



Code and Name: FİZ5660 RELATIVITY THEORY

Unit: Graduate School of Natural and Applied Sciences

Detail: **Period:** 2023-2024 **Status:** Optional **Class:** 1 **Credits:** 3 0 0 3 **ECTS:** 6 **Language:** Turkish

INSTRUCTOR

Title, Name and Surname: -
Phone: -
Email: -
Social Account: -
Student Day and Time: -

COURSE ASSISTANT

Title, Name and Surname:
Phone:
Email:
Social Account:
Student Day and Time:

Lessons Weekly Program:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			-			

Rendering:
Place: YY: Face-to-face UE: -

Purpose: Principles of relativity, Einstein's kinematics, Basic properties of special relativity

Material:

Student Responsibility:

Weekly Lesson Plan

Week	Topic	Method
1	Newtonian motion laws, Galileo transformations	YY
2	Newtonian relativity, Lorentz ether theory	YY
3	Principles of relativity, Einstein's kinematics, Basic properties of special relativity	YY
4	Lorentz transformation and its properties	YY
5	Einstein optics, drag effect, Doppler effect, Space-time and quadruple vector, Quadruple tensors	YY
6	Three-dimensional Minkowski diagram, Relativistic particle mechanics	YY
7	Validity of Newton's laws	YY
8	VISA	YY
9	Mass of relative inertia	YY
10	Quadruple vector formulation of relativistic mechanics	YY
11	Equivalence of mass and energy, De Broglie waves	YY
12	Photons and the Compton effect, Relativity and electrodynamics,	YY
13	Curved surfaces, Riemann surfaces, General plan of relativity, Gravitational doppler effect,	YY
14	Field equations in the presence of vacuum and matter in general relativity, Cosmology, Cosmic dynamics in general relativity.	YY

Assessment and Evaluation

Method		Number	Weight
Break Exam	Exam	Face	1 % 50
	Quiz	-	-
	Homework	-	-
	Project	-	-
General Exam	Face	1	% 50

Course Outcomes:

1	
2	
3	
4	
5	

Course-Specific Explanations:

UE: Distance Education; YY: Face-to-Face Education



T.C.
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Course Syllabus Form

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