite		Prerequisite to						

Course Lecturer	Prof Dr Zihni Öztürk	Office Hours Schedule	AS 318
E-mail	zozturk@eul.edu.tr		
Phone		Office / Room No	
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Review of vector calculus. Orthagonal coordinate systems, transformation of coordinate systems, Del operator, gradient, divergence and curl of a vector field. Electrostatics in vacuum, Coulomb's and Gauss's laws. Conductors in the presence of electrostatic fields, Dielectrics and Capacitance. Electrostatic forces by the virtual work principle, Steady currents, Ohm's and Joule's laws and Ampere's force law.
Objectives	To familiarise students with orthagonal coordinate system, fundamental theory of static electric and magnetic fields in vacuum, dielectric and magnetic media.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) Orthagonal Coordinate System (2) Electrostatic potential,Coulomb's and Gauss's laws, (3) Conductors in the presence of electrostatic fields, (4) Electric Flux density, Gaus and Divergence Theorems (5) Magnetic Forces and Steady Magnetic Field

Programme Outcome Relations			
PO1: 5 PO2: 3 PO3: 1 PO4: 1 PO5: 1 PO6: 1	PO7: 1 PO8: 1 PO9: 1 PO10: 1 PO11: 1	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**	

Textbooks and/or References		
	1	Fundamentals of Engineering Electromagnetics, David K. Cheng, Addison Wesley, 1993
	2	Engineering Electromagnetics, William H. Hayt, John A. Buck, 6th Edition, McGraw-Hill,2001
	3	Electromagnetics with applications, J. D. Kraus and Fleisch, Tata McGraw-Hill, 2015
	4	Elements of Electromagnetics 6th Edition, Mathew Sadiku, Oxford Series, 2014

WEEK	Date	TOPICS	Reference No - Section
Week 1		Course Outline and Course aim. Introduction: The Electromagnetic Model, SI Units, SI Prefixes	1:1:1.1-1.3
Week 2		Applications and History of Electromagnetics, overwiev of Vector Analysis	1:2:2.1 & 2:1:1.1
Week 3		Review of Vector Calculus and Vector Analysis: Vector algebra,Orthogonal coordinate systems	1:2:2.2-2.3 & 2:1:1.8
Week 4		Rectangular, Cylindirical and Spherical Coordinate Systems and their conversion	1:2:2.4
Week 5		Gradient, Divergence, divergence theorem,Curl, Stokes' theorem, Helmholtz theorem	1:2:2.5-2.9
Week 6		Line, Surface Integral; Volume Integrals, Divergence/cylindirical coordinate systems	1:2:2.6-2.7
Week 7		**Midterm**	4:2-3
Week 8		Static Electric Fields: Coulomb's Law,Electric Field Intensity, Gauss' Law ,Electric Charge and Density	1:3:3.1-3.4
Week 9		Charge on Lines, Charge on Surfaces	2:2:2.4-2.6
Week 10		Volume charges	
Week 11		Material Media in Static Electric Fields: Conductors and Dielectrics, Electric Flux Density	1:3:3.5-3.7
Week 12		Capacitance, Electrostatic energy and forces, Poisson's and Laplace's equations,	1:3:3.9-3.11
Week 13		Steady Electric Currents: Current density and Ohm's law	1:4:4.1-4.3
Week 14		General Problem Solving on Static Electric fields	2:2-3 & 4:4
Week-15/16		**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	08-Jun-21	50	
	Semester Evaluation			50	
	Midterm(s)	1	13-Apr-21	40	80.0
	Quiz(zes)	1			
	Project(s)				
	Homework(s)				
	Laboratory work(s)				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	65	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	2	3	Final exam (FE)	1	1.5
ME preparation self study	2	20	FE preparation self study	1	25
				TOTAL :	153.5
				Recommended ECTS Credit (Total Hours / 30) :	5.12

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical and Electronics Engineering"

SYLLABUS

2025-26 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN215-ECEN205	Circuit Theory I		3	0	2	4	7	Wednesday 09:00-12:00
Prerequisite		Prerequisite to				EE-216 Circuit Theory II		

Course Lecturer	Prof. Dr. Özgür Cemal Özerdem	Office Hours Schedule	Wednesday 13:00-15:00 Friday 13:00-15:00
E-mail	oozerdem@eul.edu.tr		
Phone	2841	Office / Room No	AS305
Teaching Assistant(s)	Assoc. Prof. Dr. Ahmet Yaslı	Phone	
E-mail	ayasli@eul.edu.tr	Office / Room No	AS314

Catalogue Description	Circuit variables, circuit elements. Simple resistive circuits. Techniques of circuit analysis. Topology in circuit analysis. Inductance and capacitance. State variables and state equations. Response of first-order RL, RC circuits. Natural and step responses of second-order RLC circuits.
Course Objectives	To develop the fundamental tools of linear circuit analysis which will be useful to all engineers. To learn the "alphabet" of circuits, including wires, resistors, capacitors, inductors, voltage and current sources. To prepare students for more advanced courses in circuit analysis.
Learning Outcomes	1. Identify linear systems and represent those systems in schematic form 2. Apply Kirchhoff's current and voltage laws and Ohm's law to circuit problems 3. Simplify circuits using series and parallel equivalents and using Thevenin and Norton equivalents 4. Perform node and loop analyses and set these up in standard matrix format 5. Identify and model first and second order electric systems involving capacitors and inductors 6. Predict the transient behavior of first and second order circuits 7. An ability to design, construct, and take measurement of various circuits to compare experimental results in the laboratory with theoretical analysis.

Programme Outcome Relations			
PO1: 4	PO7: 2	(1) Strongly disagree;	
PO2: 3	PO8: 2	(2) Disagree;	
PO3: 1	PO9: 2	(3) Neither agree nor disagree;	
PO4: 3	PO10: 1	(4) Agree;	
PO5: 5	PO11: 1	(5) Strongly agree.	
PO6: 3			

Textbooks and/or References		
	1	Engineering Circuit Analysis, Nineth Ed. William H. Hayt, Jack E. Kemmerly and Steven M. Durbin, Mc Graw Hill, 2018, ISBN-978-0-07-131706-1
	2	Electric Circuits, Eleventh Eddition, James W. Nilsson and Susan A. Riedel, Pearson, 2018, ISBN-13: 978-0-13-474696-8, ISBN: 0-13-474696-1
	3	C. K. Alexander, M. N. O. Sadiku, Fundamentals of Electric Circuits (Sixth Edition), McGraw Hill, 2016, ISBN-13: 978-0078028229

WEEK	Date	TOPICS	Reference No - Section
Week 1	24/09/2025	Introduction and System of units	1.2-2.1
Week 2	01/10/2025	Charge, current, voltage and power, voltage and current sources, Ohm's law.	2.2-2.4
Week 3	08/10/2025	Nodes,paths, loops, branches, Kirchhoff's laws.	2.9-3.1
Week 4	15/10/2025	Parallel and series connections, voltage and current divisions	3.4-3.8
Week 5	22/10/2025	Nodal Analysis,supernode, Mesh analysis, supermesh	4.1-4.4
Week 6	05/11/2025	Linearity and Superposition,Source transformations	5.1-5.2
Week 7	08-16/11/2025	**MIDTERM EXAMS**	-
Week 8	19/11/2025	Thevenin and Norton Equivalent circuits,	-5.3
Week 9	26/11/2025	Maximum Power Transfer	-5.4
Week 10	03/12/2025	Delta-Wye Conversions, summary of circuit analysis techniques	5.5-5.6
Week 11	10/12/2025	Operational amplifiers	6.2-6.5
Week 12	17/12/2025	Energy Storage Elements, capacitors and inductors	7.1-7.4
Week 13	24/12/2025	RL and RC circuit responses, Natural and forced response,	8.1-8.8
Week 14	31/12/2025	Driven RL and RC circuits, RLC circuits	9.1-9.6
Week 15	03-11/1/2026	**FINAL EXAMS**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	03-11/1/2026	50	
	Semester Evaluation			50	
	Midterm(s)	1	08-16/11/2025	30	60.0
	Quiz(zes)				
	Project(s)				
	Homework(s)	5	During the Semester	5	10.0
	Laboratory	10	During Laboratory hours	15	30.0
	Other				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	38	Homework	5	5
TLH self study	14	71	Project		
Quiz			Presentation		
Q preparation self study			Seminar		
Laboratory (L)	10	20			
L preparation work			Presentation		
Midterm exam (ME)	1	3	Final exam (FE)	1	3
ME preparation self study	2	35	FE preparation self study	1	35
			TOTAL :		210
			Recommended ECTS Credit (Total Hours / 30) :		7.00

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 SPRING Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN216/ECEN216	Circuit Theory II		3	0	2	4	6	Thursday: 09:00-11:50 AS114
Prerequisite	EEEN 215-Circuit Theory I	Prerequisite to				EEEN341-Electromech. Energy Conv.		

Course Lecturer	Assist. Prof. Dr. Burçin Özmen	Office Hours Schedule	Wednesday: 11:00-12:00
E-mail	bozmen@eul.edu.tr		
Phone	2510	Office / Room No	AS303
Teaching Assistant(s)	Dr. Ahmet Yaşlı	Phone	3504
E-mail	ayasli@eul.edu.tr	Office / Room No	ATC

Course Objectives

The basic objective of this course is to introduce students to the fundamental theory and mathematics for the analysis of Alternating Current (AC) electrical circuits, frequency response and transfer function of circuits.

Learning Outcomes

On successful completion of this course, all students will have:
1. Identify the usage of transformators in AC circuits.
2. Make analysis of balanced three-phase circuits.
3. Analyze frequency response characteristics.
4. Analyze magnetically coupled circuits.
5. Extend these principles into a way of thinking for problem solving in mathematics, science and engineering.
6. An ability to design, construct, and take measurement of various circuits to compare experimental results in the laboratory with theoretical analysis.

Programme Outcome Relations

PO1: 5	**PO6b: 1**	**(1) Strongly disagree;**
PO2: 4	**PO7: 3**	**(2) Disagree;**
PO3: 2	**PO8: 5**	**(3) Neither agree nor disagree;**
PO4: 5	**PO9: 4**	**(4) Agree;**
PO5: 4	**PO10a-b: 1**	**(5) Strongly agree.**
PO6a: 1	**PO11: 5**	

Textbooks and/or References

1. C. K. Alexander, M. N. O. Sadiku, Fundamentals of Electric Circuits (Fifth Edition), McGraw Hill, 2012.
2. C. K. Alexander, M. N. O. Sadiku, Problem Solving Made Almost Easy, McGraw-Hill, USA, 2003.
3. D. E. Johnson, J. R. Johnson, J. L. Hilburn, Electric Circuit Analysis (Third Edition), Prentice-Hall, USA, 1997.
4. J. W. Nilsson, S. A. Riedel, Electric Circuits (Seventh Edition), Prentice-Hall, USA, 2005.

WEEK	Date	TOPICS	Reference No - Section
Week 1	02/02/2026	Introduction-Overview	9.1-9.4
Week 2	09/02/2026	Sinusoids and Phasors	9.5-9.7
Week 3	16/02/2026	Sinusoids and Phasors	9.5-9.7
Week 4	23/02/2026	Sinusoidal Steady-State Analysis	10.1-10.3
Week 5	02/03/2026	Sinusoidal Steady-State Analysis	10.4-10.6
Week 6	09/03/2026	AC Power Analysis	11.1-11.4
Week 7	16/03/2026	AC Power Analysis	11.5-11.9
Week 8	23/03/2026	Three-Phase Circuits	12.1-12.2
Week 9	30/03/2026	Three-Phase Circuits	12.3-12.7
Week 10	06/04/2026	MIDTERM EXAMS	
Week 11	13/04/2026	Magnetically Coupled Circuits	13.1-13.3
Week 12	20/04/2026	Magnetically Coupled Circuits	13.4-13.6
Week 13	27/04/2026	Frequency Response	14.1-14.3
Week 14	04/05/2026	Frequency Response	14.4-14.6
Week15	11/05/2026	Review	
Week 16	18/06/2026	Final Exam	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	16-25/05/26	45	40.0
Semester Evaluation			50	
Midterm(s)	1	04-12/04/26	25	50.0
Quiz(zes)	1	TBA	15	30.0
Project(s)				
Homework(s) / Projects				
Laboratory/	9-10	TBA	15	30.0
Other				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Duration	Student Workload Hours	Evaluation Tool	Quantity	Duration	Student Workload Hours
Theoretical Hours	14	3	42	Applied Hours			
Project	1	40	42	Final	1	2	2
Self study for mid-term	1	30	30	Self study for final	1	50	50
HWK				Lab	9	2	18
Self study for class disc				Projecct			
Self studey for Assignment				Seminar			
Field Study				Presentation			
Other							
				TOTAL :			184.0
				Recommended ECTS Credit (Total Hours / 30) :			6.1

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 FALL Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN227/ECEN227	Electrical Materials	Major	3	0	0	3	5	Wednesday @ 15:00-17:50; AS111
Prerequisite	PHYS104	Prerequisite to						

Course Lecturer	Prof. Dr. Zihni Öztürk	Office Hours Schedule	
E-mail	zozturk@eul.edu.tr		
Phone		Office / Room No	AS-318
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Basic semiconductor structure and the atom model (Basic lattice types, Hydrogen atom, Schrodinger's wave equation, etc.), Energy band-gap theory,Basic semiconductor theory (intrinsic carrier concentration, donors acceptors, etc.), Physics of p-n junction diodes (Bipolar junction transistors, field effect transistors). Transistor biasing and small-signal models, Secondary effects in transistors, Dynamic models for diodes and transistors (p-n-p-n switching devices), Semiconductor junctions with metals (Schottky barrier diode, current flow in a Schottky barrier, small-signal equivalent circuit, etc.)
Course Objectives	This course aims to provide an understanding about basic semiconductor operation and semiconductor devices. It starts briefly from quantum mechanics to crystal nature of solids, then it explains the operation of pn junctions, band diagrams and finishes with BJTs, MOSFETS and detector structures.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) basic quantum mechanics (2) band diagrams for different devices (3) basics of semiconductors and crystal structures (4) pn junction operating principles and solve basic diode circuits (5) BJT and FET operating principles and solve basic transistor circuits.

Programme Outcome Relations			
	PO1: 4 **PO2: 3** **PO3: 2** **PO4: 3** **PO5: 0** **PO6: 2**	**PO7: 0** **PO8: 0** **PO9: 2** **PO10: 0** **PO11: 0**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Dolad A Neamen, Semiconductor Physics and Devices: Basic Principles, 4th Edition, Mc GrawHill, 2011. ISBN 0-07-232107-5
	2	R. Boylestad and L. Nashelsky, Electronic Devices and Circuit Theory, 11th Ed, Prentice-Hall, 2015.

WEEK	Date	TOPICS	Reference No - Section
Week 1		Introduction. Overview of semiconductors and their use.	1: 1.1-1.8
Week 2		The atom model, lattice types and structures, bonding	1: 2.1-2.4
Week 3		Basic semiconductor structure	1: 2.5-2.9
Week 4		Schrodingers equation	1: 3.1-3.4
Week 5		Energy band-gap theory (direct semiconductors, holes, thermal equilibrium, etc.)	1: 3.3; 3.5-3.7
Week 6		Basic semiconductor theory (intrinsic carrier concentration, donors acceptors, etc.),	1: 4.1-4.4;4.6
Week 7		Physics of p-n junction diodes	1: 5.1-5.4
Week 8		**Midterm Exam Week**	-
Week 9		Ideal and non-ideal diodes models	1: 5.2; 5.5-5.6; 5.9
Week 10		Diode circuits	1: 5.2; 5.5-5.6; 5.9
Week 11		Physics of the bipolar junction transistor (BJT)	1: 6.4-6.6
Week 12		BJT Basic Circuits	1: 7.1-7.3
Week 13		Physics of metal-oxide semiconductor (MOS) transistors	1: 7.3; 7.6-7.8
Week 14		nMOS and pMOS transistor operation and basic circuits	1: 7.3; 7.6-7.8
Week 15		**Final Exam Week**	-

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	15-24 January 2021	60	
Semester Evaluation			40	
Midterm(s)	1	28-06 Nov.-Dec. 2020	40	100.0
Quiz(zes)				
Project(s)				
Homework(s)				
Laboratory works				
Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	29	Homework		
TLH self study	13	59	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	20	FE preparation self study	1	30
				TOTAL :	142

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 SPRING Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN228	Electronics I		3	0	2	4	5	Tuesday: 09:00-11:50 AS116
Prerequisite	EEEN 227-Electrical Materials	Prerequisite to				EEEN337 Electronics II		

Course Lecturer	Assoc. Prof. Dr. Samet Biricik	Office Hours Schedule	Monday :14:00-14:50
E-mail	sbiricik@eul.edu.tr		
Phone	2510	Office / Room No	AS305
Teaching Assistant(s)		Phone	-
E-mail		Office / Room No	Advanced Technology Center

Catalogue Descriptions	This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyse, verify, and troubleshoot analog circuits using appropriate techniques and test equipment. The course includes basic concepts such as; semiconductor material, semiconductor diode circuits and applications, zener diodes, rectifiers, filters. BJT, MOSFET and JFET amplifier design including biasing, small signal analysis and frequency response. Design of multistage amplifiers. Differential and operational amplifier design. Output stages.
Course Objectives	To introduce methods for the analysis and design of diode circuits, BJT amplifiers stages, and FET amplifiers stages.
Learning Outcomes	On successful completion of this course, all students will have: 1. An ability to analyze diode circuits and design regulators and rectifiers. 2. An ability to use basic techniques for analyzing diode circuits in different architecture including Zener Diodes. 3. Demonstrate substantial knowlede and understanding skills and operation of BJTs. 4. Demonstrate substantial knowledge, understanding and skills in the operation, of JFETs. 5. An ability to design, construct, and take measurement of various transistor circuits to compare experimental results in the laboratory with theoretical analysis.

