ELECTRONIC CIRCUITS

1	Course Title:	ELECTRONIC CIRCUITS
2	Course Code:	BIL1104
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	7.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ADEM UZUN
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	auzun@uludag.edu.tr
17	Website:	
18	Objective of the Course:	The aim of this course is to provide prospective teachers with the knowledge of electronic circuit elements and basic theories related to them, and also to gain the ability to make analog and digital circuit designs using basic circuit elements.
19	Contribution of the Course to Professional Development:	It enables them to use the theories and applications specified in the purpose of the course in their professional practice.
20	Learning Outcomes:	
	1	To be able to explain the concepts of electricity and electronics.
	2	Distinguish basic circuit elements.
	3	To be able to explain Ohm's Law, Kirchhoff's Current and Voltage Laws.
	4	To be able to use basic measuring instruments.
	5	To be able to explain the fundamentals of digital electronics.
	6	Ability to simplify digital circuit with Karnaugh Map.
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21	Course Content:	

Course Content:

Week	Theoretical	Practice
1	Quantities and units	
2	Electric charge	
3	Conductors, semiconductors and insulators	
4	Current	

5	Voltage	
6	Resistance	
7	Power	
8	Basic circuit elements	
9	Ohm's law	
10	Branches, knots and loops	
11	Kirchhoff's Current and Voltage Law, series and parallel resistors	
12	Number Systems	
13	Digital electronics	
14	Karnaugh maps	

22	Textbooks, References and/or Other Materials:	Bell, David A. Fundamentals of Electric Circuits: Lab Manual. Oxford University Press, Inc., 2009. Nilsson, J. W., & Riedel, S. A. (2015). Electric circuits. Upper Saddle River, NJ: Pearson. Alexander, C., Sadiku, M., & Sadiku, M. Fundamentals of Electric Circuits, 2000.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course	Process evaluation will be applied during the period. Test method will be applied in midterm and final exam.	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	12	4.00	48.00
Homeworks	0	0.00	0.00
Projects	10	9.00	90.00
Field Studies	0	0.00	0.00
Midterm exams	1	10.00	10.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			210.00
Total work load/ 30 hr			7.00
ECTS Credit of the Course			7.00

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	5	5	4	4	4	4	0	0	0	0	0	0	0	0	0	0
ÖK2	4	5	4	5	0	4	0	0	0	0	0	0	0	0	0	0
ÖK3	4	4	5	5	0	4	0	0	0	0	0	0	0	0	0	0
ÖK4	5	5	4	5	0	5	0	0	0	0	0	0	0	0	0	0

ÖK5	4	4	5	5	0	5	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	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**