SCIENCE EDUCATION IN INFORMAL LEARNING ENVIRONMENT

1	Course Title:	SCIENCE EDUCATION IN INFORMAL LEARNING ENVIRONMENT	
2	Course Code:	FEN5119	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. DİLEK ZEREN ÖZER	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Adres: Uludağ Ünv. Eğitim Fak. Matematik ve Fen Bilimleri Eğitimi Bölümü Fen Bilimleri Eğitimi Anabilim Dalı Görükle/BURSA dzeren@uludag.edu.tr 0-224-2942254	
17	Website:		
18	Objective of the Course:	Having knowledge about science education in non-school learning environments, developing examples of activities suitable for different learning environments in science education, and learning evaluation techniques.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	to knows the non-school settings.
		2	understands how to take advantage of the educational environment for learning outside of school.
		3	Acquire the educational position of different non-school learning environments.
		4	Design activities related to out-of-school learning environments.
		5	to create a lesson plan for the learning environments of the school.
		6	Know the assessment techniques in non-school learning environment and apply them.
		7	
		8	
		9	
		10	
21	Course Content:		
	Course Content:		
Week	Theoretical	Practice	

1	• Historical overview of non-school settings in science education • Integrating non-school settings into science education	
2	• Associating Non-School Learning Environments with Teaching Programs • Things to be aware of before, during and after the activities in non-school learning activities	
3	• The Effects of Non-School Learning Environments on Learning	
4	museums • Museum concept and its varieties • Learning theories used in museum education • Fine Arts and Science Teaching • Sample Trip Plans for the Museum • Presentation and examples of appropriate application examples for the fixtures	
5	Science and Technology Centers (BTM) • Important Science and Technology Centers in Turkey • Use of Science and Technology Centers in Education • Sample Trip Plans for BTM trips • Sample work sheet that can be used in BTM trips • Presentation and examples of appropriate application examples for BTM	
6	Zoo • Important Zoological Gardens in Turkey • Use of Zoo in Education • Sample Trip Plans for Zoo Gardens • Sample worksheet that can be used in Zoo visits • Presentation of examples of applications suitable for zoo visits and development of new ones	
7	Botanical Gardens • Important Botanical Gardens in Turkey • Use of Botanical Gardens in Education • Sample Trip Plans for Botanical Gardens • Sample working leaf that can be used in botanical garden visits • Presentation and development of applications for botanical garden	
8	Planetariums • Planetarium concept • The purpose and importance of planetarium • Important Planetariums in Turkey • Use of planetarium in education • Planetarium displays and contents	
9	National Parks • The concept of national park in the world and in Turkey • Important National Parks in Turkey • Use of national parks in education • Sample Trip Plans for National Parks • Sample working leaf that can be used in national park sightseeing • Examples of activities that can be performed in National Parks	

10	Observatories • Observatories in Turkey • Use of Educational Observatories • Sample Trip Plans for observation houses • Sample information leaf that can be used in observatory visits	
11	Aquariums • Aquariums in Turkey • The use of aquariums in education • Sample Trip Plans for Aquariums • Sample information leaf that can be used in aquarium trips	
12	Institutions and organizations as an out-of-school learning environment (Cultures, science houses, etc.) • Observatories in Turkey • Use of Educational Observatories • Sample Trip Plans for observation houses • Sample information leaf that can be used in observatory visits	
13	Nature Education • TUBITAK Nature Trainings • Examples of Nature Education	
14	Non-School Learning Environments and Evaluation	
22	Textbooks, References and/or Other Materials:	Humberstone, B. & Stan, I. (2011). Outdoor Learning: Primary Pupils' Experiences And Teachers' Interaction In Outdoor Learning. Education 3-13, 39 (5), 529-540 -Kavak, N., Tufan,Y. ve Demirelli, H. (2006). Fen-Teknoloji Okuryazarlığı Ve İnformal Fen Eğitimi: Gazetelerin Potansiyel Rolü. Gazi Eğitim Fakültesi Dergisi, 26(3), 17-28. Laçin Şimşek, C. (2011). Okul Dışı Öğrenme Ortamları ve Fen Eğitimi. C. Laçin Şimşek (Editör), Fen Öğretiminde Okul Dışı Öğrenme Ortamları (1.Baskı), s. 1-23. Ankara: Pegem Akademi. -Linderman Matthies, P. & Knecht, S. (2011). Swiss Elementary School Teachers Attitudes Toward Forest Education. The Journal of Environmental Education, 42 (3), 152 167 -Türkmen, H. (2010). İnformal (Sınıf-Dışı) Fen Bilgisi Eğitimine Tarihsel Bakış ve Eğitimimize Entegrasyonu. Çukurova Üniversitesi Eğitim Fakültesi Dergisi. 3 (39), 46-59 - Cross, R. (1996). Teaching Primary Science, Longman Ltd. Australia. Bosak,V.S. (1991). Science is . Scholastic. U.S.A.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	15.00
Quiz	0	0.00
Home work-project	1	25.00
Final Exam	1	60.00
Total	3	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	1	15.00	15.00
Homeworks	2	20.00	40.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			87.00
Total work load/ 30 hr			2.90
ECTS Credit of the Course			3.00

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	5	0	5	5	3	0	3	4	5	0	5	3	4	4	4
ÖK2	5	5	5	5	5	5	5	0	5	5	3	5	5	5	5	5
ÖK3	5	5	5	5	5	5	5	0	5	5	3	5	5	5	5	5
ÖK4	5	5	5	5	5	5	5	3	5	5	3	5	4	5	5	5
ÖK5	5	5	5	5	5	5	5	5	5	5	0	5	4	5	5	5
ÖK6	5	5	5	5	5	5	5	5	5	5	0	5	4	5	5	5

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High