

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-4013	Introduction to Plasma Physics	3.00	0.00	0.00	3.00	6.00
Course Detail						
<b>Course Language</b>	: Turkish					
<b>Qualification Degree</b>	: Bachelor					
<b>Course Type</b>	: Optional					
<b>Preconditions</b>	: Not					
<b>Objectives of the Course</b>	: This course aims to introduce Basic Parameters and Basic Equations of Plasma Physics, and also to provide a knowledge about their usages and applications.					
<b>Course Contents</b>	: the 4th state of matter Able to classify plasma w.r.t. sources, temp. versus density, knowledge about plasma applications.					
<b>Recommended or Required Reading</b>	: Francis F. Chen, 2006, Introduction to plasma physics and controlled fusion New York, Springer. R.J. Goldston, P.H. Rutherford, 1995, Introduction to Plasma Physics, Taylor & Francis D.R. Nicholson, , 1983, Introduction to Plasma Theory, Wiley					
<b>Planned Learning Activities and Teaching Methods</b>	: Midterm (40) final (% 60)					
<b>Recommended Optional Programme Components</b>	: Knowledge of mathematical physics, symbolic computation and office programs are important					
<b>Instructors</b>	: Prof. Dr. Hüseyin Çavuş					
<b>Instructor's Assistants</b>	: Non					
<b>Presentation Of Course</b>	: Face to face					

## Course Outcomes

## Upon the completion of this course a student :

1 1) to identify the 4th state of matter

2 2) to learn the representations of plasma.

3 3) to identify the plasma applications

## Preconditions

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## Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week	*What is plasma?				*Oral lectures Homeworks Interactive discussions
2.Week	*Main parameters of plasma; debye length				*Oral lectures Homeworks Interactive discussions
3.Week	*Parameters of Plasma: Plasma Frequency				*Oral lectures Homeworks Interactive discussions
4.Week	*Motion of charged particle at E and B field				*Oral lectures Homeworks Interactive discussions
5.Week	*Equation of motion of charged particle at E and B field				*Oral lectures Homeworks Interactive discussions
6.Week	*Fluid description of plasma				*Oral lectures Homeworks Interactive discussions
7.Week	*Plasma as fluid				*Oral lectures Homeworks Interactive discussions
8.Week	*Plasma as fluid				*Oral lectures Homeworks Interactive discussions
9.Week	*Interaction of Plasma with Electromagnetic field				*Oral lectures Homeworks Interactive discussions
10.Week	*Interaction of Plasma with Electromagnetic Field				*Oral lectures Homeworks Interactive discussions
11.Week	*Interaction of Plasma with Electromagnetic Field				*Oral lectures Homeworks Interactive discussions
12.Week	*Plasma Sources				*Oral lectures Homeworks Interactive discussions
13.Week	*Applications of plasma				*Oral lectures Homeworks Interactive discussions
14.Week	*General Review				*Oral lectures Homeworks Interactive discussions

## Assesment Methods %

1 Mz : 40.000

2 Final : 60.000

## ECTS Workload