Programme Outcome Relations			
	PO1: 3 **PO2: 5** **PO3: 2** **PO4: 5** **PO5: 5** **PO6: 3**	**PO7: 3** **PO8: 2** **PO9: 2** **PO10: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
1	R. Boylestad and L. Nashelsky, Electronic Devices and Circuit Theory, 8th Ed, Prentice-Hall, 2001.	
2	A. S. Sedra and K. C. Smith, Microelectronic Circuits, 6th Ed, Oxford University Press, 1997.	
3	Basic Engineering Circuit Analysis, J. D. Irwin, Prentice Hall 1999 (sixth edition)	
4	T. L. Floyd, Electronic Devices, 9th Edition, 2011	

WEEK	Date	TOPICS	Reference No - Section
Week 1	06/02/2026	Introduction to Electronics	Ref1
Week 2	13/02/2026	Semiconductor Diodes and Applications	Ref1 -Ref2
Week 3	20/02/2026	Semiconductor Diodes and Applications	Ref1 -Ref2
Week 4	27/02/2026	Semiconductor Diodes and Applications	Ref1 -Ref2
Week 5	06/03/2026	Bipolar Juntion Transistor	Ref1 -Ref2
Week 6	13/03/2026	Bipolar Juntion Transistor	Ref1 -Ref2
Week 7	20/03/2026	DC-Biasing-BJTs	
Week 8	27/03/2026	Midterm(s)	Ref1 -Ref2
Week 9	03/04/2026	Field Effect Transistor	Ref1 -Ref2
Week 10	10/04/2026	Field Effect Transistor	Ref1 -Ref2
Week 11	17/04/2026	April 23 Children's Day (National Holiday)	
Week 12	24/04/2026	Fet Biasing	Ref1 -Ref2
Week 13	01/05/2026	Differential and Multistage amplifiers	Ref1 -Ref2
Week 14	08/05/2026	Differential and Multistage amplifiers	Ref1 -Ref2
Week 15	15/05/2026	Differential and Multistage amplifiers	Ref1 -Ref2
Week 16	15-30/05/2026	**Final Exam**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		40	40.0
	Semester Evaluation			60	60
	Midterm(s)	1		35	58.3
	Quiz(zes)	2		10	16.7
	Project(s)/Homework(s)				
	Laboratory	10		15	25.0
	Other				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **100.0**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	14	42.0		Applied Hours		
Midterm	1	2.0		Final	1	2.0
Quiz	2	4.0		Project	0	
Laboratory	10	20.0		Homework		
Atelier				Seminar		
Field Study				Presentation		
Other				Self Study	14	80.0
				TOTAL :		150.0
				Recommended ECTS Credit (Total Hours / 30) :		5.0

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2024-2025 SPRING Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN228	Electronics I		3	0	2	4	5	Tuesday: 09:00-11:50 AS116
Prerequisite	EEEN 227-Electrical Materials	Prerequisite to				EEEN337 Electronics II		

Course Lecturer	Assoc. Prof. Dr. Samet Biricik	Office Hours Schedule	Monday :14:00-14:50
E-mail	sbiricik@eul.edu.tr		
Phone	2510	Office / Room No	AS305
Teaching Assistant(s)		Phone	-
E-mail		Office / Room No	Advanced Technology Center

Catalogue Descriptions	This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyse, verify, and troubleshoot analog circuits using appropriate techniques and test equipment. The course includes basic concepts such as; semiconductor material, semiconductor diode circuits and applications, zener diodes, rectifiers, filters. BJT, MOSFET and JFET amplifier design including biasing, small signal analysis and frequency response. Design of multistage amplifiers. Differential and operational amplifier design. Output stages.
Course Objectives	To introduce methods for the analysis and design of diode circuits, BJT amplifiers stages, and FET amplifiers stages.
Learning Outcomes	On successful completion of this course, all students will have: 1. An ability to analyze diode circuits and design regulators and rectifiers. 2. An ability to use basic techniques for analyzing diode circuits in different architecture including Zener Diodes. 3. Demonstrate substantial knowlede and understanding skills and operation of BJTs. 4. Demonstrate substantial knowledge, understanding and skills in the operation, of JFETs. 5. An ability to design, construct, and take measurement of various transistor circuits to compare experimental results in the laboratory with theoretical analysis.

Programme Outcome Relations			
	PO1: 3	**PO7: 3**	**(1) Strongly disagree;**
	PO2: 5	**PO8: 2**	**(2) Disagree;**
	PO3: 2	**PO9: 2**	**(3) Neither agree nor disagree;**
	PO4: 5	**PO10: 1**	**(4) Agree;**
	PO5: 5	**PO11: 1**	**(5) Strongly agree.**
	PO6: 3		

Textbooks and/or References		
1	R. Boylestad and L. Nashelsky, Electronic Devices and Circuit Theory, 8th Ed, Prentice-Hall, 2001.	
2	A. S. Sedra and K. C. Smith, Microelectronic Circuits, 6th Ed, Oxford University Press, 1997.	
3	Basic Engineering Circuit Analysis, J. D. Irwin, Prentice Hall 1999 (sixth edition)	
4	T. L. Floyd, Electronic Devices, 9th Edition, 2011	

WEEK	Date	TOPICS	Reference No - Section
Week 1	13/02/2025	Introduction to Electronics	Ref1
Week 2	20/02/2025	Semiconductor Diodes and Applications	Ref1 -Ref2
Week 3	27/02/2025	Semiconductor Diodes and Applications	Ref1 -Ref2
Week 4	06/03/2025	Semiconductor Diodes and Applications	Ref1 -Ref2
Week 5	13/03/2025	Bipolar Juntion Transistor	Ref1 -Ref2
Week 6	20/03/2025	Bipolar Juntion Transistor	Ref1 -Ref2
Week 7	27/03/2025	**Midterm Exam**	
Week 8	03/04/2025	DC-Biasing-BJTs	Ref1 -Ref2
Week 9	10/04/2025	Field Effect Transistor	Ref1 -Ref2
Week 10	17/04/2025	Field Effect Transistor	Ref1 -Ref2
Week 11	24/04/2025	April 23 Children's Day (National Holiday)	
Week 12	01/05/2025	Fet Biasing	Ref1 -Ref2
Week 13	08/05/2025	Differential and Multistage amplifiers	Ref1 -Ref2
Week 14	15/05/2025	Differential and Multistage amplifiers	Ref1 -Ref2
Week 15	22/05/2025	Differential and Multistage amplifiers	Ref1 -Ref2
Week 16	01-12/06/2025	**Final Exam**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1		40	40.0
Semester Evaluation			60	60
Midterm(s)	1		35	58.3
Quiz(zes)	2		10	16.7
Project(s)/Homework(s)				
Laboratory	5		15	25.0
Other				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **100.0**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	14	30.0		Applied Hours		
Midterm	1	2.0		Final	1	2.0
Quiz	2	4.0		Project	1	
Laboratory	5	20.0		Homework		
Atelier				Seminar		
Field Study				Presentation		
Other				Self Study	16	96.0
				TOTAL :		154.0
				Recommended ECTS Credit (Total Hours / 30) :		5.1

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical and Electronics Engineering"

SYLLABUS

2024-2025 Spring Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EEEN252	Technical Drawing & CAD		3	0	3	3	4	Friday 14:30-17:30
Prerequisite		Prerequisite to						

Course Lecturer	Assist. Prof. Dr. Samet Biricik	Office Hours Schedule	Tuesday 11:30-13:20
E-mail	sbiricik@eul.edu.tr		
Phone	2519	Office / Room No	AS 304
Teaching Assistant(s)		Phone	0
E-mail		Office / Room No	

Course Objectives	Learning the basics of Electrical and Architectural Engineering drawing, including how to understand, read, and produce design documents, the meanings of the various symbols used as well as the use of computer aided design software.
Learning Outcomes	1. Acquire knowledge of basic principles of technical drawing, sketching, use of Autocad, 2. Learn about electrical and archtietural practices/standards 3. Become proficient with time management, problem solving, organization methods, critical thinking and effective visual/oral communication. 4. Understand careers that require technical drawings.
Textbooks and/or References	1 2 3 4

WEEK	Date	TOPICS	Reference No - Section
Week 1	21/02/2025	Introduction to technical drawing	
Week 2	28/02/2025	Usage of Auto-CAD Drawing	
Week 3	07/03/2025	Usage of Drawing Equipment	
Week 4	14/03/2025	Scale conversion	
Week 5	21/03/2025	Paraline Drawings	
Week 6	28/03/2025	Architectural Drawings (plan)	
Week 7	04/04/2025	Architectural Drawings (plan)	
Week 8	11/04/2025	**MIDTERM EXAMS (Classwork on drawing)**	
Week 9	18/04/2025	Architectural Drawings (plan)	
Week 10	25/04/2025	Architectural Drawings (plan)	
Week 11	02/05/2025	Electrical Circuit Drawings	
Week 12	09/05/2025	Electrical Circuit Drawings	
Week 13	16/05/2025	Electrical Circuit Drawings	
Week 14	23/05/2025	Electrical Circuit Drawings	
Week 15	30/05/2025	Electrical Circuit Drawings	
Week 16	06/06/2025	**FINAL EXAMS**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	6-18.06.2018	40	100.0
Semester Evaluation			60	
Midterm(s)	1		30	
Quiz(zes)				
Project(s)	5	Project	25	41.7
Homework(s)				
Laboratory	1	Lab Performance	25	41.7
Other				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	10	42.0		Applied Hours		
Midterm	1	2.0		Final	1	2.0
Quiz				Project	10	28.0
Laboratory	5	25.0		Homework		
Atelier				Seminar		
Field Study				Presentation		
Other				Self Study	8	30.0
				TOTAL :		129.0
				Recommended ECTS Credit (Total Hours / 30) :		4.3

EUROPEAN UNIVERSITY OF LEFKE

Electrical & Electronics Engineering - Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE315	Electromagnetic theory 2	Compulsory	3	0	3	3	6	Tuesday 09:00-11:50
Prerequisite	EE214- Electromagnetic Theory 1	Prerequisite to						

Course Lecturer	Assoc. Prof. Dr. Samet Biricik	Office Hours Schedule	Friday: 8:30-1100
E-mail	sbiricik@eul.edu.tr		
Phone		Office / Room No	AS305
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Course includes in depth theoretical knowledge about Time-varying fields; Maxwell's equations; wave equations; time-harmonic fields; complex phasors; scalar and vector potential functions; plane waves in vacuum; plane waves in dielectrics and conductors; polarisation of plane waves, Poynting's theorem; reflection and refraction of plane waves at dielectric interfaces; Snell's laws; Fresnel formulas; critical angle; total internal reflection; total transmission; Brewster's angle; standing waves; transmission line theory; TEM waves; transmission line parameters; lossy and lossless lines; matching of transmission lines to their loads.
Objectives	This course aims to cover the theory of Electrodynamics, Maxwell's Equations, plane waves as a solution of wave equations, propagation, polarization, transmission and reflection of plane waves, transmision lines.
Learning Outcomes	On successful completion of the course, students should be able to: (1) understand basic time-varying fields and their interactions. (2) the basics of Maxwell's equations and properties of plane waves, (3) basic transmission line theory, (4) Use of Graphical Methods: Smith Chart

Programme Outcome Relations			
	PO1: 5 **PO2: 4** **PO3: 1** **PO4: 1** **PO5: 1** **PO6: 1**	**PO7: 1** **PO8: 1** **PO9: 1** **PO10: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Fundamentals of Engineering Electromagnetics, David K. Cheng Addison Wesley, 1993
	2	Elements of Electromagnetics, Matthew N O Sadiku, Oxford University Press, 2001
	3	Schaum's Outline of Electromagnetics, 5th Edition. McGraw-Hill Education 2018

WEEK	Date	TOPICS	Reference No - Section
Week 1	23/09/2025	Introduction, course outline and Course aim	1- Ch: 6.1, 6.2.1
Week 2	30/09/2025	Time varying fields: Electromagnetic induction, faraday's and Lenz's Law	1-Ch: 6.2.1, 6.2.2,
Week 3	07/10/2025	Transformer and motional electromotive force, displacement current	1-Ch: 6.2.3, 6.2.4,
Week 4	14/10/2025	Maxwells equations: wave equations, time harmonic fields	1-Ch: 6.3,6.4
Week 5	21/10/2025	Plane waves: Plane waves in dielectrics, conductors and vacuum.	1-Ch: 6.4, 7.1,7.2
Week 6	28/10/2025	Doppler Effect	1-Ch:7.2, 7.3, 7.4
Week 7	04/11/2025	Oblique Indices of Plane waves at plane boundaries	1-Ch:7.5
Week 8	11/11/2025	**Midterm**	
Week 9	18/11/2025	Reflection and Refraction of plane waves at dielectric interfaces,	
Week 10	25/11/2025	Reflection and Refraction of plane waves at dielectric interfaces,	1-Ch:7.6,7.7
Week 11	02/12/2025	Poynting Vector and Snell's law, Critical angle, total internal reflection and total transmission	1-Ch: 7.5,7.7
Week 12	09/12/2025	Transmission Lines: Types of transmission lines and applications	1-Ch:8.1,.8.2,8.3
Week 13	16/12/2025	Input impedance of a transmission line and special cases	1-Ch:8.4
Week 14	23/12/2025	Input impedance of a transmission line and special cases	
Week 15	30/12/2025	Revision	
Week 16	06/01/2026	Final Exam	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		50	100.0
	Semester Evaluation			50	
	Midterm(s)	1		40	80.0
	Quiz(zes)	1		10	20.0
	Project(s)				
	Homework(s)				
	Laboratory work(s)				
	Attendance				

**** Lifelong Learning Programme (LLP) ****

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	91	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	20	FE preparation self study	1	24
			TOTAL :		178
			Recommended ECTS Credit (Total Hours / 30) :		5.93

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 FALL Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP343/EE317	Signals and Systems		3	0	1	3	6	Monday 09:00-11:50, AS115
Prerequisite	MATH101	Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Burçin Özmen	Office Hours Schedule	Tuesday 15:00-16:00
E-mail	bozmen@eul.edu.tr		
Phone		Office / Room No	AS303
Teaching Assistant(s)	TBA	Phone	-
E-mail		Office / Room No	-

Course Objectives	To give students the mathematical skills and knowledge to analyse signals and systems in both the time and frequency domains; understanding LTI system behavior and their effect on signals. Class material is complemented with in-class demonstrations using MATLAB; this is done with a view to reinforcing knowledge and understanding gained in class.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: 1. how to describe, categorize, and analyse signals and systems 2. the techniques for analysis and manipulation of linear, time-invariant systems 3. time- and frequency-domain represention of signals and LTI systems 4. Fourier analysis of signals and systems.

Programme Outcome Relations			
	PO1: 4 PO2: 3 PO3: 2 PO4: 4 PO5: 3 PO6a: 1	PO6b: 1 PO7: 1 PO8: 2 PO9: 2 PO10a-b: 1 PO11: 4	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References		
	1	S. Haykin and B. Van Veen, Signals and Systems , 2nd Ed., John Wiley & Sons, 2003, ISBN: 0471164747.
	2	S. T. Karris, Signals and Systems with MATLAB Computing and Simulink Modeling, 3rd Ed., 2007, ISBN: 978-1934404119
	3	A. V. Oppenheim, A. S. Willsky, S. Hamid, S. H. Nawab, Signals and Systems, Prentice Hall, 1997, ISBN: 0136511759.

WEEK	Date	TOPICS	Reference No - Section
Week 1	22/09/2025	Signal categorisation, description and properties	1: 1.1-1.8
Week 2	29/09/2025	Signal description and properties with supported by examples shown using MATLAB	1: 2.1-2.4
Week 3	06/10/2025	System properties: linearity, time-invariance, causality, stability	1: 2.5-2.9
Week 4	13/10/2025	System properties: linearity, time-invariance, causality, stability	1: 3.1-3.4
Week 5	20/10/2025	Linear time-invariant systems	1: 3.3; 3.5-3.7
Week 6	27/10/2025	Convolution for discrete-time signals/systems supported by examples shown using MATLAB	1: 4.1-4.4;4.6
Week 7	03/11/2025	Convolution for continuous-time signals supported by examples shown using MATLAB	1: 5.1-5.4
Week 8	10/11/2025	**Midterm Week**	
Week 9	17/11/2025	Fourier transform of continuous and discrete-time signals	1: 6.1-6.3
Week 10	24/12/2025	Fourier series of continuous and discrete-time signals with in class MATLAB examples	1: 6.4-6.6
Week 11	01/12/2025	Properties of Fourier representation	1: 7.1-7.3
Week 12	08/12/2025	Fourier transform rep of signals and systems	1: 7.3; 7.6-7.8
Week 13	15/12/2025	Fourier transform rep of signals and systems	1:7.6-7.8
Week 14	22/12/2025	Basic Fourier transform pairs	1:7.6-7.8
Week 15	29/12/2025	Review	1: 9.1-9.4; 9.9
Week 16	03-11/01/2026	**Final Exam**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	03-11/01/2026	45	100.0
	Semester Evaluation			50	
	Midterm(s)	2	08-16/11/2025	25	50
	Quiz(zes)	1	TBA	15	30
	Laboratory	5-6		15	30

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Duration	Student Workload Hours	Evaluation Tool	Quantity	Duration	Student Workload Hours
Theoretical Hours	14	3	42	Applied Hours	14	2	28
Midterm	1	2	2	Final	1	2	2
Self study for mid-term	1	20	20	Self study for final	1	30	30
Class Disc. and Quiz	2	1	2	Project			
Laboratory	5	2	10	Homework			
Self study for quiz	2	10	20	Seminar			
Field Study	1		16	Presentation			
Other				Self Study			
				TOTAL :			172
				Recommended ECTS Credit (Total Hours / 30) :			5.7

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical & Electronics Engineering"

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE 319	Industrial and Power Electronics I	Elective	3	0	0	3	5	Thursday 09:00-11:50
Prerequisite		Prerequisite to						

Course Lecturer	Prof. Dr. Özgür Cemal Özerdem	Office Hours Schedule	Tuesday 13:00-14:00	Thursday 12:00-14:00
E-mail	oozerdem@eul.edu.tr			
Phone	2517	Office / Room No	AS503 Engineering Faculty	

Course Objectives	Create an awareness of the general nature of Power electronic equipment. Understand the key features of the principal Power Electronic Devices. Give the idea about which device to choose for a particular application. The applications in AC/DC, DC/DC, DC/AC and AC/AC converters as well as switching power supplies using power transistors, MOSFETs, SCRs, GTOs, IGBTs and UJTs.
Learning Outcomes	Ability to explain the power electronics topologies. Ability to design proper switching circuits. Ability to analyze, model, and predict the performance of basic power converter configuration.

