

Course Information								
Course Code	T	P	L	C	ECTS	Type C/E	Language TR/ENG etc.	Year/Semester
FİZ4021	3	0	0	3	5	E	TR	4/FALL
Course Name (Turkish)	Plazma Fizikine Giriş							
Course Name (English)	Introduction to Plasma Physics							

Unit/Program	Physics Department/Undergraduate Program			
Course Prerequisite	No			
Course Objectives	Providing students with the necessary basic information by introducing the plasma environment			
Course Outline	Introduction to High Energy and Plasma Physics, Confinement of Plasma, Magnetoionic Theory, Waves in Plasma			
Textbook/ Material / Resources	1. Plasma Physics (Tanenbaum) 2. Cold Plasma Waves (H. G. Booker)			
Internship Status	No			
Course Precedents				
University Name	Program Name	Course Name	T-P-L-C; ECTS	Type
Eskisehir Osmangazi University	Physics	Introduction to Plasma Physics I	3-0-0-3; 5	E
Duzce University	Physics	Plasma Physics	3-0-0-3; 6	E
The instructor who proposed the course (Title, Name and Surname)			Signature	
Instructors who can teach the course (Title, Name and Surname)			Signature	

Academic justification for the opening of the course? (The effect of course outcomes on program outcomes, etc.)

Brief explanation of the course (theoretical lecture, applications, laboratory, studio, off-campus activity, using software, etc.)
Face-to-face courses will be taught under the supervision of the relevant faculty member.

External Stakeholder Opinions About the Course (It is expected that the opinions to be obtained from the business world that will employ your graduates or from real or legal persons outside the University who have expertise on the subject of the course will be specified. Proof documents must be attached to this form.)	
Stakeholder Name	Opinion (It should be given as a summary, it should not exceed two lines.)

Weekly Course Content Distribution		
Week	Theory	Application/Laboratory
1	Entrance; Plasma	
2	Characteristics of plasma	
3	Plasma Parameters	
4	Field Equation	
5	The Debye Incident	
6	Plasma Vibration Frequency	
7	Plasma Phenomenon in Solids	
8	Motion of Charged Particles	
9	Midterm Exam	
10	Drift Speed and Magnitude	
11	Magnetic Moment	
12	Magnetic Pressure	
13	Generalized ohm's law	
14	DC conductivity of plasma	
15	Final Exam	
16		

Assessment			
Evaluation Criteria	Activity	Custom	Contribution to Success Grade (%)
	Midterm Exams	1	40
	Quizzes		
	Assignments		
	Projects		
	Term Paper		
	Laboratory		
	Other		
	Final Exam	1	60
	Sum:		100
Remarks			

Content Design and Subject Weight (%)	Mathematics and Basic Sciences	100
	Engineering Sciences	
	Social Sciences	
	Health Sciences	
	Educational Sciences	
	Culture and Art Sciences	
	Design Information	

Workload (ECTS) Calculation			
Events	Number	Duration (Hours)	Total workload (Hours)
Fieldwork			
Midterm Exam Application	1	2	2
Self-Study (including pre-class and exam preparation)	14	2	28
Make-up Exam	1	2	2
Experiment and Observation			
Class Participation (Theory)	14	3	42
Homework			
Final Exam Practice	1	2	2
Laboratory			
Article Review			
Writing an Article			
Reading			
Case Study			
Performance			
Problem Solution			
Project Preparation			
Project Submission			
Quiz			
Report Preparation			
Submitting Reports			
Role/Drama Work			
Seminar			
Oral Exam			
Team/Group Work	12	3	36
Argument	14	1	14
Application/Practice			
Other			
TOTAL WORKLOAD:			126
ECTS CREDITS OF THE COURSE: (The number obtained as a result of Total Workload/25 is calculated by rounding to the whole number.)			5

Program Outcomes (PO)		1	2	3	4	5	6	7	8	9	10	11
		1	2	3	4	5	6	7	8	9	10	11
1	Understand the properties of plasma by learning the basics	5	5	5	4	3	3	4	5	5	1	1
2	Understands plasmas in nature and learns the classification of plasma	5	5	5	4	3	3	4	5	5	1	1
3	Establish a relationship between plasma and natural phenomena	5	5	5	4	3	3	4	5	5	1	1

Organizer: Prof. Dr. Ali YEŞİL
Preparation Date: 20.05.2024