

	Course name: EE101 Introduction to Electrical and Electronics Engineering		Department: Electrical and Electronics Engineering		Semester		
					1		
	Methods of Education						Credit (ECTS)
Lecture	Recitation/ (Etud)	Lab	Study Tme	Homework	Other	Total	
28	-	-	25	25	15	93	
							3
Language	English						
Compulsory /Elective	Compulsory						
Prerequisites	None						
Course Contents	Fundamental Concepts of Circuit Elements and Circuit variables, Real and Ideal independent voltage and current sources, V-I relations; Basic Circuit Laws, Analysis of resistive circuits, Magnetic Circuits, Electromagnetic Induction; Alternating current fundamentals, Phasor Concepts, Complex representation, Phasor analysis of RL, RC, RLC circuit, admittances; Complex Power, Resonance in series and parallel circuits; Three-phase systems, analysis of balanced and unbalanced star and delta connected loads						
Course Objectives	The objective of this course is to set a firm and solid foundation in Electrical Engineering with strong analytical skills and conceptual understanding of basic laws and analysis methods in electrical and magnetic circuits.						
Learning Outcomes and Competences	After the course, the students know basic EE concepts and they will be ready to to learn advanced topics in Electrical Engineering						
Textbook and /or References	<ol style="list-style-type: none"> 1. "EE306 – Electrical Engineering Technologies : Lecture Notes" by Bahattin Karagözoğlu, King Abdulaziz Univ., 2011. 2. Ibe A.O. and Uzunwangho Roland. "Introduction to Electrical Engineering, Second Edition" Odus Press, Enugu, Nigeria, 2017. ISBN: 978-36289-7-6. 3. "Introduction to Electrical Engineering" by Mulukutla S. Sarma, Oxford Univ. Press, 2001. 4. Bhattacharya, S. K., Basic Electrical & Electronics Engineering, Pearson 5. Bird, J., Electrical Circuit Theory and Technology, Routledge, Taylor & Francis Group 6. Edminister, J., Electric Circuits, Schaum's Outline Series, Tata McGraw Hill 7. Hayt, W. H., Kemmerly, J. E., and Durbin, S. M., Engineering Circuit Analysis, Tata McGraw Hill 8. Hughes, Electrical and Electronic Technology, Pearson Education 9. Parker and Smith, Problems in Electrical Engineering, CBS Publishers and Distributors 10. Sudhakar and Syam Mohan, Circuits and Networks Analysis and Synthesis, Tata McGraw Hill 11. Suresh Kumar, K. S, Electric Circuits and Networks, Pearson Education 						
Assessment Criteria			If any, mark as (X)		Percentage (%)		
	Midterm Exams		X		30		
	Quizzes						
	Homeworks		X		20		
	Projects		X		20		
	Term Paper						
	Laboratory work						
	Other						
Final Exam		X		30			
Instructors	Prof. Dr. Hüseyin Canbolat						
Week	Subject						
1	Fundamental Circuit Concepts						
2	Electromagnetic Induction						
3	Voltage and Current Sources and Power						
4	Basic Circuit Laws						
5	Resistors						
6	Kirchoff's Laws						
7	Capacitors and Inductors						
8	Star-delta connections						
9	Midterm Exam						
10	Magnetic Circuits and Alternating Current Fundamentals						

11	Phasors, Impedance, Complex Power
12	Three phase Systems
13	Basic laboratory work.
14	Project, Homework
15	Final exam

