COURSE DESCRIPTION	
Course code and title	FİZ104,PHYSICS II
Course Semester	2
Course Content	Electric fields, Continuous charge distribution and Electric fields, Gauss Law and applications, Electric Potential, Electric Potential of Continuous charge distribution, Capacitance and Dielectric , Current and Resistance, electromagnetic force, Direct current circuits, Magnetic Fields , Magnetic field sources, Electromagnetic induction, Faraday's Law and induction, Alternating Current Circuits , Alternating Current Circuits: AC sources, resistors, capacitors, ınductors at ac circuits , ac circuits in series, power, Electromagnetic Waves
Recommended or Required Reading	Physics for Scientists and Engineers, R.Serway & John W. Jewett Thomson Brooks/Cole © 2004 6th Edition.
Recommended or Required Reading	Young Freedman University Physics 13th Edition. Fundamentals of Physics [10th Edition] Halliday & Resnick.
Credits of Course (ECTS)	6
Prerequisites	Lectures must be attended by students
Type of Course	Basic Science Education
Language of Instruction	English
Purpose and Object of the Course	To examine basic electrics and magnetism phenomena in the nature and learning of basic concepts. To gain the basic discipline of algorithm development for analytical thinking and problem solving.
Learnıng Outcomes Of The Course Unıt	1. Understands electric charge and electrification. 2. Analyzes about electric current and conduction. 3. Understands the magnetic field and the formation of magnetic field strength. 4. Analyzes alternative current and direct current circuits.
Planned Learning Activities and Teaching Methods	Face to face
Course Per Week	1.Week: Electric fields 2. Week : Continuous charge distribution and Electric fields 3. Week : Gauss Law and applications 4.Week: Electric Potential 5. Week :Electric Potential of Continuous charge distribution 6. Week :Capacitance and Dielectric 7. Week :Current and Resistance, electromagnetic force 8. Week : Mid term exam, Direct current circuits 9. Week :Magnetic Fields sources 10. Week: Electromagnetic induction 11. Week: Faraday's Law and induction 12. Week: Alternating Current Circuits 13. Week: Alternating Current Circuits: AC sources, resistors, capacitors, ınductors at ac circuits , ac circuits in series, power 14. Week: Electromagnetic Waves 15. Week: Final
Workload	Theoretical Study Hours of Course Per Week: 4hours Practising Hours of Course Per Week:0 Reading:2 hours Searching in Internet and Library:2 hours Designing and Applying Materials:0 Preparing Reports: 0 Preparing Presentation:0 Presentation:0 Mid-Term and Studying for Mid-Term: 10 hours Final and Studying for Final: 10 hours

		Number	**Total contribution (%)**	
	Mid-terms	1	40	

Assessment Methods And Criteria

Assignment	0		
Exercise	0		
Projects	0		
Practice	0		
Quiz	0		
Contribution of In-term Studies to Overall Grade (%)			
Contribution of Final Examination to Overall Grade (%)		60	1
Attendance		0	

Efficiency

Activities	Total number of weeks	Time (Weekly)	Total efficiency at the end of the semester
Theoretical Study Hours of Course Per Week	14	4	56
Practicing Hours of Course Per Week	0	0	0
Reading	14	2	28
Searching in Internet and Library	14	2	28
Designing and Materials, Applying	0	0	0
Preparing Reports	0	0	0
Preparing Presentation	0	0	0
Presentation	0	0	0
Mid-Term and Studying for Mid-Term	1	10	10
Final and Studying for Final	1	10	10
Other	5	2	10
TOTAL WORKLOAD			142
TOTAL WORKLOAD/ 25			5.68
ECTS of Course			6

Course's Contribution To Program

No	PROGRAM LEARNING OUTCOMES	1	2	3	4	5
1	Adequate knowledge of subjects specific to mathematics, natural sciences and related engineering disciplines; ability to use theoretical and applied knowledge related to these areas in complex engineering problems.				x	
2	Ability to identify, define, formulate, and solve complex engineering problems; ability to select and apply appropriate analysis and modeling methods to this end.	x				
3	Ability to design a complex system, process, device or product under realistic constraints and conditions to meet specific requirements; ability to apply modern design methods for this purpose.					
4	Ability to develop, select and use modern techniques and tools required for the analysis and solution of complex problems encountered in engineering practice; ability to use information technologies effectively.		x			
5	Ability to design and conduct experiments, collect data, analyze and interpret results to investigate					

		complex engineering problems or discipline-specific research topics							
	6	Ability to work effectively in disciplinary and multi-disciplinary teams; ability to work individually.							
	7	Ability to communicate effectively in Turkish, both orally and in writing; knowledge of at least one foreign language; the ability to write effective reports and understand written reports, to prepare design and production reports, to deliver effective presentations, to give and receive clear and understandable instructions.							
	8	Awareness of the necessity of lifelong learning; the ability to access information, to follow developments in science and technology, and to renew oneself constantly.							
	9	Acting in accordance with ethical principles, professional and ethical responsibility; information about standards used in engineering applications.							
	10	Information about business life practices such as project management, risk management and change management; awareness of entrepreneurship, innovation; information about sustainable development.							
	11	Knowledge about the universal and social effects of engineering applications on health, environment and safety and the problems of the age reflected in the engineering field; awareness of the legal consequences of engineering solutions.							
Name of Lecturer(s) and E-mail(s) of Lecturer(s)	Prof. Dr. Haluk KORALAY koralay@gazi.edu.tr								