Program Outcome Relations			
PO1: 5 PO2: 5 PO3: 3 PO4: 3 PO5: 2	PO7: 2 PO8: 3 PO9: 2 PO10: 2 PO11: 2	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References	
1.	M. H. Rashid, Power Electronics: Circuits, Devices, and Applications, Fourth Edition, Prentice Hall, 2017, ISBN 9332584583.
2.	N. Mohan, T. M. Undeland, and W. P. Robbins, Power Electronics: Converters, Ap., and Design, Media En., 3th Ed., J.Wiley & Sons,

WEEK	Date	TOPICS	Reference No - Section
Week 1	05/02/2026	Introduction to Power Electronics	
Week 2	12/02/2026	Power Semiconductor Devices: Power diodes, Thyristors, Commutation techniques	
Week 3	19/02/2026	Power transistors, Power MOSFETs, Diac, Triac, GTOs, IGBTs, UJTs, Switching losses, Switch selection	
Week 4	26/02/2026	AC/DC Rectifier, Power computations, Sinusoidal and Non sinusoidal waveforms	
Week 5	05/03/2026	Power factor, Half-wave rectifiers, Single-phase uncontrolled and half controlled rectifiers	
Week 6	12/03/2026	Single Phase Fully Controlled Rectifier, midpoint converters	
Week 7	19/03/2026	Power factor, displacement factor and distortion factors in power electronic equipment.	
Week 8	26/03/2026	Three phase uncontrolled (diode) and half controlled rectifiers. Operation waveforms and analysis	
Week 9	02/04/2026	Three phase fully controlled rectifiers, Operation waveforms and analysis .	
Week 10	04-12/04/2026	**MID-TERM Examinations**	
Week 11	16/04/2026	DC/DC Converter: Buck, Boost, Buck-boost converters	
Week 12	23/04/2026	DC/AC Inverter: PWM techniques, Three inverter, High power converter, Multilevel converter	
Week 13	30/04/2026	AC/AC Voltage controller Phase Converter	
Week 14	07/05/2026	Direct Power Converter, Modeling of DC-DC Converter	
Week 15	16-25/05/2026	**Final Exams**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	16-25/05/2026	45	
	Semester Evaluation			55	
	Midterm(s)	1	04-12/04/2026	40	72.7
	Quiz(zes)				
	Project(s)				
	Homework(s)	4	During Semester	15	27.3
	Laboratory				

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	40		Homework	1	1
TLH self study	13	84		Project	1	3
Quiz				Presentation		
Q preparation self study				Seminar		
Laboratory (L)						
L preparation work				Presentation		
Midterm exam (ME)	1	2		Final exam (FE)	1	2
ME preparation self study	1	7		FE preparation self study	1	12
TOTAL :						151
Recommended ECTS Credit (Total Hours / 30) :						5.03

EUROPEAN UNIVERSITY OF LEFKE - "Faculty of Engineering"

"Computer Engineering"

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP362/EE320 ECE308	Microprocessor Systems	Compulsory	3	0	2	4	7	Monday @ 09:00-12:00
Prerequisite		Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Cem Kalyoncu	Office Hours Schedule	
E-mail	ckalyoncu@eul.edu.tr		
Phone		Office / Room No	AS-308
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course will introduce the fundamentals of microprocessor systems, microcontrollers, hardware interfacing and system design techniques as well as microprocessor architectures. Additionally embedded C/C++ programming, Arduino Nano microcontrollers, analog to digital conversion, I/O methods, pin and port manipulation, pulse-width modulation, UART communication, serial peripheral interface, inter integrated circuit communication, interrupts, timers, counters, EEPROM access, power saving modes, and fuses will be covered.
Course Objectives	This course will introduce the fundamentals of microprocessors and related subjects using Arduino Nano microcontroller development board. This course is designed to have focus both on theoretical foundations and practical implementations.
Learning Outcomes	1. Understanding the microcontroller fundamentals 2. Practical and in depth knowledge about I/O pin/port operations 3. Knowledge about communicating with peripheral devices
Programme Outcome Relations	PO2: 5 PO8: 2 (2) Disagree; PO3: 4 PO9: 1 (3) Neither agree nor disagree;
Textbooks and/or References	1 Arduino: A Technical Reference, J. M. Hughes, 2016 2 Arduino: Advanced Strategies to Learn and Execute Arduino Programming, Daniel Jones, 2017 3 Microcontrollers: Architecture, Implementation, & Programming, Kenneth J. Hintz and Daniel Tabak, 1992 4 Programming: Principles and Practice Using C++, Second Edition, Bjarne Stroustrup

WEEK	Date	TOPICS	Reference No - Section
Week 1	02-06/02/2026	Introduction, course layout, lab schedule and rules, material recommendation	-
Week 2	09-13/02/2026	Microprocessor capabilities, microprocessor architectures, Atmel AVR family microcontrollers, boot	R3.Ch 3
Week 3	16-20/02/2026	Additional C/C++ programming knowledge for microprocessors, bitwise operators	R4.Ch 3
Week 4	23-27/02/2026	Pin manipulation, pin modes, controlling external components, getting input, pins on ATMega 328p	R1. Ch 5
Week 5	02-06/03/2026	Port manipulation, digital ports on ATMega 328p, DDR, PIN, PORT registers, using C operators for port	R1. Ch 5
Week 6	09-13/03/2026	Serial and parallel communication with peripheral devices	R1. Ch 7
Week 7	16-20/03/2026	Quiz 1, Common communication methods: UART, sending and receiving data, checking data availability	R1. Ch 7
Week 8	23-27/03/2026	Common communication methods: Serial peripheral interface, using SPI library to transfer data,	R1. Ch 7
Week 9	30/03-03/04/2026	Common communication methods: I2C communication, using two wires for multiple devices,	R1. Ch 7
Week 10	06-10/04/2026	**Midterms**	
Week 11	13-17/04/2026	Asynchronous operation using timers	R2. Ch 2
Week 12	20-24/04/2026	Interrupt basics, arduino interrupts, using interrupts for input processing	R2. Ch 3
Week 13	27/04-01/05/2026	Quiz 2, Using EEPRom	R1. Ch 7
Week 14	04-08/05/2026	Low power modes, waking by interrupt, fuses, ARM based microcontrollers	R1. Ch 7
Week-15/16	11-15/05/2026	**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	2		40	
	Semester Evaluation			60	
	Midterm(s)	2		30	50.0
	Quiz(zes)	2		10	16.7
	Laboratory works	8		20	33.3
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	52	Project		
Quiz (Q)	2	2	Presentation		
Q preparation self study	2	10	Seminar		
Laboratory (L)	8	16			
L preparation work	8	24			
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	15	FE preparation self study	1	40
				TOTAL :	202
				Recommended ECTS Credit (Total Hours / 30) :	6.73

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE322	Control Systems	Major	3	0	0	3	7	Monday, 14:00-16:50. AS114
Prerequisite		Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Burçin Özmen	Office Hours Schedule	THURSDAY 12:00-12:50
E-mail	bozmen@eul.edu.tr		
Phone	2510	Office / Room No	AS303
Teaching Assistant	Dr. Ahmet Yaşlı	Phone	
E-mail	ayasli@eul.edu.tr	Office / Room No	

Catalogue Descriptions	Open loop and closed loop control. Transfer function, block diagram, signal flow graph, state equations. Sensitivity, disturbance rejection, steady-state error. Second- and first-order system performance, dominant roots, steady-state error of feedback systems. Routh-Hurwitz criterion, relative stability. Root locus method. Bode diagram, Nyquist stability criterion, gain margin and phase margin. PI, PD and PID controller design.
Course Objectives	To establish the concept of the general processes involved in the design and analysis of linear control systems. Having successfully completed the module, the student will be able to: (i) Obtain the mathematical model and/or transfer function of linear control systems; (ii) Apply time and frequency domain techniques for the analysis of linear systems; (iii) Use the control point of view to analyse problems arising in other disciplines. Course material will be complemented with in-class MATLAB demonstrations.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) mathematical modelling of linear control systems, e.g. transfer functions, (2) the theoretical tools required for basic control system analysis, (3) techniques for stability analysis of control systems, (4) frequency domain techniques for the analysis of linear systems.

Programme Outcome Relations			
PO1: 5 PO2: 4 PO3: 2 PO4: 5 PO5: 4 PO6a: 1	PO6b: 1 PO7: 3 PO8: 5 PO9: 4 PO10a-b: 1 PO11: 5	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.	

Textbooks and/or References		
	1	R. C. Dorf and R. H. Bishop, Modern Control Systems 13th Ed, Pearson - Prentice Hall 2016. ISBN: 0134407628
	2	N. S. Nise, Control Systems Engineering, 3rd Ed., John Wiley & Sons, 2014. ISBN: 1118170512
	3	Franklin, Gene, J. David Powell, and Abbas Emami–Naeini. Feedback Control of Dynamic Systems. 6th ed. Prentice Hall, 2009. ISBN: 9780136019695.

WEEK	Date	TOPICS	Reference No - Section
Week 1	02/02/2026	Open loop and closed loop control	1: 1.1-1.8
Week 2	09/02/2026	Modeling: integro-differential equations	1: 2.1-2.4
Week 3	16/02/2026	System block diagram description	1: 2.5-2.9
Week 4	23/02/2026	Signal flow graphs, state space equations	1: 3.1-3.4
Week 5	02/03/2026	Laplace transforms	1: 3.3; 3.5-3.7
Week 6	09/03/2026	Laplace transform and transfer functions	1: 4.1-4.4;4.6
Week 7	16/03/2026	Feedback control system performance	1: 5.1-5.4
Week 8	23/03/2026	Feedback control system characteristics: steady-state, type.	1: 5.2; 5.5-5.6; 5.9
Week 9	30/03/2026	Root locus method - introduction Midterm Exam	1: 6.4-6.6
Week 10	06/04/2026	Midterm Exam	
Week 11	13/04/2026	Root locus method - system stability analysis	1: 7.1-7.3
Week 12	20/04/2026	Frequency response methods: Bode diagrams I	1: 7.3; 7.6-7.8
Week 13	27/04/2026	Frequency response methods: Bode diagram II	1: 8.1-8.3
Week 14	04/05/2026	Frequency response methods: Nyquist stability criterion I	1: 8.1-8.3
Week 15	11/05/2026	Frequency response methods: Nyquist stability criterion II	1: 8.1-8.3
Week 16	18/06/2026	Final Exam	-

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	16-25/05/26	50	
Semester Evaluation			50	
Midterm(s)	1	04-12/04/26	20	40.0
Quiz(zes)	1	TBA	10	20.0
Project(s)	2_4	TBA	20	40.0
Homework(s)				
Laboratory works				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	42	Project	2	40
Quiz (Q)	1	1	Presentation		
Q preparation self study	1	10	Seminar		
Laboratory (L)					
ME preparation	1	30	FE preparation	1	40
Midterm exam (ME)	1	2	Final exam (FE)	1	2
			Total:		209
			Recommended ECTS Credit (Total Hours / 30) :		6.97

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP342/EE329	Introduction to Telecommunication Networks	Technical Elective	3	0	0	3	5	Wednesday 12:00-14:50
Prerequisite		Prerequisite to						

Course Lecturer	Prof. Dr. Yönal Kırsal	Office Hours Schedule	Monday 9:30-11:30 Tuesday 9:30-11:30
E-mail	ykirsal@eul.edu.tr		
Phone	2502	Office / Room No	AS-306
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Physical Layer-the theoretical basis for data communication, guided transmission media, wireless transmission, Data Link Layer, data link layer design issues, MAC Sublayer, MAC Sublayer (Wireless), MAC Sublayer (Bridges), network layer design issues, Network Layer (Routing and Routers), Network Layer (Internetworking/IP), Transport Layer/Services/ Protocols. The Transport Service, elements of transport protocols, flow control and buffering, multiplexing, introduction to UDP, the TCP service model, the TCP protocol, performance issues, the application layer, the domain name system. Internetworking with IP (classes of IP addresses; IPV4 and IPV6), Cisco Packet Tracer Tutorial.
Course Objectives	To familiarise students with the fundamental concepts of computer networks. Basic performance and engineering trade-offs in the design and implementation of computer networks. An ability of designing and simulating basic networks.
Learning Outcomes	On successful completion of the course, students should have gained: (1) An understanding of overarching frameworks for telecommunications network designs and operations, (2) An appreciation of the OSI framework by focusing on specific example implementations, (3) An understanding of various multi-service network topologies and how specific industrial network implementations fit within the broad topologies, (4) An accurate appreciation of how different switched networks are designed and implemented in order to provide internet services.

Programme Outcome Relations			
	PO1: 4 **PO2: 3** **PO3: 5** **PO4: 2** **PO5: 4** **PO6: 5**	**PO7: 4** **PO8: 3** **PO9: 4** **PO10: 3** **PO11: 3**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	A. S. Tanenbaum, Computer Networks, 5th ed., Prentice Hall, 2011.
	2	L. L. Peterson and B. S. Davie, Computer Networks: A Systems Approach, 5th ed.,Morgan Kaufmann, 2012.
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	05/02/2026	Course Outline and Course Aim. Introduction to Computer Networks	1:1.1
Week 2	12/02/2026	Application of Computer Networks, Types of Networks: PAN, LAN, MAN, WAN, Internet	1:1.2,2.2,2.6,2.7
Week 3	19/02/2026	Foundations and Topologies, Links, nodes, packet switch and telephone switch networks	1:1.3.3,1.3.4,1.3.5
Week 4	26/02/2026	Network softwares; protocols, Layering and Encapsulation	1:1.3,3.1
Week 5	05/03/2026	The OSI model; 7 layer of OSI model	1:1.4
Week 6	12/03/2026	The Data Link: Framing, addressing, flow control and the Network layer: Routing and Logical addressing	1:3.1-3.7,5.1-5.3
Week 7	19/03/2026	**Mid-term Exams**	-
Week 8	26/03/2026	TCP/IP Model and comparison with OSI model, Cisco Packet Tracer Tutorial I	1:1.4-9,1
Week 9	02/04/2026	Network performances: Delay (Latency) and Bandwidth (Throughput)	1:1.4-9,1
Week 10	09/04/2026	Physical Link Technologies: Wired/Wireless (WiFi,WiMax, Bluetooth,Cellular Technologies)	1:1.4-9,1
Week 11	16/04/2026	Switching in Networks: Datagram and Virtual circuit Switching	1:4.7
Week 12	23/04/2026	IP Technology (IPv4 message header format). Cisco Packet Tracer Tuttorial II	
Week 13	30/04/2026	IP Technology (IPv4 message header format). Cisco Packet Tracer Tuttorial III	
Week 14	07/05/2026	IP Technology (IPv4 message header format). Cisco Packet Tracer Tuttorial III (cont.)	
Week 15	14/05/2026	Revisions	
Week-16	16-25/06/2026	**Final Exams**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		45	
	Semester Evaluation			55	
	Midterm(s)	1		35	63,6
	Quiz(zes)				
	Project(s)	1		25	45,5
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	65	Project	1	25
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)			Final exam (FE)	1	2
ME preparation self study			FE preparation self study	1	12
				TOTAL :	143
				Recommended ECTS Credit (Total Hours / 30) :	4,77

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 FALL Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE337/ECE311	Electronics II	Major	3	0	2	4	7	Monday 12:00-14:50; AS-115
Prerequisite	EE228	Prerequisite to						

Course Lecturer	Burçin Özmen	Office Hours Schedule	Thursday 15:00 - 15:50
E-mail	bozmen@eul.edu.tr		
Phone	2510	Office / Room No	AS303
Teaching Assistant	Ahmet Yasli	Phone	
E-mail	ayasli@eul.edu.tr	Office / Room No	

Course Objectives	To give students the necessary skills for analysing, designing and synthesising dc and ac electronic circuits. Supplemented by further examples
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding tof: 1. Design and analysis of amplifiers circuits using BJT. 2. Design and analysis of amplifiers circuits using FET and MOSFET. 3.Analyze and design feedback amplifiers and transistor oscillators. 4. An understanding of the frequency response of amplifiers. 5. Demonstrate understanding and skills in the design of passive to active filters.

Programme Outcome Relations			
	PO1: 4 **PO2: 3** **PO3: 2** **PO4: 4** **PO5: 5** **PO6a: 1**	**PO6b: 1** **PO7: 3** **PO8: 5** **PO9: 4** **PO10a-b: 1** **PO11: 4**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks

1. E. A. S. Sedra and K. C. Smith, Microelectronic Circuits, 7th Ed, Oxford University Press, 2014. ISBN: 9780199339136.
2. R. Boylestad and L. Nashelsky, Electronic Devices and Circuit Theory, 11th Ed, Prentice-Hall, 2015. ISBN: 9332542600.
3. R. C. Jaeger and Travis Blalock, Microelectronic Circuit Design, 5th Ed, McGraw-Hill, 2015. ISBN: 0073529605.

WEEK	Date	TOPICS	Reference No - Section
Week 1	22/09/2025	Introduction	1: 1.1-1.8
Week 2	29/09/2025	Review: DC (large signal) analysis for BJT	1: 2.1-2.4
Week 3	06/10/2025	Review: DC (large signal) analysis for JFET	1: 2.5-2.9
Week 4	13/10/2025	Multistage stage amplifiers	1: 3.1-3.4
Week 5	20/10/2025	Multistage stage amplifiers	1: 3.3; 3.5-3.7
Week 6	27/10/2025	Small-signal models and AC analysis of BJT circuits	1: 4.1-4.4;4.6
Week 7	03/11/2025	AC analysis for FET circuits	1: 5.1-5.4
Week 8	10/11/2025	**Midterm Week**	
Week 9	17/11/2025	AC analysis for FET circuits	1: 5.2; 5.5-5.6
Week 10	24/12/2025	Further worked examples of AC analysis for both BJT & FET circuits	1: 5.2; 5.5-5.6; 5.9
Week 11	01/12/2025	Frequency response of BJT circuits	1: 5.2; 5.5-5.6; 5.9
Week 12	08/12/2025	Frequency response of FET circuits	1: 5.2; 5.5-5.6; 5.9
Week 13	15/12/2025	Examples on frequency response of transistor circuits	1: 5.2; 5.5-5.6; 5.9
Week 14	22/12/2025	Operational Amplifiers	1: 6.4-6.6
Week 15	29/12/2025	Application of op-amps	1: 6.4-6.6
Week 16	03-11/01/2026	**Final Exam Week**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	03-11/01/2026	45	100.0
Semester Evaluation			50	
Midterm(s)	2	08-16/11/2025	20	40
Assignments/Projects	1	TBA	10	20
Laboratory	9-10	TBA	15	30
Quiz(zes)	1-2	TBA	10	20
Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	42	Project	1	20
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)	9	16			
L preparation work	7	28			
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	16	FE preparation self study	1	40
			TOTAL :		208
			Recommended ECTS Credit (Total Hours / 30) :		6.93

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical and Electronics Engineering"

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE339	Electronic Instrumentation		3	0	0	3	5	Monday 14:00-17:00
Prerequisite		Prerequisite to						

Course Lecturer	Assoc. Prof. Dr. Samet Biricik	Office Hours Schedule	Firday 09:00-11:50
E-mail	sbiricik@eul.edu.tr		
Phone	2519	Office / Room No	AS305
Teaching Assistant(s)	-	Phone	-
E-mail	-	Office / Room No	-

Course Objectives	The basic objective of this course is to develop knowledge in principles, theory, and practice of measurements and instruments encountered in industrial processes, designing circuits involved in transducers, signal conditioners and display units, and developing projects on complete instrumentation on specialized application areas
Learning Outcomes	Through the material presented in this course, students will learn: 1-How to design and develop analogue or digital instrument based on custom needs; 2-How to analyze the performance of instrumentation and possible errors encountered; 3-How to improve the performance of process transducers and signal conditioners; 4-How to write clear and effective technical report for a technical audience; 5-How to learn and work effectively both individually and in groups; 6-To evaluate the personal learning process and understanding of the concepts and skills from class.

