NUCLEAR PHYSICS

1	Course Title:	NUCLEAR PHYSICS
2	Course Code:	FZK3201
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	3
6	Semester:	5
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. REMZIYE ERGÜL
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	ergulr@uludag.edu.tr, 224 2942293, Uludağ Üniversitesi Eğitim Fakültesi, A Blok, İlköğretim Bölümü, 16059 Nilüfer,Bursa
17	Website:	
18	Objective of the Course:	The purpose of this course, student teachers acquire the necessary basic knowledge about the subjects of radioactivity, to establish the relationships between concepts, is to acquire basic problem solving skills
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To be able to to gain knowledge and skills to interpret and analyze events related nuclear physics
	2	To be able to learning and applying the general concepts about nuclear events
	3	To be able to.know the characteristics of radiation detectors and measurement of radiation and gain the knowledge and skills of nuclear physics applications
	4	To be able to solve related problems in nuclear physics.
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Introduction-basic information	
2	Properties of nucleus	
3	Nuclear radius and nucleus density	

4	Binding energy of nucleus	
5	Nuclear models	
6	Nuclear reactions	
7	Radioactive decay	
8	Radioactive decay series	
9	Alfa, beta decay	
10	Nuclear forces	
11	Fision and fusion	
12	Nuclear energy	
13	Simulations of Nuclear Physics	
14	Simulations of Nuclear Physics	

22	Textbooks, References and/or Other Materials:	Kenneth S. Krane Nükleer Fizik 1.Cilt , Palme yayınevi A. Beiser, Concepts of modern Physics, Mcgraw-Hill NY, 1987: çeeviri: Gülsen Önengüt. Arya, Atam P. Çekirdek Fiziğinin Esasları Besim Tanyel Nükleer Fizik, Ege Üniv. Basımevi 1994.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24 ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	5	10.00	50.00
Homeworks	2	10.00	20.00
Projects	2	10.00	20.00
Field Studies	0	0.00	0.00
Midterm exams	1	1.00	1.00
Others	0	0.00	0.00
Final Exams	1	1.00	1.00
Total Work Load			120.00
Total work load/ 30 hr			4.00
ECTS Credit of the Course			4.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	5	4	0	5	0	0	0	0	5	0	0	0	0	0	0	0
ÖK2	5	4	0	5	0	0	0	0	5	0	0	0	0	0	0	0
ÖK3	5	4	0	5	0	0	0	0	5	0	0	0	0	0	0	0
ÖK4	5	4	0	5	0	0	0	0	5	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**		**2 low**			**3 Medium**			**4 High**				**5 Very High**			