Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Basic electronics laboratory	FZK231	3. Semester	0 + 4	2.0	4.0

Prerequisites	None

Language of Instruction	Turkish
Course Level	Bacheclor's Degree (First Cycle)
Course Type	Compulsory
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. Serhat ÖZDER
Instructors	Prof. Dr. Serhat ÖZDER
Assistants	
Course Objectives	This course is prepared to make laboratory exercises of the basic electronic course. Parallel to The Basic Electronic course there are two basic part for this course: DC circuits and AC circuits. In DC part Ohm's law, kirchhoff examples and using oscilloscope, in AC part the AC signal analysis, the RC, RL and RLC circuit analysis and filters are studied
Course Content	Plotting graphs, Measurement and evaluation, Error analysis, Presentation of experimental devices, Resistors in DC current and Kirchhoff's laws , Thevenin circuit theorem in DC current,The use of an osciloscope -1, The use of an osciloscope -AC circuit practice by using resistors, capacitors and inductors., RC – RL and band pass filters,Serial RLC filters, Make-up, Reminding
Course Learning Outcomes	1) set up AC and DC circuits 2) analyze AC and DC circuits 3) use oscilloscope, multimeter and function generator 4) practice the knowledge learned by technical books 5) take responsibility as a person and as a member of a group solving any problem of physics 6) learn documentation of any work by a report study

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Plotting graphs	Course presentation, practice, group study	
2. Week	Measurement and evaluation	Course	

Quick Access

Physics
- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

Course Information
- Course Information
- Weekly Course Content
- Resources
- Assessment
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

		presentation, practice, group study	
3. Week	Error analysis	Course presentation, practice, group study	
4. Week	Presentation of experimental devices	Course presentation, practice, group study	
5. Week	Resistors in DC current and Kirchhoff's laws	Course presentation, practice, group study	
6. Week	Thevenin circuit theorem in DC current	Course presentation, practice, group study	
7. Week	The use of an osciloscope -1	Course presentation, practice, group study	
8. Week	The use of an osciloscope -2	Course presentation, practice, group study	
9. Week	AC circuit practice by using resistors, capacitors and inductors.	Course presentation, practice, group study	
10. Week	RC – RL and band pass filters	Course presentation, practice, group study	
11. Week	Serial RLC filters	Course presentation, practice, group study	
12. Week	Make-up	Course presentation, practice, group study	
13. Week	Make-up	Course presentation, practice, group study	
14. Week	Reminding	Course presentation, practice, group study	
15. Week	General Review	Course presentation, practice, group study	
16. Week	Final Exam	Written Exam	

RESOURCES

Recommended Sources
Basic Electronic Laboratory Booklet

ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Report, final		
In-Term Studies	**Quantity**	**Percentage**
Laboratory	1	60
Total	1	60
End-Term Studies	**Quantity**	**Percentage**
Final Exam	1	40
Total	1	40
Contribution Of In-Term Studies To Overall Grade		60
End-Term Studies		40
Total		100

COURSE CATEGORY

Course Category	Percentage
Core Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5	DK6
PY1	5	3	3	4	5	4	4
PY2	4	4	5	4	4	4	4
PY3	4	3	4	4	5	5	4
PY4	5	4	5	5	4	4	4
PY5	5	5	4	3	4	3	5
PY6	3	3	5	5	4	3	4
PY7	5	5	5	5	5	5	5
PY8	5	5	5	5	5	5	5
PY9	0	0	0	0	0	0	0
PY10	5	5	5	5	5	5	5
PY11	0	0	0	0	0	0	0
PY12	0	0	0	0	0	0	0
PY13	0	0	0	0	0	0	0
PY14	0	0	0	0	0	0	0
PY15	0	0	0	0	0	0	0

*DK = Course's Contrubution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

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ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Final Exam Preparation	1	9	9

Research&Project	7	1	7
Class Hours (14 weeks)	14	4	56
Preliminary Study	14	2	28
Final Exam	1	2	2
		Total Workload	102
		Total Workload / 25.5 (s)	4.00
		ECTS Credit of the Course	4