Programme Outcome Relations			
	PO1: 5 PO2: 4 PO3: 4 PO4: 3 PO5: 5 PO6: 1	PO7: 1 PO8: 1 PO9: 1 PO10: 2 PO11: 1	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References		
1	H. S. Kalsi, Electronic Instrumentation, McGraw-Hill, USA, 2010.	
2	A. S. Morris, Measurement and Instrumentation Principles, Butterworth-Heinemann, USA, 2001.	
3	C.S. Rangan, G.R. Sarma, V.S. Mani, Instrumentation Devices and Systems, McGraw-Hill, USA, 1990.	
4	A.D.Helfrick and W.D.Cooper, Modern Electronic Instrumentation and Measurement Techniques, Prentice-Hall, USA, 2004.	

WEEK	Date	TOPICS	Reference No - Section
Week 1	24/09/2025	Introduction to Instrumentation	
Week 2	01/10/2025	Types of Errors	
Week 3	08/10/2025	DC Meters	
Week 4	15/10/2025	AC Meters	
Week 5	22/10/2025	Standards of Measurment	
Week 6	29/10/2025	Holiday	
Week 7	05/11/2025	Bridges and Their Application / Theory of Oscilloscope	
Week 8	12/11/2025	MIDTERM WEEK	
Week 9	19/11/2025	Sensors and Transducers	
Week 10	26/11/2025	Harmonic componentents Measurement	
Week 11	03/12/2025	Active, Reactive and Real Power Measurement	
Week 12	10/12/2025	Specific parameters measurement	
Week 13	17/12/2025	Specific parameters measurement	
Week 14	24/12/2025	Specific parameters measurement	
Week 15	31/12/2025	Holiday	
Week 16	07/01/2026	Final Exam	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		50	100.0
	Semester Evaluation			50	
	Midterm(s)	1		40	80.0
	Quiz(zes)	1		10	20.0
	Attendance				
	Homework(s)				
	Laboratory work(s)				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)		14	42	Assigment	1	3
TLH self study		16	50	Project	0	0
Quiz (Q)		2	15	Presentation		
Quiz preparation self study				Seminar		
Midterm exam (ME)		1	2	Final exam (FE)	1	2
ME preparation self study		1	10	FE preparation self study	1	30
					TOTAL :	154
					Recommended ECTS Credit (Total Hours / 30) :	5.13

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical & Electronics Engineering"

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE 341	Electromechanical Energy Conversion I		3	0	0	3	6	Tuesday 14:00-16:50
Prerequisite	EE216, EE 214	Prerequisite to						

Course Lecturer	Assoc.. Prof. Dr. Samet Biricik	Office Hours Schedule	Thursday 08:00-10:50
E-mail	sbiricik@eul.edu.tr		
Phone	2282	Office / Room No	AS305
Teaching Assistant(s)	-	Phone	-
E-mail	-	Office / Room No	-

Course Objectives	To provide knowledge of basic principles of electromechanical energy conversion. To provide understanding of operation principles of single phase and three phase transformers, To provide ability to analyze electromechanical energy conversion devices.
Learning Outcomes	1. Gain a general understanding of energy conversion. 2. Having knowledge of concepts and related laws used in electromechanical energy conversion. 3. Understanding electromechanical energy conversion devices and their operational principles. 4. Ability to analyze electromechanical energy conversion systems.

Programme Outcome Relations			
	PO1: 5 PO2: 4 PO3: 4 PO4: 4 PO5: 5 PO6: 1	PO7: 1 PO8: 1 PO9: 1 PO10: 2 PO11: 1	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References		
	1.	B. S. Guru, H. R. Hiziroglu, "Electric Machinery and Transformers", 3rd edition, Oxford University Press, 2001

WEEK	Date	TOPICS	Reference No - Section
Week 1	23/09/2025	Introduction to the cource, basic concepts, magnetic filed, magnetic circuit.	
Week 2	30/09/2025	Review of Electric Circuit Theory	
Week 3	07/10/2025	Basic Laws of Electromagnetisim	
Week 4	14/10/2025	Principle of Electromechanical Energy Conversion	
Week 5	21/10/2025	Principle of Electromechanical Energy Conversion	
Week 6	28/10/2025	Determination of Transformer Parameters	
Week 7	04/11/2025	Determination of Transformer Parameters	
Week 8	11/11/2025	Midterm Week	
Week 9	18/11/2025	Equivalent circuit, efficiency analysis	
Week 10	25/11/2025	Autotransformers,	
Week 11	02/12/2025	Autotransformers,	
Week 12	09/12/2025	tree phase transformers,	
Week 13	16/12/2025	tree phase transformers,	
Week 14	23/12/2025	Construction of a Transformers Three Phase Transformer	
Week 15	30/12/2025	Construction of a Transformers Three Phase Transformer	
Week 16	06/01/2026	Final Exam	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		50	111.1
	Semester Evaluation			45	
	Midterm(s)	1		40	88.9
	Quiz(zes)	1		10	22.2
	Project(s)				
	Assignment				
	Laboratory work(s)				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)		14	42	Assignment	1	1
TLH self study		30	30	Project	0	0
Quiz (Q)		1	6	Presentation		
Quiz preparation self study		1	15	Seminar		
Midterm exam (ME)		1	2	Final exam (FE)	1	2
ME preparation self study		1	35	FE preparation self study	1	35
					TOTAL :	168
					Recommended ECTS Credit (Total Hours / 30) :	5.60

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
COMP342/EE329	Introduction to Telecommunication Networks	Technical Elective	3	0	0	3	5	Wednesday 12:00-14:50
Prerequisite		Prerequisite to						

Course Lecturer	Prof. Dr. Yönal Kırsal	Office Hours Schedule	Monday 9:30-11:30 Tuesday 9:30-11:30
E-mail	ykirsal@eul.edu.tr		
Phone	2502	Office / Room No	AS-306
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Physical Layer-the theoretical basis for data communication, guided transmission media, wireless transmission, Data Link Layer, data link layer design issues, MAC Sublayer, MAC Sublayer (Wireless), MAC Sublayer (Bridges), network layer design issues, Network Layer (Routing and Routers), Network Layer (Internetworking/IP), Transport Layer/Services/ Protocols. The Transport Service, elements of transport protocols, flow control and buffering, multiplexing, introduction to UDP, the TCP service model, the TCP protocol, performance issues, the application layer, the domain name system. Internetworking with IP (classes of IP addresses; IPV4 and IPV6), Cisco Packet Tracer Tutorial.
Course Objectives	To familiarise students with the fundamental concepts of computer networks. Basic performance and engineering trade-offs in the design and implementation of computer networks. An ability of designing and simulating basic networks.
Learning Outcomes	On successful completion of the course, students should have gained: (1) An understanding of overarching frameworks for telecommunications network designs and operations, (2) An appreciation of the OSI framework by focusing on specific example implementations, (3) An understanding of various multi-service network topologies and how specific industrial network implementations fit within the broad topologies, (4) An accurate appreciation of how different switched networks are designed and implemented in order to provide internet services.

Programme Outcome Relations			
	PO1: 4 **PO2: 3** **PO3: 5** **PO4: 2** **PO5: 4** **PO6: 5**	**PO7: 4** **PO8: 3** **PO9: 4** **PO10: 3** **PO11: 3**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	A. S. Tanenbaum, Computer Networks, 5th ed., Prentice Hall, 2011.
	2	L. L. Peterson and B. S. Davie, Computer Networks: A Systems Approach, 5th ed.,Morgan Kaufmann, 2012.
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	04/02/2026	Course Outline and Course Aim. Introduction to Computer Networks	1:1.1
Week 2	11/02/2026	Application of Computer Networks, Types of Networks: PAN, LAN, MAN, WAN, Internet	1:1.2,2.2,2.6,2.7
Week 3	18/02/2026	Foundations and Topologies, Links, nodes, packet switch and telephone switch networks	1:1.3.3,1.3.4,1.3.5
Week 4	25/02/2026	Network softwares; protocols, Layering and Encapsulation	1:1.3,3.1
Week 5	04/03/2026	The OSI model; 7 layer of OSI model	1:1.4
Week 6	11/03/2026	The Data Link: Framing, addressing, flow control and the Network layer: Routing and Logical addressing	1:3.1-3.7,5.1-5.3
Week 7	18/03/2026	**Mid-term Exams**	-
Week 8	25/03/2026	TCP/IP Model and comparison with OSI model, Cisco Packet Tracer Tutorial I	1:1.4-9,1
Week 9	01/04/2026	Network performances: Delay (Latency) and Bandwidth (Throughput)	1:1.4-9,1
Week 10	08/04/2026	Physical Link Technologies: Wired/Wireless (WiFi,WiMax, Bluetooth,Cellular Technologies)	1:1.4-9,1
Week 11	15/04/2026	Switching in Networks: Datagram and Virtual circuit Switching	1:4.7
Week 12	22/04/2026	IP Technology (IPv4 message header format). Cisco Packet Tracer Tuttorial II	
Week 13	29/04/2026	IP Technology (IPv4 message header format). Cisco Packet Tracer Tuttorial III	
Week 14	06/05/2026	IP Technology (IPv4 message header format). Cisco Packet Tracer Tuttorial III (cont.)	
Week 15	13/05/2026	Revisions	
Week-16	16-25/06/2026	**Final Exams**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		45	
	Semester Evaluation			55	
	Midterm(s)	1		35	63,6
	Quiz(zes)				
	Project(s)	1		25	45,5
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	65	Project	1	25
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)			Final exam (FE)	1	2
ME preparation self study			FE preparation self study	1	12
				TOTAL :	143
				Recommended ECTS Credit (Total Hours / 30) :	4,77

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical & Electronic Engineering"

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE 348	Electromechanical Energy Conversion 2		3	0	0	3	5	Friday 09:00 - 12:00
Prerequisite	EE224/ 304	Prerequisite to				-		

Course Lecturer	Assist. Prof. Dr. Samet Biricik	Office Hours Schedule	Thuesday 14:00-16:50
E-mail	sbiricik@eul.edu.tr		
Phone	2282	Office / Room No	AS305
Teaching Assistant(s)	-	Phone	-
E-mail	-	Office / Room No	-

Course Objectives	This course serves as an introduction to three phase and single phase synchronous and asynchronous machine, dc motors, Variable-Reluctance Machines and Stepping Motors electromechanical energy conversion and operating principles of rotating electrical machines.
Learning Outcomes	1. Gain a general understanding of rotating machines.
	2. Describe the fundamentals of electromechanical energy conversion inside a dc or ac electric machine.
	3. Describe the techniques for motor drive.
	4. Measure the electrical characteristics of electric machines.

Programme Outcome Relations			
	PO1: 5	**PO7: 1**	**(1) Strongly disagree;**
	PO2: 4	**PO8: 1**	**(2) Disagree;**
	PO3: 4	**PO9: 1**	**(3) Neither agree nor disagree;**
	PO4: 3	**PO10: 2**	**(4) Agree;**
	PO5: 5	**PO11: 1**	**(5) Strongly agree.**
	PO6: 1		

Textbooks and/or References		
	1-	Theodore Wildi, "Electrical Machines, Drivers, and Power Systems", Fifth Edition, Prentice Hall, 2020
	2-	Fitzgerald, Charles Kingsley, Stephen D. Umans "Electric Machinery" ,ISBN 0-07-366009-4 Sixth Edition McGraw.Hill, 2003.

WEEK	Date	TOPICS	Reference No - Section
Week 1	03/02/2026	Introduction to Rotating Machines	Cp.13
Week 2	10/02/2026	Introduction to Rotating Machines	Cp.13
Week 3	17/02/2026	Synchronous Machines	Cp.14
Week 4	24/02/2026	Synchronous Machines	Cp.14
Week 5	03/03/2026	Synchronous Machines	Cp.15
Week 6	10/03/2026	Polyphase Induction Machine: Currents and Fluxes, Induction-Motor Equivalent Circuit ,Analysis of the Equivalent Circuit	Cp.15
Week 7	17/03/2026	Polyphase Induction Machine :Parameter Determination from No-Load and Blocked-Rotor Tests, Effects of Rotor Resistance; Wound and Double-Squirrel-Cage Rotors	
Week 8	24/03/2026	Polyphase Induction Machine	Cp. 16
Week 9	31/03/2026	Polyphase Induction Machine	Cp. 16
Week 10	07/04/2026	MT EXAM	Cp. 17
Week 11	14/04/2026	DCMachines	Cp. 17
Week 12	21/04/2026	DCMachines	Cp. 18
Week 13	28/04/2026	Variable-Reluctance Machines and Stepping Motors	Cp. 18
Week 14	05/05/2026	Single- and Two-Phase Motors: Qualitative Examination, Starting and Running Performance of Single- Phase Induction and Synchronous Motors	Cp. 19
Week 15	12/05/2026	Single- and Two-Phase Motors:Revolving-Field Theory of Single-Phase Induction Motors , Two-Phase Induction Motors .	Cp. 19
Week 16	19/05/2026	**Final Exam**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1		50	100.0
Semester Evaluation				
Midterm(s)	1		40	70.0
Quiz(zes)	1		10	30.0
Project(s)				
Homework(s)				
Laboratory				
Other				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)		14	42	Homework	1	10
TLH self study		12	36	Project		
Quiz (Q)				Lab Practice	0	0
Quiz preparation self study		4	15	Seminar		
Midterm exam (ME)		1	15	Final exam (FE)	1	8
ME preparation self study		1	15	FE preparation self study	1	10
				TOTAL :		151
				Recommended ECTS Credit (Total Hours / 30) :		5.03

EUROPEAN UNIVERSITY OF LEFKE

Electronics and Communication Engineering- Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE403/ECE403	Digital Communication	Technical Elective	3	0	0	3	5	Thursday 9:00-11:50
Prerequisite		Prerequisite to						

Course Lecturer	Prof. Dr. Yönal Kırsal	Office Hours	Monday 9:30-11:30
E-mail	ykirsal@eul.edu.tr	Schedule	Tuesday 9:30-11:30
Phone	2502	Office / Room No	AS-313
Teaching Assistant		Phone	
E-mail		Office / Room	

Catalogue Descriptions	Course starts with a review of probability and introduction to stochastic processes so as to understand channel behaviour. Digital modulation and demodulation methods explained with respect to analog modulation methods. Differences between analog and digital techniques and the importance of detectors. Base band signals and dimensionality theorem. Gramm Schmidt orthogonalisation procedure. Pulse code modulation, Nyquist sampling theorem, explanation of aliasing. Pulse amplitude modulation, Pulse position modulation and minimum eucladian distance between signals. Multiplexing methods. Digital Passband Transmission topics which include Additive White Gaussian Noise, Coherent and non-coherent digital modulation themes such as BPSK, DBPSK, BFSK, BASK, etc. Optical Communications.
Course Objectives	To introduce to the students the concept of analog digitization using PCM, maximum-likelihood design, digital modulation and demodulation techniques, and performance of digital communication systems using error probability.
Learning Outcomes	On successful completion of the course, students should be able to: (1) define and recognise stochastic processes and their relation to communications, (2) understand concepts related to vector spaces, dimensionality, basis functions, (3) understand the differences in various digital modulation methods, (4) calculate the probability of error, for a given digital modulation technique, (5) compare the performance of digital modulation techniques, (6) be able to model a modulation method and assess its performance using Matlab, (7) have basic understanding of today's popular modulation techniques.

