

# ENGINEERING ECONOMY

1	Course Title:	ENGINEERING ECONOMY	
2	Course Code:	END3068	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	3	
6	Semester:	6	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	3.00	
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. ASLI AKSOY	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	e-posta: asliaksoy@uludag.edu.tr, Tel: + 90 (224) 294 20 78 Adres: Bursa Uludağ Üniversitesi, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 16059 Görükle Bursa	
17	Website:		
18	Objective of the Course:	Learning how to perform economic analyses for engineering projects	
19	Contribution of the Course to Professional Development:	The contribution of the course to professional development is to provide the basic knowledge and methods for economic analysis in project evaluation and investment decisions in business life and the ability to apply appropriate methods for problem solving.	
20	Learning Outcomes:		
		1	Being able to perform economic analysis for engineering projects
		2	Being able to perform time value of money, interest rate and economical analysis computations
		3	Being able to compare alternatives by using economic analysis methods
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21	Course Content:		
		<b>Course Content:</b>	
Week	Theoretical	Practice	
1	Introduction to Engineering Economy -Explaining engineering economy concepts		

2	Basic concepts in engineering economy Cost terminology Economic value			
3	Interest rate Cash flow diagrams Economic equivalence Cash flow diagrams Single cash flows Net present value			
4	Time value of money Uneven payment series Linear gradient series Gradient series			
5	Understanding money management Nominal interest rate Effective interest rate			
6	Continuous series Project cash flows Pay back period analysis Net present worth analysis MARR analysis Future worth analysis			
7	Annual equivalent worth analysis IRR ERR			
8	Rate of return analysis			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Effects of Inflation	14	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preparation	Differential price changes	14	6.00	84.00
Homeworks		1	14.00	14.00
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 Exam	Random variables	1	2.00	2.00
Total Work Load				144.00
Total work load/ 30 hr				4.80
ECTS Credit of the Course				5.00
	Materials:	Pearson • Engineering Economy; 15. Basim, William G. Sullivan, Elin M. Wicks, C. Patrick Koelling; Pearson • Mühendislik Ekonomisi Temel Kavramlar ve Örnek Problemler , Esra Baş, Beta • Mühendislik Ekonomisi, Prof. Dr. Emin Kahya, Eskişehir Osmangazi Üniversitesi Yayınları • Mühendislik Ekonomisinin Temelleri, Orhan Torkul, İhsan Hakan Selvi, Palme Yayınevi, 2018		
23	Assesment			
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT	
Midterm Exam		1	20.00	
Quiz		0	0.00	

Home work-project	1	20.00
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	Midterm exam, homework, final exam	

**24 ECTS / WORK LOAD TABLE**

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	3	4	2	2	0	2	3	0	0	0	0	0	0
ÖK2	4	4	0	3	4	0	0	0	0	3	0	0	0	0	0	0
ÖK3	4	4	0	3	4	0	0	0	0	3	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							