Code and Name:	**FİZ5800 SYNTHESIS AND CHARACTERIZATION OF BIOCERAMICS**
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:	**Face-to-face lessons per week 3 It will be done on an hourly basis.**
Place:	**YY:** - **UE:** -
Purpose:	General information about bioceramics examining the current properties, production methods and stages of characterizing the produced bioceramics is intended.
Material:	**1)** L.L. Hench (Ed.), An Introduction to Bioceramics, World Scientific, Singapore (1993) . **2)** S.V. Dorozhkin Calcium Orthophosphates: Applications in Nature, Biology, and Medicine, Pan Stanford, Singapore (2012) .
Student Responsibility :	**Attending classes, submitting assignments on time, and participating in exams.**

Weekly Lesson Plan

Week	Topic	Method
1	Bioceramics (Description of bioceramics and its main characteristics)	YY
2	Oxide ceramics (Alumina and Zirconia)	YY
3	Bioglasses	YY
4	Calcium phosphate ceramics	YY
5	Beta tricalcium phosphate	YY
6	Hydroxyapatite	YY
7	Calcium phosphate ceramics other than hydroxyapatite and beta tricalcium phosphate	YY
8	Biy Application Areas of Oceramics	YY
9	Main types of synthesis and dry methods	YY
10	Wet chemical methods and multiple production methods in which more than one method is applied together	YY
11	Biocompatibility tests and mechanical tests	YY
12	Use of Fourier transform infrared (FTIR) and Raman spectroscopy	YY
13	Analysis by microscopy applications	YY
14	Analysis by X-ray diffraction (XRD) technique	YY

Assessment and Evaluation

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

Course Outcomes:

1	Knowledge about bioceramics is gained.
2	Information is obtained about how the properties of bioceramics change under different physical conditions.
3	He/She can conduct research independently.
4	By using the knowledge of Physics in the field of bioceramics; Selection of material content, sample production and characterization, and thus prepare interdisciplinary studies.

Course-Specific Explanations:

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