Programme Outcome Relations			
	PO1: 4 **PO2: 3** **PO3: 2** **PO4: 3** **PO5: 1** **PO6: 2**	**PO7: 1** **PO8: 1** **PO9: 2** **PO10: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Digital Communications: Fundamentals and Applications, By Bernard Sklar, Prentice Hall, 2 nd ed, 2001.
	2	Digital Communications, Fundamentals and Applications, Larsen & Keller 2017
	3	Proakis J, Digital Communications 4th Edition, Mc. Graw Hill

WEEK	Date	TOPICS	Reference No - Section
Week 1	05/02/2026	Introduction and overview of Probability	1-Ch: 2.1
Week 2	12/02/2026	Overview of Stochastic Processes and AWGN channel	1-Ch:2.2
Week 3	19/02/2026	Baseband transmission techniques (dimensionality, Gramm Schmnidtt)	1-Ch: 1.1, 1.2, 1.3, 1.4
Week 4	26/02/2026	PAM, PPM, signals in baseband	1-Ch:4.2,
Week 5	05/03/2026	Biorthogonal and antipodal signals in baseband	1-Ch:4.3
Week 6	12/03/2026	Receivers (Correlation Type)	1-Ch: 5.1.2
Week 7	19/03/2026	**Midterm Exams**	
Week 8	26/03/2026	Receivers (matched filter)	1-Ch: 5.1.2
Week 9	02/04/2026	Pass Band modulation techniques (PAM)	2-Ch: 4.2.4
Week 10	09/04/2026	Pass Band modulation techniques (PSK)	2-Ch:4.2.2
Week 11	16/04/2026	Pass Band modulation techniques (QAM)	2-Ch: 4.2.6,
Week 12	23/04/2026	Pass Band modulation techniques (OFDM)	2-Ch: 4.2.3
Week 13	30/04/2026	Probability of error	1-Ch: 5.2 2-Ch: 4.7
Week 14	07/05/2026	Probability of error and performance of comunicaton systems	2-Ch: 12.1, 12.2, 12.3
Week 15	14/05/2026	Introduction to optical communications and wideband techniques.	2-Ch: 12.1, 12.2, 12.3
Week 16	16-25/05/2026	**Final Exams**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		40	
	Semester Evaluation			60	
	Midterm(s)	1		30	50,0
	Quiz(zes)				
	Project(s)				
	Homework(s)			30	50,0
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	78	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	10	FE preparation self study	1	14
				TOTAL :	145
				Recommended ECTS Credit (Total Hours / 30) :	4,83

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical & Electronics Engineering"

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE 409	High Voltage Engineering		3	0	0	3	5	Thursday 09:00-11:50
Prerequisite	-	**Prerequisite to**	-					

Course Lecturer	Assoc. Prof. Dr. Samet Biricik	**Office Hours Schedule**	Tuesday 15:30-17:20
E-mail	sbiricik@eul.edu.tr		
Phone	2282	**Office / Room No**	AS305
Teaching Assistant(s)	-	**Phone**	-
E-mail	-	**Office / Room No**	-

Catalogue Description	1) Electrical Field Analysis, Static electric field concept, basic electrode systems, experimental and computational methods for field analysis, 2) Discharge phenomena electrical breakdown in gasses, Townsend's breakdown criterion, Paschen's law, Streamer or "Canal" mechanisms, breakdown in non-uniform field and corona, electrical breakdown of dielectric liquids and solids.
Course Objectives	The course serves as an introduction to high voltage engineering, including basics of electical breakdown, high voltage generation, high voltage test systems, measurement and analysis techniques as applied to power system apparatus such as cables, insulators, transformers, and generators
Learning Outcomes	1. Understand fundamental concepts of high voltage AC, DC, and impulse generation 2. Learn the techniques employed in high voltage measurements 3. Apply analytical and numerical techniques for electric field calculations in high voltage systems 4. Learn the fundamental concept of electric breakdown in liquids, gases, and solids

Programme Outcome Relations			
	PO1: 5 **PO2: 4** **PO3: 4** **PO4: 3** **PO5: 5** **PO6: 1**	**PO7: 1** **PO8: 1** **PO9: 1** **PO10: 2** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References	1. High Voltage Engineering: Fundamentals, E. Kuffel, W. S. Zaengl, and J. Kuffel, Newnes: Oxford, 2nd edition, 2000

WEEK	Date	TOPICS	Reference No - Section
Week 1	26/09/2025	Introduction.	Ch-1
Week 2	03/10/2025	Generation of high voltage: DC	Ch-2
Week 3	10/10/2025	Generation of high voltage: DC, and impulse generating equipment.	Ch-2
Week 4	17/10/2025	Measurement of High Voltage	Ch-3
Week 5	24/10/2025	Simulation models.	Ch-3
Week 6	31/10/2025	High voltage measuring systems	Ch-3
Week 7	07/11/2025	Midterm Exam Week	
Week 8	14/11/2025	Midterm Exam Week	Ch-5
Week 9	21/11/2025	Measurement methods and analysis of results.	Ch-5
Week 10	28/11/2025	Electrical breakdown fundamentals.	Ch-6
Week 11	05/12/2025	electrical breakdown in solids, liquids, and gases.	Ch-6
Week 12	12/12/2025	Non-destructive tests such as corona testing and partial discharge	Ch-6
Week 13	19/12/2025	Insulation coordination as related to equipment ratings .	Ch-6
Week 14	26/12/2025	Test requirements.	Ch-6
Week 15	02/01/2026	**Final Exam**	
Week 16	03-11/01/2026	**Final Exam**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1		50	100.0
Semester Evaluation			50	
Midterm(s)	1		40	80.0
Quiz(zes)	1		10	20.0
Project(s)				
Assigment(s)	0		0	0.0
Laboratory work(s)				
Attendance				

*** *Lifelong Learning Programme (LLP)* *** | Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours		Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42		Homework	1	2
TLH self study	16	50		Project	0	0
Quiz (Q)	2	1		Presentation		
Quiz preparation self study	1	10		Seminar		
Midterm exam (ME)	1	2		Final exam (FE)	1	2
ME preparation self study	1	8		FE preparation self study	1	30
				TOTAL :		147
				Recommended ECTS Credit (Total Hours / 30) :		4.90

EUROPEAN UNIVERSITY OF LEFKE - Faculty of Engineering

Electrical & Electronics Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE410/ECE410	Graduation Project I	Compulsory	0	2	0	1	4	Thursday 14:00-17:00 AS215
Prerequisite		Prerequisite to						
Course Lecturer	B. Özmen, Y. Kirsal, S. Biricik, A. Yasli, , Ö.C. Özerdem					Office Hours Schedule	Wednesday 12:00-13:00	
E-mail	bozmen@eul.edu.tr, ykirsal@eul.edu.tr, sbiricik@eul.edu.tr, ayasli@eul.ed							
Phone	2510					Office / Room No	AS-303	
Teaching Assistant						Phone		
E-mail						Office / Room No	ATC	

Catalogue Descriptions	4th academic year (final year) students in the Department of Electrical and Electronic Engineering are required to prepare and present a graduation project (Graduation Project - Part I & II) under the supervision of a faculty member listed above. Each student has to prepare a separate (or, as part of a team with two members) project. The purpose of the project is to develop an understanding of independent research by studying a particular Electrical and Electronic Engineering topic. It is an extended exercise in the professional application of the skills and experience gained in the undergraduate program.
Course Objectives	To enable final-year Electrical and Electronics Engineering students to conduct an independent or team-based graduation project under faculty supervision, through which they develop the ability to define and analyze an engineering problem, apply the knowledge and skills acquired during their undergraduate studies, perform research on a specific topic, and present their work in a professional written and oral format.The design project provides an experience in designing and implementing methods within multiple realistic constraints using conventional materials, tools and facilities. Projects should be proposed in conformity with relevant standards, ethical issues and environmental responsibilities.
Learning Outcomes	(1) familiarize with their projects, (2) carry out literature survey, (3) prepare materials, (4) study components and relevant standards before the implementation phase in the following semester.

Programme Outcome Relations			
	PO1: 5	**PO6b: 5**	**(1) Strongly disagree;**
	PO2: 5	**PO7: 5**	**(2) Disagree;**
	PO3: 5	**PO8: 5**	**(3) Neither agree nor disagree;**
	PO4: 5	**PO9: 5**	**(4) Agree;**
	PO5: 5	**PO10a-b: 5**	**(5) Strongly agree.**
	PO6a: 5	**PO11: 5**	

Textbooks and/or References		
	1	Ralph M. Ford and William C. Lasher,Processes for Ensuring QualityCapstone Design Projects, 0-7803-8552-7/04/$20.00 © 2004, IEEE.
	2	Abdallah MHasna,Embedding Sustainability in Capstone EngineeringDesign Projects, 978-1-4244-6571-2/10/$26.00 © 2010, IEEE.
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	22/09/2025	Course Introduction & Project Guidelines	
Week 2	29/09/2025	Project Topic Selection	
Week 3	06/10/2025	Preparing project proposal form	
Week 4	13/10/2025	Literature Review	
Week 5	20/10/2025	Problem Definition	
Week 6	27/10/2025	Defining System Design Requirements	
Week 7	03/11/2025	Feasibility & Constraints &Report Writing	
Week 8	10/11/2025	MIDTERM EXAMS	
Week 9	17/11/2025	MIDTERM EXAMS	
Week 10	24/12/2025	Tools & Methods	
Week 11	01/12/2025	Implementation Planning	
Week 12	08/12/2025	Preliminary Simulation/Modeling	
Week 13	15/12/2025	Data Collection / Testing Plan	
Week 14	22/12/2025	Report Writing	
Week 15	29/12/2025	Final Report Submissions	
Week 16	03-11/01/2026	**Final Exams**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Project Discussions	1	23-02/05-06/25	20	
Semester Evaluation			80	
Final Report	1	TBA	50	62.5
Demonstration of Implementations				
Presentation	1	TBA	20	25.0
Poster	1	TBA	5	6.3
Time Plan	1		5	6.3
Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	14	Homework		
TLH self study	14	64	Final Report	1	30
Quiz (Q)			Presentation	1	1
Q preparation self study			Poster	1	2
Laboratory (L)			Demonstration of Implementations Work		
L preparation work					
Midterm exam (ME)			Final exam (FE)		
ME preparation self study			FE preparation self study		
			TOTAL :		111
			Recommended ECTS Credit (Total Hours / 30) :		3.70

EUROPEAN UNIVERSITY OF LEFKE

Electrical & Electronics Engineering - Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE419	Narrowband Wireless Communications	Elective	3	0	0	3	5	Thursday: 12:00-16:50
Prerequisite		Prerequisite to						

Course Lecturer	Prof. Dr. Yönal Kırsal	Office Hours	Friday 9:00-11:00
E-mail	ykirsal@eul.edu.tr	Schedule	Wednesday 15:00:00-16:00
Phone	2502	Office / Room	AS313
Teaching Assistant		Phone	
E-mail		Office / Room	

Catalogue Descriptions	This course introduces the characteristics and applications of transmission fundamentals, communication networks, the cellular concept and system design fundamentals frequency reuse, interference and system capacity. Protocols and the TCP/IP protocol suite. Antennas and radio propagation and large-scale path loss. Small-scale fading and multipath propagation. Doppler shift, mobile multipath channel parameters such as coherence bandwidth and coherence time. Diversity techniques and diversity combining. Spread spectrum communication techniques. Multiple access techniques TDMA, FDMA, CDMA, SDMA. Satellite
Objectives	This course focuses on principles of wireless mobile communications. The lectures are intended to stress the fundamentals of mobile communications engineering that are important to any mobile communication system. To make the students to know about the various Signal encoding techniques, modulation techniques, propagation methods, coding and multi access techniques used in the mobile communication. Various wireless network systems and standards are to be introduced.
Learning Outcomes	On successful completion of the course, students should be able to: (1) An ability to understand the basics of wireless communication, (2) An ability to acquire a good knowledge of wireless communication systems and applications, (3) An ability to understand the standards/technologies for various wireless computing systems, (4) An ability to be aware of trends in wireless computing systems and applications, (5) An ability able to compare the various access techniques and will learn the fundamentals of satellite communications.

Programme Outcome Relations			
	PO1: 3	PO6b: 3	(1) Strongly disagree;
	PO2: 3	PO7: 1	(2) Disagree;
	PO3: 2	PO8: 3	(3) Neither agree nor disagree;
	PO4: 1	PO9: 5	(4) Agree;
	PO5: 2	PO10a: 2	(5) Strongly agree.
	PO6a: 5	PO10b: 2	
		PO11: 2	

Textbooks and/or References		
	1	Stallings, W., Wireless Communications & Networks, 2nd Edition, Prentice Hall, 2005
	2	Stallings, W., Data & Computer Communications, 10th Edition, Prentice Hall, 2013
	3	Wireless Communications: Principles and Practice, by T. S. Rappaport, 2nd Edition, 2002. Prentice Hall, ISBN-13
	4	Wireless Communications, by A. F. Molisch, 2005, John Wiley and Sons. ISBN-13 978-0-470-84887-6 (HB) or ISBN-13 978-0-470-84888-3 (PB).

WEEK	Date	TOPICS	Reference No - Section
Week 1		Introduction to course, objectives of the course	1:1.1-1:1.8
Week 2		Transmission Fundamentals; Signals for Conveying Information, Analog and Digital Data Transmission	1:2.1-1:2.2
Week 3		Transmission Fundamentals; Channel Capacity, Transmission Media, Multiplexing	1:2.2-1:2.5
Week 4		Communication Networks; LANs,MANs and WANs, Switching Techniques, Circuit Switching, Packet Switching	1:3.1-1:3.5
Week 5		Protocols and the TCP/IP Suite; The need for a protocol Architecture; TCP/IP Protocol	1:4.1-1:4.3
Week 6		Protocols and the TCP/IP Suite; The OSI Model, Internetworking	1:4.4-1:4.6
Week 7		Protocols and the TCP/IP Suite; The OSI Model, Internetworking	1:4.4-1:4.6
Week 8		**Midterms**	
Week 9		Antennas and Propagation; Antennas, Propagation Models, Line of Sight Transmission	1:5.1-1.5.6
Week 10		Antennas and Propagation; Fading in the Mobile Environment	1:6.1-1.6.3
Week 11		Signal Encoding Techniques; Signal Encoding Criteria, Digital Data, Analog Signal	1:6.4
Week 12		Signal Encoding Techniques; Analog Data, Digital Signals	1:9.1-1:9.4
Week 13		Satallite Communications;Sattalite parameters and configurations, Capacity Allocation-Frequency/Time Devision	1:10.1-1:10.3
Week 14		Cellular Wireless Networks; Principles of Cellular Networks, First Generation Analog	1:10.4-1:10.7
Week-15		Cellular Wireless Networks; FDMA, TDMA, CDMA Third Generation Systems	
Week-16		**Finals**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	3-11/01/2026	40	
Semester Evaluation			100	
Midterm(s)	1	8-16/11/2024	35	35.0
Quiz(zes)	1		25	25.0
Project(s)				
Homework(s)				
Laboratory works				
Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	68	Project		
Quiz (Q)	1	3	Presentation		
Q preparation self study	1	9	Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	10	FE preparation self study	1	14
				TOTAL :	150
			Recommended ECTS Credit (Total Hours / 30) :		5.00

EUROPEAN UNIVERSITY OF LEFKE - "Faculty of Engineering"

"Computer Engineering"

SYLLABUS

2023-2024 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE431	Digital Image Processing	Elective	3	0	0	3	5	Friday 09:00 - 11:50
Prerequisite		Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Cem Kalyoncu	Office Hours Schedule	
E-mail	ckalyoncu@eul.edu.tr		
Phone	2527	Office / Room No	AS-308
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course introduces the principles of digital image processing applications and their implementations mainly in C++. Topic covers: Image sampling and quantization; interpolation techniques, nearest neighbor interpolation, bilinear interpolation; Histograms, understanding image histogram, constrast stretching, brightness and contrast, gamma, histogram equalization. Filtering in spatial domain, low pass filter, high pass filter, band pass filter, box filter, edge detection techniques. Color theory, human color vision, digital image color systems: RGB, HSI, HSV, CMYK. Image morphology, thresholding, erosion, dilation, opening and closing operations, and/or/not operations. Information theory, Shannon's entropy, Huffmann compression, compression techniques, lossy/lossless compression.
Course Objectives	At the end of this course the student should be able to implement and perform experiments using generic image processing algorithms as well as being able to understand and implement published methods. At the end of the course, students will be well equipped to perform research on image processing topics.
Learning Outcomes	1. Familiarity with image processing terms 2. Knowledge of histograms and histogram processing 3. Ability to understand and perform filters on grayscale and binary images 4. Ability to understand and implement image processing algorithms 5. Having theoretical understanding of topics related to image processing, such as color theory, information theory

Programme Outcome Relations			
	PO1: 3	PO7: 2	(1) Strongly disagree;
	PO2: 2	PO8: 1	(2) Disagree;
	PO3: 1	PO9: 1	(3) Neither agree nor disagree;
	PO4: 2	PO10: 1	(4) Agree;
	PO5: 4	PO11: 1	(5) Strongly agree.

Textbooks and/or References		
	1	R. C. Gonzalez and R. E. Woods, Digital Image Processing, 3rd Edition, Prentice Hall, 2008
	2	
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	02-06/02/2026	Introduction, relation with signal processing, course outline and rules	-
Week 2	09-13/02/2026	Images, continuous and discrete images, sampling, quantization, image acquisition.	Ch 1, 2
Week 3	16-20/02/2026	Simple image transformations, interpolation and interpolation methods	Ch 2
Week 4	23-27/02/2026	Hands on training, image processing in C++	-
Week 5	02-06/03/2026	Histograms, histogram processing, contrast stretching, histogram equalization	Ch 3
Week 6	09-13/03/2026	Practical examples, Quiz 1	-
Week 7	16-20/03/2026	Filtering in spatial domain, convolution, smoothing, sharpening, edge detection.	Ch 3, 5
Week 8	23-27/03/2026	Frequency domain, frequency domain filters, low pass, high pass, and band pass filters	Ch 4, 5
Week 9	30/03-03/04/2026	**Midterms**	
Week 10	06-10/04/2026	Color theory, color models, color based segmentation	Ch 6
Week 11	13-17/04/2026	Morphology, dilation, erosion, opening, closing	Ch 9
Week 12	20-24/04/2026	Morphology examples, Quiz 2	
Week 13	27/04-01/05/2026	Information theory, image compression, huffman coding	Ch 8
Week 14	04-08/05/2026	Advanced topics in image processing: super resolution, contours, object detection, image enhancement	-
Week-15/16	11-15/05/2026	**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		40	
	Semester Evaluation			60	
	Midterm(s)	1		30	50.0
	Quiz(zes)	2		10	16.7
	Project(s)				
	Homework(s)	4		20	33.3
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework	4	20
TLH self study	13	39	Project		
Quiz (Q)	2	2	Presentation		
Q preparation self study	2	10	Seminar		
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	10	FE preparation self study	1	20
			TOTAL :		144
			Recommended ECTS Credit (Total Hours / 30) :		4.80

EUROPEAN UNIVERSITY OF LEFKE- "Faculty of Engineering"

"Electrical & Electronics Engineering"

SYLLABUS

2025-26 Spring Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE 436	Power System Analysis I		3	0	0	3	5	Friday 12:00-14:50
Prerequisite		Prerequisite to	-					

Course Lecturer	Prof. Dr. Özgür Cemal Özerdem	Office Hours Schedule	Thursday 12:00-14:00	Friday 10:00-11:00
E-mail	oozerdem@eul.edu.tr			
Phone	2517	Office / Room No	AS305 Faculty of Engineering	
Teaching Assistant(s)	-	Phone		
E-mail	-	Office / Room No	-	

Course Description	Basic structure of electrical power systems, Electrical characteristics of transmission lines, transformers and generators, Line Parameters, Modelling Transmission Lines, Control of power into a network.
Course Objectives	To teach the Basics of Power System Analysis. Understanding the transmission parameters and operation Representation power systems as one line diagram
Learning Outcomes	1. Get an overview of the power systems and its changing landscape, 2. Learn about transformers and the role they play in power systems. 3.Understanding the calculation of line parameters and represantation of transmission lines 4. Learning current and voltage relation on a transmission line 5. Understanding basic concepts of system modelling of power systems and basic symmetrical faults

Program Outcome Relations			
	PO1: 5 PO2: 5 PO3: 3 PO4: 3 PO5: 2	PO7: 2 PO8: 3 PO9: 2 PO10: 2 PO11: 2	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References	
1.	Power System Analysis and Design, J. D. Glover, M. S. Sarma, T. J. Overbye, Sixth edition, 2016, ISBN-13: 978-1-305-63618-7

