



Çanakkale Onsekiz Mart University

Education Information System

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Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Physics II (Electricity and Magnetism)	FZK104	2. Semester	4 + 2	5.0	7.0

Prerequisites	None
Language of Instruction	Turkish
Course Level	Bachelor's Degree (First Cycle)
Course Type	Compulsory
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. Ahmet ERDEM
Instructors	Prof. Dr. Ahmet ERDEM
Assistants	Assist. Prof. Dr. Melis ULU DOĞRU
Course Objectives	This course is an introduction to electricity and magnetism. We will discuss electric charge, Coulomb's law, electric structure of matter (conductors and dielectrics), concept of electrostatic field and potential, electrostatic energy, electric currents, magnetic fields and Ampere's law, magnetic materials, time-varying fields and Faraday's law of induction, basic electric circuits, electromagnetic wave and Maxwell's equations.
Course Content	Electrical properties of discontinuous and continuous charge distributions, relationship between electrostatics and electrodynamics, circuits analysis methods, magnetic field sources, magnetic and electrical forces, problems of Electricity and Magnetism.
Course Learning Outcomes	<ol style="list-style-type: none"> 1) Explore electrical properties of discontinuous and continuous charge distributions 2) Identify the relationship between electrostatics and electrodynamics 3) Apply circuits analysis methods 4) Explore magnetic field sources 5) Relate magnetic and electrical forces 6) Solve problems related to Electricity and Magnetism

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

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	The Electric Field	Course presentation, homework	
2. Week	Gauss' Law	Course presentation, homework	
3. Week	Electric Potential	Course	

		presentation, homework	
4. Week	Capacitance	Course presentation, homework	
5. Week	Current and Resistance	Course presentation, homework	
6. Week	Circuits	Course presentation, homework	
7. Week	Midterm Exam	Exam	
8. Week	The Magnetic Field	Course presentation, homework	
9. Week	Ampere's Law	Course presentation, homework	
10. Week	Faraday' Law of Induction	Course presentation, homework	
11. Week	Inductance	Course presentation, homework	
12. Week	Electromagnetic Oscillations	Course presentation, homework	
13. Week	Alternating Currents	Course presentation, homework	
14. Week	Electromagnetic Waves	Course presentation, homework	
15. Week	Final exam	Written exam	
16. Week	Final Exam	Written exam	

RESOURCES

Recommended Sources
Serway, R.A.: 1992, Physics For Scientists & Engineers with Modern Physics, Third edition
Halliday, D., Robert, R., and Walker, J.: 1993, Fundamentals of Physics, Fourth edition, John Wiley & Sons, Inc
Bueche, A.: 1986, Introduction to Physics for Scientists, McGraw-Hill.
Fishbone, Jr.: 1996, Physics for Scientists & Engineers, Prentice Hall.

ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Homework, Midterm Exam, Final Exam		
In-Term Studies	Quantity	Percentage
Mid Term Exam 1	1	30
Assignment 1	1	10
Total	2	40
End-Term Studies	Quantity	Percentage
Final Exam	1	60

Total	1	60
Contribution Of In-Term Studies To Overall Grade		40
End-Term Studies		60
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	4	4	4	4	4	4	4
PY2	4	4	4	4	4	4	4
PY3	4	4	4	4	4	4	4
PY4	4	4	4	4	4	4	4
PY5	4	4	4	4	4	4	4
PY6	4	4	4	4	4	4	4
PY7	4	4	4	4	4	4	4
PY8	3	3	3	3	3	3	3
PY9	4	4	4	4	4	4	4
PY10	4	4	4	4	4	4	4
PY11	4	4	4	4	4	4	4
PY12	4	4	4	4	4	4	4
PY13	4	4	4	4	4	4	4
PY14	3	3	3	3	3	3	3
PY15	3	3	3	3	3	3	3

*DK = Course's Contribution.

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

ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	14	6	84
Assignment 1	2	10	20
Final Exam Preparation	1	10	10
Mid Term Exam Preparation	1	10	10
Mid Term Exam 1	1	3	3
Final Exam	1	3	3
Further Study	14	1	14
Preliminary Study	14	2	28
Total Workload			172

Total Workload / 25.5 (s)	6.75
ECTS Credit of the Course	7

