	DATA STRUC	TURE	S AND ALGORITHMS						
1	Course Title:	DATA S	STRUCTURES AND ALGORITHMS						
2	Course Code:	EEM410	9						
3	Type of Course:	Optional							
4	Level of Course:	First Cyc	le						
5	Year of Study:	4							
6	Semester:	7							
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 f	ace						
14	Course Coordinator:	Prof. Dr.	FAHRİ VATANSEVER						
15	Course Lecturers:								
16	Contact information of the Course Coordinator:	E-posta: Tel: (224 Adres: E	fahriv@uludag.edu.tr) 294 09 05 lektrik-Elektronik Mühendisliği bölümü, No:304						
17	Website:								
18	Objective of the Course:	To gain ability to analyze and synthesis of data structures, coding and understanding different algorithms							
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								
		1	To gain ability developing advanced software in data analysis area						
		2	To gain ability to develop select and use modern techniques and equipment necessary for engineering applications						
		3	To gain ability to use information technology in efficient way						
		4	To gain ability to simulate with developing advanced software for investigating engineering problems						
		5	To gain ability to collect data, analysis result and interpret results with developing advanced software for investigating engineering problems						
		6							
		7							
		8							
		9							
		10							
21	Course Content:								
		Co	ourse Content:						
Week	Theoretical		Practice						
1	Data, data structures, data processir algorithms	ng							
2	Arrays								

3	Lists																		
4	Queues																		
5	Stacks																		
6	Trees																		
7	Sorting algorithms																		
8	Midter	Exam	+ Ger	neral i	review														
9	Sorting algorithms																		
10	Search	ning	g algo	orithms	5														
11	Searching algorithms																		
12	Graphs																		
13	Graph	s a	lgoritl	nms															
14	Hash tables																		
22	Textbooks, References and/or Other Materials:									 Goodrich, M.T., Tamassia, R., Mount, D., Data Structures & Algorithms in C++, Second Edition, John Wiley & Sons Inc., 2011. Lafore, R., Sams Teach Yourself Data Structires and Algorithms in 24 Hours, Sams Publishing, 1999. Vatansever, F., İleri Programlama Uygulamaları, Seçkin Yayıncılık, 2006. Lafore, R., Data Structures & Algorithms in Java, Second Edition, SAMS, 2003. Kruse, R.L., Ryba, A.J., Data Structures and Program Design in C++, Prentice Hall, 2000. 									
Activit	ctivites									Numb	er		Dura	ition (Total V Load (ł	tal Work ad (hour)			
Theore	etical R												3.00	3.00			42.00		
Practica	icals/Labs)			0.00			0.00			
Self stu	study and preperation									14			3 00			42 00			
Homew	eworks)			0.00	0.00					
Final E	Exam I cts													0.00			0.00		
Field S	1 Studies									0				0.00			0.00		
Midtern	im exams ess Grade								40	40,00				16.00			16.00		
Others	S									0						0.00			
Final E	Exams										1					20.00			
Total W	al Work Load															120.00			
Total W Course	Work foad 30 million recriminates used in the															4.00			
ECTS (Credit c	f th	ne Co	urse	••••											5.00			
25				CON	TRIE	BUTIO	N OI	E LE/	ARN QUA	ing (Lific	OUTC ATIO	OME: NS	S TO I	PROC	GRAM	ME			
	PG	21	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16		
ÖK1	0		0	5	0	0	0	0	0	0	0	0	0	0	0	0	0		
ÖK2	0		0	0	5	0	0	0	0	0	0	0	0	0	0	0	0		
ÖK3	0		0	0	5	0	0	0	0	0	0	0	0	0	0	0	0		
ÖK4	0		0	0	0	5	0	0	0	0	0	0	0	0	0	0	0		

ÖK5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	
LO: Learning Objectives PQ: Program Qualifications																	
Contrib 1 very low ution Level:				:	2 low			3 Medium			4 High			5 Very High			