WEEK	Date	TOPICS	Reference No - Section
Week 1	06/02/2026	Introduction: Phasors, Instantaneous Power, Complex Power, Network Equations.	2.1-2.4
Week 2	13/02/2026	Balanced three-phase circuits and power in balanced three-phase circuits	2.5-2.7
Week 3	20/02/2026	Transmission lines, transmission line resistance, conductance, Inductance: solid cylindrical conductor	3.1-3.8
Week 4	27/02/2026	Inductance: Single-phase two-wire line,three-phase three-wire line with equal phase spacing	4.5
Week 5	06/03/2026	Inductance: Composite conductors, Unequal Phase Spacing,Bundled Conductors, Series impedances	4.6-4.7
Week 6	13/03/2026	Electric Field and voltage, Capacitance: Single-phase two-wire line,three-phase three-wire line with equal phase spacing	4.8-4.9
Week 7	20/03/2026	Capacitance:Stranded conductors, Unequal Phase Spacing	4.10
Week 8	27/03/2026	Bundled Conductors	4.10
Week 9	**04-12/04/2026**	**MID-TERM Examinations**	5.1
Week 10	**13/04/2026**	Two port network representation and ABCD parameters	
Week 11	20/04/2026	Short Transmission lines, Medium transmission lines	5.2
Week 12	27/04/2026	Long transmission lines	5.5
Week 13	03/05/2026	Nominal Π and T, equivalent Π approimations	6.1-6.
Week 14	10/05/2026	One Line Diagrams (Schematic representation of the Power Systems),Symmetrical Faults	
Week 15	**16-25/05/2026**	**FINAL Exam**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	**16-25/05/2026**	50	
Midterm(s)	1	04-12/04/2026	40	80.0
Quiz(zes)				
Project(s)	1	During the semester	5	10.0
Homework(s)	2	During the semester	5	10.0
Laboratory				
Other (Technical Trips)				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	40	Homework	1	1
TLH self study	13	84	Project	1	3
Quiz			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work			Presentation		
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	10	FE preparation self study	1	8
			TOTAL:		150
			Recommended ECTS Credit (Total Hours / 30) :		5.00

EUROPEAN UNIVERSITY OF LEFKE - Faculty of Engineering

Electrical & Electronics Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
EE452/ECE420	Graduation Project II	Compulsory	0	9	0	5	5	Wednesday 14:00-17:00 AS215
Prerequisite	EE410/ECE410	Prerequisite to						
Course Lecturer	B. Özmen, Y. Kirsal, S. Biricik, A. Yasli, , Ö.C. Özerdem					Office Hours Schedule	Wednesday 12:00-13:00	
E-mail	bozmen@eul.edu.tr, ykirsal@eul.edu.tr, sbiricik@eul.edu.tr, ayasli@eul.e					Office / Room No	AS-303	
Phone	2510							
Teaching Assistant						Phone		
E-mail						Office / Room	ATC	

Catalogue Descriptions	This course is the sequel to EE410. It consists in the implementation of a realistic, preferably interdisciplinary, engineering capstone project emphasizing engineering design principles on an Electrical and Electronics Engineering topic. The team must complete the detailed design and implementation of the preliminary design they started in the EE410 course. It is an extended exercise in the professional application of the skills and experience gained in the undergraduate program. Students are expected to make a presentation and submit a detailed final report which documents the design, implementation and testing.
Course Objectives	Graduation Project II will establish a powerful knowledge of completing a successful project related to student's professions. The project topics are to be proposed in the course EE410. Projects should include at most two students. Graduation Project II should include Interdisciplinary/multidisciplinary and/or inter-sectoral aspects, originality and innovativity, real life constraints, software and/or hardware implementation plan. Graduation Project I Included a review of the literature that supports the need for the project. In Graduation Project II, students must carefully define their methodologies and realistic constraints in their projects. Projects should complete hardware and/or software implementations and should be presented with an oral presentation at the end of the semester.
Learning Outcomes	On successful completion of the course, students should be able to: (1) An ability to be able to define design objectives, design constraints and product specifications according to the stakeholder and project requirements., (2) An ability to Collect and review related data such as technical information, regulations, and standards etc. from credible literature resources, published research, and patents etc. to generate solutions., (3) An ability to manage concept generation and concept evaluation process, analyze and compare design alternatives/possible solutions, at the system and subsystem levels, and use measures of performance or other criteria to rank alternatives., (4) An ability to execute the design strategy and project plan (work breakdown structure) to ensure timely and within-budget completion of the project., (5) An ability to Design a system to meet the design criteria and constraints (such as cost, economic, resource availability, environment, sustainability, safety, manufacturability, assembly, reliability, testing and maintenance, and product life cycle considerations), (6) An ability to Execute manufacturing/ simulation/ implementation plan by selecting the suitable manufacturing/ simulation/ implementation techniques, (7) An ability to verification and validation of the project objectives according to the relevant engineering standards/ requirements/ design criteria. (8) An ability to understand the significance of relevant engineering standards for materials, components, manufacturing and product qualification, (9) An ability to understand the major characteristics of engineering drawings and generate engineering drawings according to the technical drawing standards (layout, assembly drawing, parts drawings, etc.) (10) An ability to manage design documentation and communication (both orally and in writing) using language and graphics appropriate to the technical discipline, with the necessary supporting material, to achieve desired understanding and impact.

Programme Outcome Relations			
PO1: 5	PO6b: 5	(1) Strongly disagree;	
PO2: 5	PO7: 5	(2) Disagree;	
PO3: 5	PO8: 5	(3) Neither agree nor disagree;	
PO4: 5	PO9: 5	(4) Agree;	
PO5: 5	PO10a-b: 5	(5) Strongly agree.	
PO6a: 5	PO11: 5		

Textbooks and/or References		
	1	Ralph M. Ford and William C. Lasher,Processes for Ensuring QualityCapstone Design Projects, 0-7803-8552-7/04/$20.00 © 2004, IEEE.
	2	Abdallah MHasna,Embedding Sustainability in Capstone EngineeringDesign Projects, 978-1-4244-6571-2/10/$26.00 © 2010, IEEE.
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	22/09/2025	Briefing about expectations from Grad. Project II and Milestones	
Week 2	29/09/2025	Project Discussions and Guideliness	
Week 3	06/10/2025	Submissions and Evaluations of Project Check List	
Week 4	13/10/2025	Finalizing the Structure of the Project with Check List	
Week 5	20/10/2025	Discussions with Supervisors	
Week 6	27/10/2025	Discussions with Supervisors	
Week 7	03/11/2025	Submissions of Project First Draft	
Week 8	10/11/2025	MIDTERM EXAMS	
Week 9	17/11/2025	MIDTERM EXAMS	
Week 10	24/12/2025	Discussions with Supervisors	
Week 11	01/12/2025	Demonstration of Implementations	
Week 12	08/12/2025	Demonstration of Implementations	
Week 13	15/12/2025	Submissions of Project Second Draft	
Week 14	22/12/2025	Discussions with Supervisors	
Week 15	29/12/2025	Final Report Submissions	
Week 16	03-11/01/2026	Final Exams	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Project Defence	1	23-02/05-06/25	20	
Semester Evaluation			80	
Final Report	1	TBA	30	37.5
Demonstration of Implementations	1	TBA	20	25.0
Presentation	1	TBA	20	25.0
Poster	1	TBA	5	6.3
Time Plan	1		5	6.3
Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	15	15	Homework		
TLH self study	15	60	Final Report	1	25
Quiz (Q)			Presentation	1	1
Q preparation self study			Poster	1	1
Laboratory (L)			Demonstration of Implementations Work	15	45
L preparation work					
Midterm exam (ME)			Final exam (FE)		
ME preparation self study			FE preparation self study		
			TOTAL :		147
			Recommended ECTS Credit (Total Hours / 30) :		4.90

EUROPEAN UNIVERSITY OF LEFKE

Electrical and Electronics Engineering, Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
ECE408/EE464	Digital Signal Processing	Major	3	0	0	3	5	Tuesday @ 09:00-11:50; AS-116
Prerequisite		Prerequisite to						

Course Lecturer	Burçin Özmen	Office Hours Schedule	On instructor's timetable.
E-mail	bozmen@eul.edu.tr		
Phone	2510	Office / Room No	AS-303
Teaching Assistant		Phone	3504
E-mail	ayasli@eul.edu.tr	Office / Room No	

Catalogue Descriptions	Discrete-time signals, the relationship between continuous and discrete-time transforms, and the sampling theorem. System properties. The impulse response of discrete time, linear time-invariant (LTI) systems and the convolution sum. The z-transform and its properties. Design and analysis of LTI systems using the z-transform. Filter structures. Design of FIR and IIR digital filters. Characterization using linear difference equations. Signal analysis using the discrete Fourier transform and the fast Fourier transform (FFT). Analysis and simulation using the MATLAB software package.
Course Objectives	This course aims to give students the necessary skills for analysing and synthesising algorithms and systems that process discrete-time signals, with emphasis on realization and implementation
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) discrete-time signals & systems, and system properties, (2) digital LTI systems and the convolution sum, (3) the z-transforms and region of convergence, (4) the design of both FIR and IIR digital filters (5) computational tools for the analysis of signals and manipulation of LTI systems.

Programme Outcome Relations			
	PO1: 5 **PO2: 3** **PO3: 2** **PO4: 4** **PO5: 5** **PO6a: 1**	**PO6b: 1** **PO7: 3** **PO8: 5** **PO9: 4** **PO10a-b: 1** **PO11: 4**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	E. C. Ifeachor and B. W. Jervis, Digital Signal Processing: A Practical Approach, Englewood Cliffs, N. J. Prentice-Hall, 2001. ISBN: 0201596199.
	2	B. Mulgrew, P. Grant and J. Thompson, Digital Signal Processing: Concepts and Applications, 2nd Ed, Palgrave Macmillan, 2003. ISBN: 0333963563.
	3	S. K. Mitra., Digital Signal Processing: A Computer based approach, MCGraw-Hill, 4th Ed., 2011. ISBN: 0071289461.ISBN: 0071289461

WEEK	Date	TOPICS	Reference No - Section
Week 1	22/09/2025	Intro and review of discrete-time (DT) signals	1: 1.1-1.8
Week 2	29/09/2025	Review: system properties (linearity, time-invariance, causality, stability)	1: 2.1-2.4
Week 3	06/10/2025	Review: LTI systems and DT convolution	1: 2.5-2.9
Week 4	13/10/2025	LTI systems continued	1: 3.1-3.4
Week 5	20/10/2025	Sampling continuous-time signals and the Nyquist criterion	1: 3.3; 3.5-3.7
Week 6	27/10/2025	Z-transform: properties and region of convergence	1: 4.1-4.4;4.6
Week 7	03/11/2025	Z-transform: difference equations for LTI systems	1: 5.1-5.4
Week 8	10/11/2025	Properties of digital filters: FIR and IIR filters and their structures	1: 6.1-6.3;7.1-7.4
	10/11/2025	**Midterm Exam Week**	-
Week 9	17/11/2025	Properties of digital filters: lowpass, highpass, bandpass and bandstop filters	1: 6.1-6.2
Week 10	24/12/2025	Properties of digital filters: lowpass, highpass, bandpass and bandstop filters	1: 6.2-6.3
Week 11	01/12/2025	FIR digital filter design: window and Kaiser methods	1: 6.4-6.6
Week 12	08/12/2025	IIR digital filter design: bilinear transform method	1: 7.1-7.3
Week 13	15/12/2025	IIR digital filter design: bilinear transform method	1: 7.1-7.3
Week 14	22/12/2025	DT Fourier representations: DFT, FFT	1: 8.1-8.3
Week 15	29/12/2025	Review	
Week 16	03-11/01/2026	**Final Exam Week**	-

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	03-11/01/2026	50	
	Semester Evaluation			50	
	Midterm(s)	1	08-16/11/2025	25	50.0
	Quiz(zes)	1-2	TBA	15	30.0
	Project(s)	1	TBA	10	20.0
	Homework(s)				
	Laboratory works				

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	42	Project	1	30
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)					
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	2
ME preparation self study	1	2	FE preparation self study	1	30
					150
			Recommended ECTS Credit (Total Hours / 30) :		5.00

EUROPEAN UNIVERSITY OF LEFKE- Faculty of Engineering

SYLLABUS

2025-2026 FALL Semester

Course Code	Course Name	Course Type	Weekly Course T	A	L	Credits	ECTS	Weekly Time Schedule
ENGG111	Chemistry Laboratory		0	0	2	1	2	Tuesday 09:00-11:50 AS114 AND CHEMISTRY LAB
Prerequisite		Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Devrim ÖZDAL	Office Hours Schedule	Tuesday 14.00-15.00
E-mail	devrimozdal@eul.edu.tr		
Phone	2516	Office / Room No	AS307
Teaching Assistant(s)	-	Phone	-
E-mail	-	Office / Room No	-

Catalogue Descriptions	This course has been specially designed as a intensive introduction to the techniques of experimental chemistry. Molarity, Solution preparation, Calculation of denisty, distillation, Seperation methods, precipitation reaction, acid-base titration, thermochemisty.
Objectives	In the chemistry laboratory, students will examine, test and establish for themselves the chemical principles studied in class and textbooks; will collect experimental data; and will use their reasoning to draw logical conclusions about the meaning of these data.
Learning Outcomes	LO1: Students will develop skills in collecting and managing data in order to express their results in a precise and reliable quantitative or qualitative form on lab. reports, LO2: Students will be use basic apparatus, apply experimental methodologies in the chemistry laboratory setting and Demonstrate the basic laboratory safety concepts, LO3: To gain ability to calculate concentration of solution and learn preparation of solution experimentally, LO4: To understand seperation techniques and apply in laboratory, LO5: an understanding thermodynamics laws, enthalpy and free energy concepts, LO6: To observe precipitation reaction experimentally and calculate percentage yield of experiments, LO7: Defining acids and bases and conduct acid-base titration experiment, LO8: To calculate density of materials.

Program Outcome Relations			
	PO1: 5	PO7: 1	(1) Strongly disagree;
	PO2: 1	PO8: 4	(2) Disagree;
	PO3: 1	PO9: 4	(3) Neither agree nor disagree;
	PO4: 1	PO10: 1	(4) Agree;
	PO5: 3	PO11: 1	(5) Strongly agree.
	PO6: 1		

Textbooks and/or References		
	1	European University of Lefke Chemistry Lab. Manual, 2017.
	2	William L. Masterton, Cecile N. Hurley, Chemistry Principles and Reactions, 8th edition Cengage Learning, 2016

WEEK	Date	TOPICS	Reference No - Section
Week 1	22-26.09.2025	Introduction and General Definitons	Ref. 1
Week 2	29.09-03.10.2025	Laboratory Safety Rules and Laboratory Equipments	Ref. 1
Week 3	06-10.10.2025	Theoretical Background and Report Writing	Ref. 1
Week 4	13-17.10.2025	Experiment 1. Density (FIRST GROUPS)	Ref. 1
Week 5	20-24.10.2025	Experiment 1. Density (SECOND GROUPS)	Ref. 1
Week 6	27-31.10.2025	Experiment 2. Distillation (FIRST GROUPS)	Ref. 1
Week 7	03-07.11.2025	Experiment 2. Distillation (SECOND GROUPS)	Ref. 1
Week 8	10-14.11.2025	**MIDTERM EXAM WEEK**	Ref. 1
Week 9	17-21.11.2025	Experiment 3. Solution Preparation (FIRST GROUPS)	Ref. 1
Week 10	24-28.11.2025	Experiment 3. Solution Preparation (SECOND GROUPS)	Ref. 1
Week 11	01-05.12.2025	Experiment 4. Acid-Base Titration (ALL GROUPS)	Ref. 1
Week 12	08-12.12.2025	Experiment 5. Precipitation Reaction (FIRST GROUPS)	Ref. 1
Week 13	15-19.12.2025	Experiment 5. Precipitation Reaction (SECOND GROUPS)	Ref. 1
Week 14	22-26.12.2025	Experiment 6. Thermochemistry (ALL GROUPS)	Ref. 1
Week 15	29-31.12.2025	Make-Up Experiment Week	Ref. 1
Week 16	05.09.01.2026	**FINAL EXAM WEEK**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	03-11.01.2026	40	
	Semester Evaluation			50	
	Midterm Exam	1	08-16.11.2025	30	60,0
	Quiz(zes)	0		0	0,0
	Project(s)	0		0	0,0
	Homework	0		0	0,0
	Laboratory	0		0	0,0
	Report Writing	6	After each Experiment	30	60,0

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours			Applied Hours		
Midterm	1	8,0	Final	1	10,0
Quiz			Project		
Laboratory	6	12,0	Homework		
Atelier			Seminar		
Field Study			Presentation		
Report Writing	6	18,0	Self Study		
			TOTAL :	48	
			Recommended ECTS Credit (Total Hours / 25) :	2	

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
ENGG121	PHYSICS I LABORATORY	Compulsory	0	0	1	1	2	Tuesday 12.00-13.00
Prerequisite		Prerequisite to						

Course Lecturer	Mehmet BURHAN	Office Hours Schedule	Thursday 09:00-11:00
E-mail	mburhan@eul.edu.tr		
Phone	2515	Office / Room No	AS307
Teaching Assistant	Aboubakar Gulam	Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course is directed to COMN121-Physics. The aim ocourse is providing a medium for students to see the experimental applications of kinematics and dynamics of one dimensional, two dimensional, circular and rotational motion. The course supports students to validate the underlying theory through experiment and observation.
Objectives	The aim of the course is providing the understanding of the fundamental concepts/laws in physics by setting up laboratory equipment safely and efficiently and planning and carrying out experimental procedures.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1)nature of science and scientific method (2) the ability to apply knowledge/skills to real world settings by identifying possible sources of error and implementing techniques that enhance precision. (3) an ability to demonstrate critical thinking and problem solving skills in the area of physics, (4) teamwork skills/ ability to collaborate by working in groups on a laboratory experiment. (5) written communication ability by reporting verbally the experimental data, results, and assessment of reliability.

