

BALIKESIR UNIVERSITY
ENGINEERING FACULTY
UNIVERSITY ELECTIVE COURSE PROPOSAL FORM

Department/Program	Environmental Engineering					
Course Unit Title	USD0000- Clean Production Technologies					
Semester	Fall	☐	Spring	☒		
Language of Instruction	Turkish	☒	English	☐		
Credit	Theoretical	2	Application		Total Credit	2
Number of ECTS Credits	3					
Course Learning Type	University Elective			Formal Education		
Objectives of the Course	This course aims to provide knowledge and awareness of the objectives of transition from pollutant reduction to clean energy, the tools used, possible benefits (environmental, economic, social gains), cleaner production components, cleaner production tools and methods.					
Course Content	The course includes topics such as the effects of industry on the environment, development of pollution reduction strategies, evaluation of cleaner production, monitoring of environmental performance, energy saving, waste reduction, reduction of water pollution, efficient use of water, reduction of air pollution and promotion of cleaner production.					
Prerequisites	There are no prerequisites for the course					
Name of Lecturer	Arş.Gör. Dr. Elif ÇALGAN		mail : eliftekin@balikesir.edu.tr			
Assistants			mail :			
Internship						
Resources	- Environmental management accounting, investment appraisal and financing cleaner production, Staniskis J.K., Stasiskiene Z., Jasch Ch.. Monography. ISBN: 978-1-60456-614-7 New York: NovaPublishers, 2008 -Identification of Cleaner Production Improvement Opportunities, Kenneth L. Mulholland, 2006, John Wiley & Sons, Ltd - Pollution Prevention: Fundamentals and Practice, Bishop, P., 2000, McGrwa-Hill, Inc					
Type of Course Unit	University elective lesson					
Planned Learning Activities and Teaching Methods	Theoretical lecture, Midterm exam, Final exam					
Assessment methods and criteria			ECTS allocated based on student workload			
In-term Studies	Quantity	Percentage (%)	Activities	Quantity	Duration	Total workload (Hours)
Midterms	1	40	Course Duration	14	2	28
Quizzes			Off the class study hours	0	2	0
Assignment			Midterms	1	2	2
Attendance			Final Exam	1	2	2
Practice			Total workload (hours): 32			
Project			Number of ECTS Credits: 3			
Final Exam	1	60				

Learning outcomes	-Students will learn about clean technologies that generate low or no waste, engineering and management practices that can be used to minimize domestic and industrial waste generation -At the same time, it is aimed that they have knowledge about environmentally friendly products and changes to reduce air, water and soil pollution by saving raw materials and natural resources that can be applied in existing industries.
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Weekly Detailed Course Contents

Week	Topic	Prerequisites	Resources
1	Clean production and pollution prevention concepts		
2	Eco efficiency		
3	Clean production concept		
4	International and local legislation on cleaner production		
5	Energy savings, water savings		
6	Air pollution reduction, waste reduction		
7	Clean production applications		
8	Midterm exam		
9	Carbon footprint		
10	Kyoto Protocol		
11	Clean production sample studies in our country		
12	Clean production sample studies in our country		
13	Clean production sample studies around the world		
14	Clean production sample studies around the world		

Contribution of the Course to Program Outcomes

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