

İstanbul Commerce University
Engineering and Design Faculty
Electrical-Electronics Engineering Department
EEE301 Electronics Laboratory 2 Course Description Form

Course		Term	Theory	Application	Credit	ECTS
Name	Code					
Electronics Laboratory 2	EEE301	5	0	2	1	3
Prerequisite	None					
Course Duration	Starts: 26.09.2022 Ends: 30.12.2022					
Course Language	English					
Course Type	Compulsory					
Course Level	Undergraduate					
Instructors	Asst. Prof. Dr. Vedat TAVAS					
Contact	vtavas@iticu.edu.tr , 0 216 489 18 88 (Ext : 3343)					
Teaching Assistant	Aynur Tuba Çakmak, Fatih Kuru					
Objective of The Course	Analyze the frequency behavior, gain and stability of the circuits.					
Course Learning Outcomes (CLO)	1) Knows frequency dependent behavior of circuits 2) Knows behaviors of op-amps 3) Knows multivibrators. 4) Knows oscillators. 5) Knows power amplifier applications.					
Teaching Methods	Face to face.					
Course Content (brief)	Frequency response of amplifiers, Filters and Peak Detector, Linear Applications of Op-Amp, Non-Linear Applications of Op-Amp, Analyzing Non-Ideal Characteristics of Op-Amp, Multivibrators, Wave generation with 555 / 2206, Operation Classes of Transistor, Oscillators					

WEEKLY COURSE OUTLINE

1	Add-drop week
2	Introduction of Laboratory, Organizing experiment teams
3	Frequency response of amplifiers
4	Filters
5	Linear applications of opamps
6	Non-Linear applications of opamps
7	Non-ideal properties of opamps
8	Midterm Exam
9	Multivibrators
10	Wave generation with 555 / 2206
11	Power amplifiers, amplifier classes
12	Oscillators
13	Oscillators
14	Make-up week

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Resources	Textbook	1. Booklet prepared by the instructor.
	Recommended Books	2. Synthesis of Electrical Networks, New York: J. Wiley, 1984
Teaching Equipment		Experiment sets. multimeters, oscilloscopes, electrical components.

Evaluation System

Activities during the term	Studies	Number	Contribution %
	Homework	0	0
	Presentation	0	0
	Mid Term Exams	0	0
	Project	0	0
	Laboratory	10	%60
	Field Study	0	0
	Quiz	0	0
	Term Project	0	0
	Portfolio	0	0
	Reports	0	0
	Learning Diaries	0	0
	Graduate Project	0	0
	Seminar	0	0
	Others	0	0
	Sub Total	10	60
	During Term Studies Contribution	-	60
	Final Exam Contribution (≥ 40%)	-	40
	TOTAL		100

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COURSE AND PROGRAM LEARNING OUTCOMES RELATIONSHIP

No	Program Learning Outcomes (PLO), (Contribution Rate: 1 lowest, 5 highest)	Course Learning Outcomes (CLO)				
		1	2	3	4	5
1	a. Qualified knowledge of mathematics, science and electrical-electronics Engineering discipline;	5	5	5	5	5
	b. ability to use theoretical and practical knowledge to model and solve complex electrical-electronics engineering problems.	5	5	5	5	5
2	a. An ability to identify, formulate, and solve complex Electrical-Electronics engineering problems;	5	5	5	5	5
	b. the ability to select and apply appropriate analysis and modeling methods for this purpose.	5	5	5	5	5
3	a. An ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions;					
	b. the ability to apply modern design methods for this purpose.					
4	a. Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems in electrical-electronics engineering applications;					
	b. ability to use information technologies effectively.					
5	Ability to design, conduct experiments, collect data, analyze and interpret results to investigate electrical-electronics engineering problems.	5	5	5	5	5
6	a. Ability to work effectively in disciplinary and multidisciplinary teams;					
	b. self-study skills.					
7	a. Ability to communicate effectively in verbal and written Turkish;					
	b. knowledge of at least one foreign language;					
	c. ability to write effective reports and understand written reports, to prepare design and production reports, to make effective presentations, to give clear and understandable instructions and receiving skills.	5	5	5	5	5
8	a. Awareness of the necessity of lifelong learning;					
	b. the ability to access information, follow developments in science and technology, and constantly renew oneself.					
9	a. To act in accordance with the ethical principles, professional and ethical responsibility awareness;					
	b. information about standards used in electrical-electronics engineering applications.					
10	a. Information on business practices such as project management, risk management and change management;					
	b. awareness about entrepreneurship and innovation;					
	c. information on sustainable development.					
11	a. Information about the effects of electrical-electronics engineering applications on health, environment and safety in universal and social dimensions and the problems reflected in the engineering field of the age;					
	b. awareness of the legal consequences of engineering solutions.					

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ECTS-WORK LOAD TABLE

Activities	Week	Time (Hour)	Total Work Load
Course Duration	0	0	0
Out of Classroom Studies Duration	10	1	10
Homework	0	0	0
Presentation	0	0	0
Midterm Exam	0	0	0
Project	0	0	0
Laboratory	10	2	20
Field Study	0	0	0
Final Exam	1	10	10
Quiz	0	0	0
Term Project	0	0	0
Portfolio Study	0	0	0
Report	10	3	30
Learning Diaries	0	0	0
Graduation Project	0	0	0
Seminar	0	0	0
Other	0	0	0
Total Work Load			75
Total Work Load / 25			2.8
ECTS			3

Approval	Head of The Department	Prof. Dr. Fatih Üstüner
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