INTRODUCTION TO ELECTRONICS

1	Course Title:	INTRODUCTION TO ELECTRONICS
2	Course Code:	FZK2008
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	2
6	Semester:	4
7	ECTS Credits Allocated:	5.00
8	Theoretical (hour/week):	4.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	There is no course prerequisite.
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. SERTAN KEMAL AKAY
15	Course Lecturers:	Fizik Bölümü Öğretim Üyeleri
16	Contact information of the Course Coordinator:	Prof. Dr. Sertan Kemal AKAY BUÜ Fen Edebiyat Fakültesi, Fizik Bölümü Görükle Bursa 16059 kakay@uludag.edu.tr 224 2941719
17	Website:	
18	Objective of the Course:	It is aimed that students has a information about fundamental concepts of electronic.
19	Contribution of the Course to Professional Development:	Provided basic electronic knowledge.
20	Learning Outcomes:	

	1	Have fundamental knowledge about electric circuits.
	2	Have learn methods related to circuit analysis.
	3	Have learn semiconductor structure
	4	Have learns the working principle of the diode.
	5	Have learns to build circuit.
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21 Course Content:

Course Content:

Week	Theoretical	Practice
1	Basic Concepts -Electric Charge and Current -Voltage -Power and Energy	
2	Circuits Elements -Active and Passive Elements -Dependent and Independent Current and Voltage Sources	

3	Basic Laws -Ohm's Law -Nodes, Branches and Loops	
4	Kirchhoff's Laws Series Resistors and Voltage Division Parallel Resistors and Voltage Divison	
5	WYE and Delta Circuit Conversions	
6	Direct Current Circuits -Nodal Analysis Method	
7	Mesh Analysis	
8	-Principle of Superposition -Resource Transformation	
9	Theven's Equivalent Circuit -Norton's Theorem	
10	Alternative Current -Frequency, Amplitude and Phase -Effective Value -Power Multiplier -Capacitance and Inductance -Capacitive and Inductive Reactance	
11	-RC Filter Circuit -Derivative and Integrating Circuits -Transient Currents, Time Constant -RL Circuit -Resonance and Mixed Waveforms	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	4.00	56.00
Practicals/Labs	0	0.00	0.00
Self study and preparation	14	5.00	70.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	12.00	12.00
Others	0	0.00	0.00
Final Exams	1	16.00	16.00
Total Work Load			154.00
Total work load/ 30 hr			5.13
ECTS Credit of the Course			5.00

22	Textbooks, References and/or Other Materials:	Fundementals of Electrical Engineering Leonard S. BORROW CBS College Publishing 1985 Electronic Devices Third Edition Thomas L. FLOYD Macmillan Publishing Company 1992
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00

Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		The system of relative evaluation is applied.

24 ECTS / WORK LOAD TABLE

25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS

	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	4	4	4	0	0	2	0	0	3	3	0	0	0	0	0	0
ÖK2	4	4	4	0	0	2	0	0	3	3	0	0	0	0	0	0
ÖK3	4	4	4	0	0	2	0	0	3	3	0	0	0	0	0	0
ÖK4	4	4	4	0	0	2	0	0	3	3	0	0	0	0	0	0
ÖK5	4	4	4	0	0	2	0	0	3	3	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**