Programme Outcome Relations			
	PO1: 5 **PO2: 4** **PO3: 1** **PO4: 1** **PO5: 4** **PO6: 1**	**PO7: 1** **PO8: 4** **PO9: 4** **PO10: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Serway, Physics for Scientists and Engineers with Modern Physics, 9/e
	2	PHYSICS I LABORATORY BOOKLET

WEEK	Date	TOPICS	Reference No - Section
Week 1	04..02.2026	INTRODUCTION	Ref. 1 : 1.1
Week 2	11..02.2026	NATURE OF SCIENCE	Ref. 1 :1.2
Week 3	18..02.2026	SCIENTIFIC METHOD	Ref. 1 : 1.3
Week 4	25..02.2026	SI UNITS, UNIT CONVERSIONS, DIMENSION ANALYSIS	Ref. 1 :1.4
Week 5	04..03.2026	MEASUREMENTS, PRESCION AND ACCURACY, CALCULATION OF MEAN	Ref. 1 :1.5
Week 6	11..03.2026	CALCULATION OF STANDARD DEVIATION, TYPES OF ERRORS IN EXPERIMENTS, PERSENTAGE ERROR	Ref 2 : 1.1
Week 7	18..03.2026	IMPORTANCE OF LINE GRAPHS IN EXPERIMENTS, CALCULATION OF SLOPE, USING SLOPE FOR DETERMINATION OF EXPERIMENTAL VALUES	Ref2: 1.2
Week 8	25..03.2026	EXPERIMENT 1 : MEASUREMENT AND CALCULATION	Ref 2 : 2
Week 9	01.04.2026	EXPERIMENT 2 : FREE FALL	Ref 2 : 3
Week 10		**MIDTERMS**	
Week 11	15.04.2026	EXPERIMENT 3 RESULTANT FORCE	Ref 2 : 4
Week 12	22.04.2026	EXPERIMENT 4: LAWS OF NEWTON	Ref 2 : 5
Week 13	29.04.2026	EXPERIMENT 5: HOOKE'S LAW	Ref 2 : 6
Week 14	06.05.2025	EXPERIMENTS MAKE-UP	
Week-15/16		**FINALS**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		30	
	Semester Evaluation			70	
	Midterm(s)	1		20	29.0
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory work(s)	6		50	71.0
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	6	6	Homework		
TLH self study			Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)	6	6	Tutorial		
L preparation work	6	18			
Midterm exam (ME)	1	1	Final exam (FE)	1	1
ME preparation self study	1	3	FE preparation self study	1	5
				TOTAL :	40
				Recommended ECTS Credit (Total Hours / 30) :	1.33

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
ENGG122	Physics-II Laboratory	Compulsory	1	0	0	1	2	Monday: 09:00-10:00
Prerequisite		Prerequisite to						

Course Lecturer	Ahmet Yaşlı	Office Hours Schedule	Thursday: 14:00-17:00
E-mail	ayasli@eul.edu.tr		
Phone	2520	Office / Room No	AS 308
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	This course is directed with COM122-Physics II. The aim of course is providing a medium for students to see the experimental applications of thermodynamics, electricity and magnetism. The course supports students to validate the underlying theory through experiment and observation
Objectives	The main aim of this course is to introduce students with experiments in static and current electricity and magnetism, and optics which are chosen to illustrate the experimental foundations of physics presented in the lecture courses.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) Conduct experimental investigations of simple electric, magnetic and thermodynamic phenomena. (2) Carry out measurements utilizing appropriate techniques and safety practices. (3) Practice record keeping of experimental work and data graphing. (4) Analyze data using simple statistics and compare the results with the relevant theory (5)Write a lab report including a summary explaining the theoretical background and major experimental achievements and findings.

Programme Outcome Relations			
	PO1: 5 PO2: 3 PO3: 1 PO4: 1 PO5: 3 PO6: 1	PO7: 1 PO8: 3 PO9: 5 PO10: 1 PO11: 1	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References	
1	Serway, Physics for Scientists and Engineers with Modern Physics, 9/e
2	PHYSICS II LABORATORY BOOKLET
3	

WEEK	Date	TOPICS	Reference No - Section
Week 1	02/02/2026	Introduction	Ref. 1 : 1.1
Week 2	09/02/2026	Fundamentals of Physical Experiments	Ref. 1 : 1.2
Week 3	16/02/2026	Uncertainites	Ref. 1 : 1.3
Week 4	23/02/2026	Ohm's Law	Ref. 1 : 1.4
Week 5	02/03/2026	Experiment: Series and Parallel Combination of Resistors	Ref 2 : 1.1
Week 6	09/03/2026	Preparing Lab Report	
Week 7	16/03/2026	Circuit Components	Ref 2 : 1.5
Week 8	23/03/2026	Circuit Components	Ref 2 : 1.5
Week 9	30/03/2026	Experiment-1 Ohm's Law, Series and Parallel Combination of Resistors	
Week 10	06/04/2026	MIDTERM	Ref 2 : 1.1
Week 11	13/04/2026	Experiment-2 Equipotential and Electric Field Lines	Ref 2 : 1.2
Week 12	20/04/2026	Experiment-3 Constructing an Ammeter and a Voltmeter	Ref 2 : 1.3
Week 13	27/04/2026	Experiment-4 Charging and Discharging a Capacitor	Ref 2 : 1.4
Week 14	04/05/2026	Experiment-5 Force on a Current Carrying Conductor	Ref 2 : 1.5
Week-15/16		FINAL EXAM	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	10-15 June 2020	30	30.0
	Semester Evaluation			70	
	Midterm(s)	1		20	
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory work(s)	6		50	
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	7	7	Homework		
TLH self study			Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)	6	6	Tutorial		
L preparation work	6	24			
Midterm exam (ME)	1	1	Final exam (FE)	1	1
ME preparation self study	1	3	FE preparation self study	1	5
				TOTAL :	46
				Recommended ECTS Credit (Total Hours / 30) :	1.53

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course	Course Name	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
ENGG131	PHYSICS I/ PHYSICS			Compulsory	3	0	0	3	4	Wednesday 09.00-12.00
Prerequisite				Prerequisite to						

Course Lecturer	Assist. Prof Dr Nemika CELLATOĞLU	Office Hours Schedule	TUESDAY 16.00-17.00
E-mail	ncellatoglu@eul.edu.tr		
Phone	3501	Office / Room No	AS306
Teaching Assistant		Phone	
E-mail		Office / Room No	3501

Catalogue Descriptions	This course aims to introduce the fundamental concepts of physics necessary for engineering science and to provide essential background for engineering students. The course provides deep understanding about kinematics and dynamics of one dimensional, two dimensional, circular and rotational motion.
Objectives	The main aim of this course is to introduce the fundamental concepts of motion necessary for engineering science and to provide essential background for engineering students.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) an ability to translate, interpret and extrapolate important scientific models and laws governing classical mechanics, (2) an ability to demonstrate critical thinking and problem solving skills in the area of physics, (3) an ability to perform mathematical modeling of basic problems and establish their analytic solutions in field of classical mechanics, (4) an understanding of the connection of course material to real life applications.

Programme Outcome Relations			
	PO1: 5 PO2: 4 PO3: 1 PO4: 1 PO5: 1 PO6: 1	PO7: 1 PO8: 1 PO9: 1 PO10: 1 PO11: 1	(1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Textbooks and/or References		
	1	Serway, Physics for Scientists and Engineers with Modern Physics, 9/e
	2	Halliday and Resnick, Fundamentals of Physics
	3	Sears and Freedman, University Physics, 10/e
	4	Gettys, Keller and Skove, Physics: Classical and Modern

WEEK	Date	TOPICS	Reference No - Section
Week 1	24.09.2025	Introduction	Ref. 1 : 1.1,1.2,1.3,1.4,1.5,1.6
Week 2	01.10.2025	Kinematics In One Dimension: Distance, displacement, average velocity, average acceleration, instan. Velocity and acceleration	Ref. 1 :2.1, 2.2,2.3,2.4
Week 3	08.10.2025	Kinematics in One Dimension with constant acceleration: , motion on x-axis and Properties of motion on y-axis	Ref. 1 : 2.5, 2.6, 2.7, 2.8
Week 4	15.10.2025	Vectors: Unit Vector Representation and Matematical Operations with Vectors	Ref. 1 :3.1, 3.2, 3.3, 3.4
Week 5	22.10.2025	Kinematics in Two Dimension: Properties of Projectile Motion	Ref. 1 :4.1, 4.2, 4.3, 4.4, 4.5, 4.6
Week 6	5.11.2025	Laws of Motion: First, Second and Third Law of Newton	Ref 1: 5.1, 5.2, 5.3, 5.4, 5.5
Week 7	12.10.2025	Applications of Newton's Laws	Ref 1: 5.6, 5.7, 5.8
Week 8	19.10.2025	Dynamics of Circular Motion	
Week 9	25.10-16.11.2025	Midterm(s)	Ref 1: 6.1 , 6.2, 6.3, 6.4
Week 10	26.11.2025	Work and Energy	Ref 1: 7.1, 7.2, 7.3 7.4, 7.5, 7.6, 7.7, 7.
Week 11	03.12.2025	Definition of Mechanical Energy, Potential Energy, Kinetic Energy and Conservation of Mechanical Energy	Ref 1:8.1, 8.2, 8.3, 8.4, 8.5
Week 12	10.12.2025	Linear Momentum and Collisions: Definition of Linear Momentum, Conservation of Momentum in Collisions (Elastic, inelastic collisions)	Ref1: 9.1- 9.8
Week 13	17.12.2025	Properties of Rotational Motion: Kinematics of Rotational Motion	Ref1 : 10.1-10.9
Week 14	24.12.2025	Rotational Kinetic Energy, Torque and Angular Mometum	Ref1 :11.1- 11.4
Week 15	31.12.2025	REVISON	
Week-16/17		FINALS	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1		40	40.0
	Semester Evaluation			60	
	Midterm(s)	2		60	60.0
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory work(s)				
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	13	39	Homework		
TLH self study	13	50	Project		
Quiz (Q)	2	2	Presentation		
Q preparation self study	1	4	Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	2	Final exam (FE)	1	1.5
ME preparation self study	1	10	FE preparation self study	1	12
				TOTAL :	120.5
				Recommended ECTS Credit (Total Hours / 30) :	4.02

EUROPEAN UNIVERSITY *of* LEFKE

Faculty of Engineering

… Engineering Department

2025-2026 - Spring Semester - SYLLABUS

Course Code	Course Name	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
ENGG434	*Engineering Ethics*	Compulsory	*3*	-	-	*3*	5	*Tuesday 15:00-17:50 (ASA100)*
Prerequisite	-	**Prerequisite to**				-		

Course Lecturer	*İbrahim Bay*	**Office Hours Schedule**	*Monday 13:00-13:50*
E-mail	*ibay@eul.edu.tr*		
Phone	*+9 0 392 660 2000 (ext: 2509)*	**Office No**	*AS301*
Teaching Assistant(s)	-	**Phone**	-
E-mail	-	**Office No**	-

Catalogue Description	Ethics and professionalism, moral reasoning, moral frameworks, ethical theories, commitment of safety, risks, workplace responsibilities, honesty, equal opportunity: non-discrimination, confidentiality and conflicts of interest, environmental ethics, green engineering, sustainable development, dilemma resolution, professional rights, whistleblowing. Code of ethics: The Institute of Electrical and Electronics Engineers, American Institute of Chemical Engineers, American Society of Civil Engineers, Software Engineering. Basic ethics training. Engineering professional training, job responsibilities and professionalism, labor law and ethics. Case studies on the topics of engineering professional ethics, labor safety, environmental protection. Computers and ethics, data protection, computer failures. Global issues.
Course Objectives	This course is designed to introduce undergraduate engineering students to the concepts, theory and practice of engineering ethics. The topics cover professionalism, moral reasoning and codes of ethics, moral frameworks, commitment of safety, workplace responsibilities, environmental ethics, green engineering, dilemma resolution. Basic ethics training, job responsibilities, labor law and ethics, case studies.
Learning Outcomes	At the end of this course student will be able to: 1 *develop comprehension of professional and ethical responsibilities of engineers, including code of ethics of professional societies,* 2 *address and resolve problems arising from questionable practice,* 3 *develop critical thinking skills and professional judgement and understand practical difficulties of bringing about change,* 4 *develop a professional ethical identity to carry forward in their working life,* 5 *recognize the existence of ethical issues.*

Program Outcomes

PO1:	*1*	**PO7:**	*5*	***(1) Strongly disagree;***
PO2:	*1*	**PO8:**	*3*	***(2) Disagree;***
PO3:	*1*	**PO9:**	*3*	***(3) Neither agree, nor disagree;***
PO4:	*1*	**PO10a:**	*3*	***(4) Agree;***
PO5:	*1*	**PO10b:**	*3*	***(5) Strongly agree.***
PO6a:	*4*	**PO11:**	*3*	
PO6b:	*4*			

Textbooks and/or References

1 *Mike W. Martin and Roland Schinzinger., "Ethics in Engineering", fourth edition, 2005*

2 *Jr. Charles E. Harris, "Engineering Ethics: Concepts and Cases", 5th Edition, Wadsworth Publishing, 2013*

3 *Charles E. Harris Jr., Michael S. Pritchard., Michael J. Rabins., "Engineering Ethics: Concepts and Cases", 4th Edition, Wadsworth Publishing, 2008*

4 Herman T. Tavani, "Ethics and Technology: Controversies, Questions, and Strategies for Ethical Computing", 4th Edition, John Wiley and Sons, 2012

WEEK	Date	TOPICS	Reference No - Section
1	03/02/2026	Introduction	1-1.1;1
2	10/02/2026	Ethics and Professionalism	1-1.1;1
3	17/02/2026	Ethics and Professionalism	1-1.2,1-1.3, 2-2.1,2-2.2;2-2.3
4	24/02/2026	Moral Reasoning and Codes of Ethics	1-1.2,1-1.3, 2-2.1,2-2.2;2-2.3
5	03/03/2026	Moral Reasoning and Codes of Ethics	3-3.1,3-3.2,3-3.3, 3-5.1,3-5.2
6	10/03/2026	Moral Frameworks	1-3.1,1.3.2
7	17/03/2026	Moral Frameworks	4-4.1,4-4.2
8	24/03/2026	Engineering Ethics Case Studies	
9	31/03/2026	Engineering Ethics Case Studies	
10	07/04/2026	**Mid-Term Exams** (04/04/2026 - 12/04/2026)	
11	14/04/2026	Engineering as social Experimentation: Informed consent, Industrial Standards	3-6,1,3-6.2
12	21/04/2026	Engineering as social Experimentation: Safety issues - Commitment to Safety	3-6,1,3-6.2
13	28/04/2026	Workplace Responsibilities and Rights	3-6,3,3-6.4
14	05/05/2026	Moral Frameworks: Honesty	3-6.5,3-6.6
15	12/05/2026	Engineers and Technological Progress & Global Issues	4-7.1,4,7.2
16	19/05/2026	**Final Exams** (16/05/2026 - 25/05/2026)	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	TBA	40	
Semester Evaluation			60	100
Midterm(s)	1	TBA	20	33,3
Quiz(zes)				
Project(s)	1	TBA	20	33,3
Homework(s)				
Participation			5	8,3
Other (Presentation)	1	TBA	15	25,0

**** Lifelong Learning Programme (LLP) ****

Language of Instruction: *English*

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical Hours	15	= 15*3= 45	Applied Hours		
Midterm	1	= 1*1= 1	Final	1	= 1*1= 1
Quiz			Project	1	= 1*25= 25
Laboratory			Homework		
Atelier			Seminar		
Field Study			Presentation	1	= 1*15= 15
Other			Self Study	15	= 15*5= 75

TOTAL = 152,0

Recommended ECTS Credit (Total Hours / 30) ≈ 5,0

"FA" will be given if the student has either poor interest (<70% attendance) or insufficient data for grading.
You need to follow the Course Portal at "https://moodle.eul.edu.tr/course/view.php?id=12372"

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Fall Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
MATH101	Calculus I	Compulsory	3	2	0	4	7	Wednesday: 14:00-16:50
Prerequisite		Prerequisite to				MATH 110		

Course Lecturer	Prof. Dr. Yönal Kırsal	Office Hours Schedule	Monday 9:30-11:30 Wednesday 9:30-11:30
E-mail	ykirsal@eul.edu.tr		
Phone	2502	Office / Room No	AS-313
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Fundamentals of calculus and its applications for engineers. The conceptual and visual representation of limits, continuity, differentiability, and tangent line approximations for functions at a point. Applying the power rule, product rule, quotient rule and chain rule to functions explicitly and implicitly for finding derivatives. Applying the fundamental theorem of calculus to evaluate definite integrals. Performing accurately improper integrals, definite and indefinite integration, integration by parts, substitution, and inverse trigonometric substitution.
Objectives	This course aims to build fundamentals of the limits, differential and integral calculus of functions and its applications for engineers.
Learning Outcomes	On successful completion of the course, the student should: (1) learn cartesian coordinates system, understand function evaluation, graph functions, recall composite functions, odd-even functions, domain-range concept of the functions, and trigonometric functions; (2) understand conceptual and visual representation of limits, continuity, differentiability, and tangent line approximations for functions at a point; (3) apply the power rule, product rule, quotient rule and the chain rule to functions explicitly and implicitly for finding derivatives; (4) apply Fundamental Theorem of calculus to evaluate definite integrals, and calculate the area between the curves; (5) perform accurately substitution method, improper integrals, integration by parts, and inverse substitution.

