

PROJECT BASED LEARNING AND PRACTICES IN SCIENCE EDUCATION

1	Course Title:	PROJECT BASED LEARNING AND PRACTICES IN SCIENCE EDUCATION
2	Course Code:	FEN0124
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	2
6	Semester:	3
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:	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:	Bursa Uludağ Üniversitesi, Eğitim Fakültesi E Blok, Oda no: 231 Görükle, Bursa. +90 (224) 294 22 59 dzeren@uludag.edu.tr
17	Website:	
18	Objective of the Course:	To gain the ability to plan, develop and implement projects at secondary school level based on the project-based learning approach in science education.
19	Contribution of the Course to Professional Development:	Contribution to academic development
20	Learning Outcomes:	
	1	Students will be able to prepare, implement and reflect on a teacher-guided instructional lesson plan based on project-based learning and research-inquiry that is egalitarian and encourages participation.
	2	Students will be able to discuss, criticise and reflect on project-based teaching practices in relation to teaching and learning.
	3	Students will be able to compare, contrast and evaluate project-based and other teaching approaches.
	4	Students will be able to collaboratively develop a 3-4 week project-based integrated unit and showcase the project in an environment such as a web-based or project exhibition.
	5	Students will be able to develop, implement and guide micro-level project-based activities in collaboration with secondary school students in a real-world setting.
	6	The learner will be able to create and evaluate alternative assessments appropriate for project-based teaching.
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21	Course Content:			
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Week	Theoretical	Practice		
1	Project concept and history; Project method Project-based learning approach Features of Project Based Learning Approach			
2	Fundamentals of project-based learning environments; The use of project-based learning in science education.			
3	Positive and Negative Aspects of Project Based Learning Approach, Effects of Project Based learning on cognitive and skill development in students			
4	Developing lesson plans for project-based learning in science education			
5	Classroom management and organisation of project-based learning classrooms basic concepts related to project management (project management plan, risk analysis, time management, labour management, etc.)			
6	Introduction of national and international supported project opportunities that can be carried out in schools in the field of science teaching (TUBITAK, National Agency,			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	making a needs analysis, Examination of project examples related to	14	2.00	28.00
Practicals/Labs		0	0.00	0.00
Self study and preparation	Steps of project preparation in science teaching (determining the project topic,	14	3.00	42.00
Homeworks		5	10.00	50.00
Projects	carrying out the project; evaluation of the project, report writing and presentation.	0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm Exams	Measurement and evaluation in project-based/Project-based learning applications	0	0.00	0.00
Others		0	0.00	0.00
Final Exams	Environments activities.	1	5.00	5.00
Total Work Load				125.00
Total work load/ 30 hr				4.17
ECTS Credit of the Course				4.00
12	Science Fairs, Project Exhibitions, Project Competitions			
13	Project-based learning applications in science education			
14	Project-based learning applications in science education			

22	Textbooks, References and/or Other Materials:	• Erdem, M. (2002). Proje tabanlı öğrenme. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 22(22). • Vatansever Bayraktar, H. (2015). Proje tabanlı öğrenme yaklaşımı. Uluslararası Sosyal Araştırmalar Dergisi/The Journal of International Social Research. • Korkmaz, H., & Kaptan, F. (2001). Fen eğitiminde proje tabanlı öğrenme yaklaşımı. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 20(20). • https://ets.anadolu.edu.tr/storage/nfs/IKT102U/ebook/IKT102U-13V2S1-8-0-1-SV1-ebook.pdf
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	5	40.00
Final Exam	1	60.00
Total	6	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	Measurement and evaluation are performed according to the Rules & Regulations of Bursa Uludağ University on Undergraduate Education.	

24	ECTS / WORK LOAD TABLE
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25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS
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	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5
ÖK2	5	1	5	1	5	1	5	1	5	5	1	5	1	1	1	1
ÖK3	5	5	1	5	1	5	1	5	1	5	1	5	1	1	1	1
ÖK4	5	1	5	1	5	1	5	1	5	1	5	5	1	1	1	1
ÖK5	5	1	5	1	5	1	5	1	5	5	5	1	1	1	1	1
ÖK6	5	5	1	5	1	5	1	5	1	5	1	1	1	1	1	1

LO: Learning Objectives PQ: Program Qualifications

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