OSTIM TECHNICAL UNIVERSITY
FACULTY OF ENGINEERING
COURSE SYLLABUS FORM
2023-2024

Course Name	Course Code	Period	Hour	Apllication Hour	Lab Hour	Credit	ECTS
Compputer Networks	EEE202	Spring	4	0	0	4	5

Prerequisite	
Language of Instruction	English
Course Status	Compulsory
Course Level	Undergraduate
Method of Teaching	In class lectures
Learning and Teaching Techniques of the Course	Lectures, Homeworks

Course Objective

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

Upon successful completion, students will learn:

1	The fundamental principles in electric circuit theory and be able to extend these principles into a way of thinking for problem solving in mathematics, science and engineering,			
2	To analyze analog circuits that includes energy storage elements in the time and frequency domains,			
3	To apply solving methods and theorems for ac circuits,			
4	To solve three phase circuits.			

Course Outline

Course topics include sinusoids and phasors, sinusoidal steady-state analysis, AC power analysis, three-phase circuits, magnetically coupled circuits, the laplace transform and circuit analysis in the s-domain, frequency selective filters.

Weekly Topics and Releated Preparation Studies		
Weeks	**Topics**	**Preparation Studies**
1	Sinusoids and Phasors	Nilsson 10th Ed. Chapter 9
2	Sinusoids and Phasors	Nilsson 10th Ed. Chapter 9
3	Sinusoidal Steady-State Analysis	Nilsson 10th Ed. Chapter 9
4	Sinusoidal Steady-State Analysis	Nilsson 10th Ed. Chapter 9
5	AC Power Analysis	Nilsson 10th Ed. Chapter 10
6	AC Power Analysis	Nisson 10th Ed. Chapter 10
7	Three-Phase Circuits	Nilsson 10th Ed. Chapter 11
8	Midterm Exam	
9	Three-Phase Circuits	Nilsson 10th Ed. Chapter 11
10	Magnetically Coupled Circuits	Nilsson 10th Ed. Appendix C
11	The Laplace Transform and Circuit Analysis in the s-Domain	Nilsson 10th Ed. Chapter 12
12	The Laplace Transform and Circuit Analysis in the s-Domain	Nilsson 10th Ed. Chapter 13
13	Frequency Selective Filters	Nilsson 10th Ed. Chapter 14
14	Frequency Selective Filters	Nilsson 10th Ed. Chapter 14
15	3-port Networks	Nilsson 10th Ed. Chapter 18
16	Final Exam	

Textbook(s)/References/Materials:
W. Nilsson, S. A. Riedel, Electric Circuits (10 th ed.) Pearson.

Assessment		
Studies	**Number**	**Contribution margin (%)**
Active Participation	14	
Lab		
Application		
Field Study		
Course-Specific Internship (if any)		
Quizzes / Studio / Critical		
Homework	4	
Presentation		
Projects	1	10
Report		
Seminar		
Midterm Exams / Midterm Jury	1	30
General Exam / Final Jury	1	60
	Total	**100**
Success Grade Contribution of Semester Studies		40
Success Grade Contribution of End of Term		60
	Total	**100**

Course Category	
Basic Vocational Courses	X
Specialization/Field Courses	
Support Courses	
Communication and Management Skills Courses	
Transferable Skills Courses	

Relationship Between Course Learning Outcomes and Program Competencies							
No	**Learning Outcomes**	**Contribution Level**					
		1	**2**	**3**	**4**	**5**
1	Ability to apply knowledge of mathematics, science, and engineering				x	
2	Ability to design and conduct experiments and to analyze and interpret experimental results.				x	
3	Ability to design a system, component, and process according to specified requirements.				x	
4	Ability to work in teams in interdisciplinary areas.					
5	Ability to identify, formulate and solve engineering problems.					x
6	Identifies, defines, formulates and solves complex network problems; chooses and applies analysis and modeling methods suitable for this purpose.					x
7	Develops, selects and uses modern techniques and tools necessary for the analysis and solution of complex problems encountered in Electrical and Electronics Engineering applications; uses required technologies effectively.					x

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Course hours (Including the exam week: 16 x total course hours)	16	4	64
Laboratory			
Application			
Course-Specific Internship			
Field Study			
Study Time Out of Class			
Presentation / Seminar Preparation			
Projects	1	10	10
Reports			
Homeworks	5	5	25
Quizzes / Studio Review			
Preparation Time for Midterm Exams / Midterm Jury	1	10	10
Preparation Period for the Final Exam / General Jury	1	10	10
Total Workload	**(ECTS 119/25 =4.76)**		