Programme Outcome Relations			
	PO1: 5 **PO2: 3** **PO3: 1** **PO4: 1** **PO5: 1** **PO6: 1**	**PO7: 1** **PO8: 1** **PO9: 1** **PO10: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	Calculus: A Complete Course 8th Edition (2013), Robert A. Adams, Christopher Essex
	2	Calculus 8th Edition (2016), James Stewart
	3	

WEEK	Date	TOPICS	Reference No - Section
Week 1		Axis scales, Increments and Distances, Graphs, Straight lines, Equations of lines, Equation of Circles, The domain convention, Graphs of functions, Even and Odd functions, Sums, Diffrences, Products, Quotients and Multiplications of the functions	1:P1, 1:P2, 1:P3, 1:P4
Week 2		Composite functions, Piecewise defined functions, Roots and Factors of Quadratic polynomials, Some useful identities for trigonometric functions, Some special angles, The addition formulas, Other trigonometric functions	1:P5, 1:P6, 1:P7
Week 3		One-Sided Limits, Rules for Calculating Limits, The Squeeze Theorem, Limits at Infinity	1:1.2, 1:1.3
Week 4		Limits at Infinity for Rational Functions, Infinite Limits, Continuity at a Point, Continuity on an Interval, There are lots of continuous functions	1:1.3, 1:1.4
Week 5		Tangent lines and their slopes, The Definition of the Derivative, Sums and constant multiples, the product rule, the quotient rule	1:2.1, 1:2.2, 1:2.3
Week 6		The chain rule, Derivatives of trigonometric functions	1:2.4, 1:2.5
Week 7		The chain rule, Derivatives of trigonometric functions	1:2.4, 1:2.5
Week 8		**Midterms**	-
Week 9		Higher-order derivates, Implicit differentiation, L'Hospital's Rule, Extreme Values	1:2.6, 1:4.3, 1:4.4
Week 10		Antiderivatives, The Indefinite Integral, The Definite Integral	1:2.10, 1:5.3, 1:5.4
Week 11		The method of substitution, Trigonometric Integral	1:5.6
Week 12		Areas between two curves using Integrals	1:5.7
Week 13		Integration by Parts	1:6.1
Week 14		Integrals of Rational Functions, Integrals for Linear and Quadratic Denominators, Integrals for Partial Fractions	1:6.2
Week-15		Inverse Substitutions, Improper Integrals	1:6.3, 1:6.5
Week-16		**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	3-11/01/2025	45	
	Semester Evaluation			55	
	Midterm(s)	1	8-16/11/2024	40	72.7
	Quiz(zes)	1		15	27.3
	Project(s)				
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	84	Project		
Quiz (Q)	1	7	Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial	14	28
L preparation work					
Midterm exam (ME)	2	4	Final exam (FE)	1	2
ME preparation self study	2	16	FE preparation self study	1	28
			TOTAL :		211
			Recommended ECTS Credit (Total Hours / 30) :		7.03

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
MATH104	Linear Algebra	Compulsory	3	0	0	3	5	Monday 09:00-11:50
Prerequisite		Prerequisite to						

Course Lecturer	Hasan Dilek	Office Hours Schedule	
E-mail	hdilek-lau@eul.edu.tr		
Phone	-	Office / Room No	AS-301
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Systems of linear equations: equivalent systems, elementary operations, triangular and echelon forms, Gaussian elimination, echelon matrices, row canonical form, homogeneous systems of linear equations. Matrices: matrix addition and scalar multiplication, matrix multiplication, transpose of a matrix, matrices and systems of linear equations, square matrices, diagonal and trace, identity matrix, invertible matrices, special types of square matrices, elementary matrices and applications. Vector spaces: subspaces, linear combinations, linear spans, linear dependence and independence, basis and dimension, linear equations and vector spaces. Inner product spaces: Cauchy-Schwarz inequality, orthogonality, Gram-Schmidt orthogonalization process. Determinants: evaluations of determinants, properties of determinants, minors and cofactors, classical adjoints, Cramer's rule. Eigenvalues and eigenvectors: characteristic polynomial, Cayley-Hamilton theorem, diagonalizing matrices.
Objectives	To understand several important concepts in linear algebra, including systems of linear equations and their solutions; matrices and their properties; determinants and their properties; vector spaces; linear independence of vectors; subspaces, bases, and dimensions of vector spaces; inner product spaces; and eigenvalues.
Learning Outcomes	On successful completion of this course, all students will have developed knowledge and understanding of: (1) systems of linear equations and various methods for solving them, (2) matrices, matrix operations, and related concepts and problems, (3) basic concepts of linear algebra such as vector spaces, subspaces, linear independence, and basis and dimension, (4) orthogonality and inner product spaces, (5) calculating eigenvalues and eigenvectors, and diagonalizing matrices.
Programme Outcome Relations	PO1: 5 PO7: 1 (1) Strongly disagree;
Textbooks and/or References	1 Seymour Lipschutz, Theory and Problems of Linear Algebra, 2nd ed., Shaum's Outline Series, McGraw-Hill, 1991. 2 Gilbert Strang, Introduction to Linear Algebra, 5th ed., Wellesley - Cambridge Press, 2016. 3

WEEK	Date	TOPICS	Reference No - Section
Week 1	02/02/2026	Linear equations, solutions, linear equations in one/two unknown, Gaussian elimination algorithm	1: 1.1, 1.2, 1.3
Week 2	09/02/2026	System of linear equations, equivalent systems, elementary operations, systems in triangular/echelon form	1: 1.4, 1.5, 1.6
Week 3	16/02/2026	System of linear equations and matrices, homogeneous systems, basis for the general solution	1: 1.7, 1.8, 1.9, 1.10
Week 4	23/02/2026	Vectors in Rn, operations on vectors, vectors and linear equations, dot (scalar) product, norm of a vector	1: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6
Week 5	02/03/2026	Matrices, operations on matrices, transpose of a matrix, matrices and systems of linear equations	1: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7
Week 6	09/03/2026	Square matrices, diagonal and trace, identity matrix, powers of matrices, polynomials in matrices	1: 4.1, 4.2, 4.3, 4.4
Week 7	16/03/2026	Invertible (nonsingular) matrices, special types of square matrices, elementary matrices and applications	1: 4.5, 4.6, 4.8, 4.9
Week 8	23/03/2026	Vector spaces, examples of vector spaces, subspaces, linear combinations and spans, rowspace of a matrix	1: 5.1, 5.2, 5.3, 5.4
Week 9	30/03/2026	Linear (in)dependence, basis and dimension, rank of a matrix, linear equations and vector spaces	1: 5.6, 5.7, 5.8
Week 10	06/04/2026	**Mid - Term**	-
Week 11	13/04/2026	Inner product spaces, orthogonal sets and bases, orthogonality, Gram-Schmidt orthogonalization process	1: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6
Week 12	20/04/2026	Determinants, determinants of orders one, two, and three, properties of determinants	1: 7.1, 7.2, 7.3, 7.6
Week 13	27/04/2026	Minors and cofactors, evaluation of determinants, classical adjoints, finding inverses, Cramer's rule	1: 7.7, 7.8, 7.9
Week 14	04/05/2026	Characteristic polynomial, Cayley-Hamilton theorem, eigenvalues and eigenvectors, diagonalizable matrices	1: 8.1, 8.2, 8.3, 8.4, 8.5
Week 15	11/05/2026	Review	-
Week 16	16-25.06.26	**Finals**	-

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Exam	1	16-25/05/26	50	
Semester Evaluation			50	
Midterm(s)	1	4-12/04/26	50	100,0
Quiz(zes)				
Project(s)				
Homework(s)				
Laboratory works				
Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	70	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	1	1	Final exam (FE)	1	1
ME preparation self study	1	15	FE preparation self study	1	20
			TOTAL :		149
			Recommended ECTS Credit (Total Hours / 30) :		4,97

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2024-2025 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
MATH110	Calculus II	Compulsory	3	2	0	4	7	Wednesday 9:00-11:50-Gr2 Wednesday 15:00-17:50-Gr1
Prerequisite	MATH101	Prerequisite to				MATH224		

Course Lecturer	Assist. Prof. Dr. Feride Tabak	Office Hours Schedule	Monday 14:00-16:00 Thursday 9:00-11:00
E-mail	ftabak@eul.edu.tr		
Phone	2518	Office / Room No	AS-306
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	Techniques of integration, integration by parts, trigonometric substitution, integration of rational functions, integration of trigonometric integrals. Application of integrals, areas between curves, volume, volumes by slicing, volumes by cylindrical shells, arc length, area of a surface of revolution, moments and centre of mass. Parametric equations, curves defined by parametric equations, calculus with parametric equations, derivation, area and arc length calculations. Polar coordinates, plotting with polar coordinates, derivation and integration with polar coordinates. Sequences, series, integral tests and estimates of sum.
Course Objectives	The purpose of this course is to introduce students to more advanced topics in calculus. Evaluation of integrals, application areas of integrals, parametric equations, polar coordinates and infinite sequences and series are discussed.
Learning Outcomes	On successful completion of the course, the student will be able to: (1) evaluate an integral by the method of substitution; (2) use integrals to calculate areas between curves, volumes, work, and average value of a function; (3) evaluate integrals, using the techniques of integration by parts, using trigonometric identities and trigonometric substitution, and using partial fractions; (4) evaluate the two types of improper integrals; (5) use integrals to find arc length and area of a surface of revolution; (6) use integrals in applications to physics and engineering; (7) describe curves in parametric form and polar coordinates; (8) determine whether or not a sequence of real numbers converges; (9) test a series for convergence or divergence, using the integral, ratio, root, and comparison tests.

Programme Outcome Relations			
	PO1: 5 **PO2: 3** **PO3: 1** **PO4: 1** **PO5: 1** **PO6a: 1**	**PO6b: 1** **PO7: 1** **PO8: 1** **PO9: 1** **PO10a: 1** **PO10b: 1** **PO11: 1**	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**

Textbooks and/or References		
	1	James Stewart, Calculus, 8th Ed. Cengage, 2015 (Textbook)
	2	Robert A. Adams, Christopher Essex, Calculus: A Complete Course, 9th Ed., Pearson Education Inc., 2017. (Reference)
	3	George B. Thomas, Maurice D. Weir, Joel R. Hass, Thomas' Calculus, 14th Ed., Pearson Education Inc., 2017. (Reference)

WEEK	Date	TOPICS	Reference No - Section
Week 1		Short review of the several topics of the prerequisite course; including integration techniques	1: 4.1-4.5
Week 2		Application of Integration: Area between Curves, Volumes by disk method	1: 5.1,5.2
Week 3		Application of Integration: Volumes by cylindirical Shell Method	1: 5.3-5.5
Week 4		Techniques of Integration: Integration by Parts, Trigonometric Integrals, Trigonometric Substitution	1: 7.1-7.3
Week 5		Techniques of Integration: Integration of rational functions, Integration Strategy, Improper Integrals	1: 7.4,7.5,7.8
Week 6		Further Applications of Integration: Arc Length, Area of Surface of Revolution	1: 8.1
Week 7		**Midterms**	
Week 8		Further Applications of Integration: Arc Length, Area of Surface of Revolution	1: 8.2
Week 9		Further Applications of Integration: Application to Physics and Engineering (Hydrostatic, Centeroids)	1: 8.3
Week 10		Parametric Equations: Parametric Curves, Calculus with Parametric Curves	1: 10.1,10.2
Week 11		Polar Coordinates: Definition, Areas and Lengths in Polar Coordinates	1: 10.3,10.4
Week 12		Infinite Sequences and Series: Sequences, Series, Integral Test Estimates of Sum, Comparison Tests	1: 11.1-11.4
Week 13		Infinite Sequences and Series: Alternating Series, Absolute Convergence and Ration and Root Tests	1: 11.5,11.6
Week 14		Infinite Sequences and Series: Strategy for Testing Series + Review	1: 11.7
Week 15		Review	all topics above
Week 16		**Finals**	all topics above

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	23/05/2025-2/06/25	45	
	Semester Evaluation			55	
	Midterm(s)	1	11-20/04/25	35	63.6
	Quiz(zes)				
	Project(s)				
	Homework(s)	1		20	36.4
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* ***

Language of Instruction: English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	84	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial	14	28
L preparation work					
Midterm exam (ME)	2	4	Final exam (FE)	1	2
ME preparation self study	2	16	FE preparation self study	1	28
			TOTAL :		204
			Recommended ECTS Credit (Total Hours / 30) :		6.80

EUROPEAN UNIVERSITY OF LEFKE

Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Title	Course Type	Weekly Course Hours T	A	L	Credits	ECTS	Weekly Time Schedule
MATH224	Engineering Mathematics	Compulsory	3	0	0	3	5	Monday 15:00-17:50
Prerequisite	MATH101	Prerequisite to						

Course Lecturer	Aslı BARDAK	Office Hours Schedule	you can reach on MS Teams Chat any time
E-mail	abardak@eul.edu.tr		
Phone		Office / Room No	AS304
Teaching Assistant		Phone	
E-mail		Office / Room No	

Catalogue Descriptions	The concept of numerical error, solution of nonlinear equations with root finding. Solution of linear systems of equations using software packages. Direct and iterative methods for the solution of linear algebraic equations. Polynomial interpolation (Lagrange and Newton polynomials) and extrapolation. Curve fitting for least squares line and polynomial fitting with data linearization method. Numerical differentiation, numerical integration with quadrature formulas and their error analysis. Numerical solution of ordinary differential equations.
Objectives	The main purpose of this course is to introduce numerical methods with the application to the solution of realistic engineering problems. This course also introduces engineering students to complex numbers.
Learning Outcomes	On successful completion of the course, students should have gained: (1) an ability to recognize the difference between analytical and numerical solutions (roundoff and truncation errors), (2) knowledge of bracketing and open methods to solve root of equation problems, (3) an ability to solve simultaneously sets of linear algebraic equations using Naive Gauss Eliminatlion, (4) ability to differentiate the fundamental difference between regression and interpolation and to solve the numerical method problems, (5) ability to solve numerical differentiation, ordinary differential equations and integration problems. (6) Having knowledge of complex numbers. (7) ability to solve optimization problems

Programme Outcome Relations			
PO1: 5 PO2: 3 PO3: 1 PO4: 1 PO5: 1 PO6: 1	PO7: 1 PO8: 1 PO9: 1 PO10: 1 PO11: 1	**(1) Strongly disagree;** **(2) Disagree;** **(3) Neither agree nor disagree;** **(4) Agree;** **(5) Strongly agree.**	

Textbooks and/or References		
	1	S.C.Chapra, Raymond P Canale, Numerical Methods for Engineers, 7th Edition, McGrawHill, 2015
	2	S.C.Chapra Applied Numerical Methods with Matlab for Engineers and Scientists, 4th Edition, McGrawHill, 2018
	3	John. H. Mathews, Kurtis D. Fink, Numerical Methods Using MATLAB, 4th Edition Pearson Prentice Hall, 2004
	4	James Stewart, Calculus, 8th Ed. Cengage, 2015

WEEK	Date	TOPICS	Reference No - Section
Week 1		Modelling	1-1.1-1.4
Week 2		Roundoff and Truncation Errors	1-3.1-3.4
Week 3		Solution of Nonlinear Equations (Root Finding: Bisection Method, Regula Falsi)	1-5.1,5.2
Week 4		Solution of Nonlinear Equations (Root Finding: Simple Fixed Point Iteration, Newton Raphson, Secant Method)	1-6.1-6.3
Week 5		Solution of Linear Algebraic Equations (Introduction to Matrix Operations, Gauss Elimination Method)	1-9.1-9.4
Week 6		One Dimensional Unconstraint Optimization (Golden Section Search, Parabolic Interpolation)	1-13.1,13.2
Week 7		MIDTERM	1-15.1-15.3
Week 8		One Dimensional and Multidimensional Constrained Optimization(Linear programming, Software Packages)	
Week 9		Least-Squares Regression (Linear, Polynomial, Multiple Linear)	1-17.1-17.3
Week 10		Least-Squares Regression (General Linear, non-linear)	1-17.4,17.5
Week 11		Polynomial Interpolation (Newton's Divided Difference, Lagrange)	1-18.1,18.2
Week 12		Numerical Derivation and Integration	1-21.1-21.4,23.1
Week 13		Ordinary Differential Equations (Euler's Method)	1-25.1,25.2
Week 14		Complex Numbers (Analytic, functions, elementary functions, the exponential functions)	4-Appendice G
Week-15		**Finals**	

Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
	Final Exam	1	16-25/05/2026	50	
	Semester Evaluation			50	
	Midterm(s)	1		50	100.0
	Quiz(zes)				
	Project(s)				
	Homework(s)				
	Laboratory works				
	Attendance				

*** *Lifelong Learning Programme (LLP)* *** **Language of Instruction:** English

Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	70	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	2	3	Final exam (FE)	1	2
ME preparation self study	2	15	FE preparation self study	1	20
				TOTAL :	152
				Recommended ECTS Credit (Total Hours / 30) :	5

EUROPEAN UNIVERSITY OF LEFKE- Faculty of Engineering

SYLLABUS

2025-2026 Spring Semester

Course Code	Course Name	Course Type	Weekly Course T	A	L	Credits	ECTS	Weekly Time Schedule
MATH226/STAT222	Probability and Statistic Methods		3	0	0	3	5	TUESDAY 15:00-17:50 (HK000)
Prerequisite		Prerequisite to						

Course Lecturer	Asst. Prof. Dr. Semih OĞUZCAN	Office Hours Schedule	Monday 10.00-11.50 /Tuesday 13.00-14.50 /Friday 14.00-14.50
E-mail	soguzcan@eul.edu.tr		
Phone		Office / Room No	AS310
Teaching Assistant(s)	-	Phone	-
E-mail	-	Office / Room No	-

Course Objectives	The aim of this course is to introduce students to the fundamentals of the probability theory and the basics of statistical analysis that are essential to decision making in engineering.
Learning Outcomes	LO1: Understand basic concepts in probability including combinatorics, independence, conditional probability and Bayes rule. LO2: Compute probabilities by modeling sample spaces and applying rules of permutations and combinations, additive and multiplicative laws and conditional probability. LO3: Solve basic problems arising in engineering that involve discrete and continuous probability distributions. LO4: Construct the probability distribution of a random variable, based on a real-world situation, and use it to compute expectation and variance. LO5: Use statistical concepts such as means, variances and various types of graphs to analyze datasets, and sampling distributions.
Textbooks and/or References	1 Sheldon Ross, "Introduction to Probability and Statistics for Engineers and Scientists", Elseveir, Academic press, ISBN 10: 0-12-370483-9 2 R. E. Walpole, R. H. Myers, S. L. Myers and K. E. Ye, "Probability & Statistics for Engineers and Scientists", Prentice-Hall, 2011.

WEEK	Date	TOPICS	Reference No - Section
Week 1	03/02/2026	Introduction to Probability	Chapter 1
Week 2	10/02/2026	Probability Laws	2.1 2.2 2.3
Week 3	17/02/2026	The Random Variable	2.4 2.5
Week 4	24/02/2026	Operations on One Random Variable	2.4 2.5
Week 5	03/03/2026	Multiple Random Variables	2/6
Week 6	10/03/2026	Operations on Multiple Random Variables & Sampling Distributions (Descriptive	2.7 & 2.8
Week 7/8/9/10	14-12/03-04/2026	**Midterms**	
Week 11	14/04/2026	Distribution functions & Continuous distribution functions	2.9 & 3.1
Week 12	21/04/2026	Gaussian RV : properties and applications & Gaussian RV: Q-function and its	3.2 & 3.3
Week 13	28/04/2026	Important Discrete distributions	3/8
Week 14	05/05/2026	Simple discrete RV . Binomial, hypergeometric combination permutation	3/9
Week 15&16	16-25/05/2026	**Final exams**	

Evaluation Tools

Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)
Final Assignment	1	16-25/05/2026	60	
Semester Evaluation			40	
Midterm Assignment	1	14-12/03-04/2026	40	100.0
Quiz(zes)	0		0	0.0
Project(s)	0		0	0.0
Homework	0		0	0.0
Laboratory	0		0	0.0
Other	0		0	0.0

*** *Lifelong Learning Programme (LLP)* *** Language of Instruction: **English**

Evaluation Tool	Quantity	Student Workload	Evaluation Tool	Quantity	Student Workload Hours
Theoretical lecturing hours (TLH)	14	42	Homework		
TLH self study	14	70	Project		
Quiz (Q)			Presentation		
Q preparation self study			Seminar		
Laboratory (L)			Tutorial		
L preparation work					
Midterm exam (ME)	2	3	Final exam (FE)	1	2
ME preparation self study	2	15	FE preparation self study	1	20
			TOTAL :		152