

INFORMATION TECHNOLOGY AND CALCULUS

1	Course Title:	INFORMATION TECHNOLOGY AND CALCULUS	
2	Course Code:	GKZ1007	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
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. SALİH BİRİŞÇİ	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Dr. Öğr. Üyesi Salih BİRİŞÇİ salihbirisci@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	To comprehend operations in sets. To learn the concept and types of relation and function. Logic, boolean algebra, matrix, graph theory and algorithm analysis.	
19	Contribution of the Course to Professional Development:	To be able to apply the basic knowledge and skills of discrete mathematics in the context of information technologies.	
20	Learning Outcomes:		
		1	Can do operations about sets.
		2	Define the relation and function concepts, and specify the properties of their types.
		3	Perform operations on matrix and its types.
		4	Can include graf theory in problem solutions.
		5	Can think algorithmically.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Introduction-planning.		
2	Set concept and operations on sets.		
3	Set concept and operations on sets.		
4	Relations		
5	Relations		
6	Functions		

7	Functions	
8	Boolean algebra and modern logic	
9	Matrix operations	
10	Matrix operations and determinant	
11	Graph theory and applications	
12	Graph theory and applications	
13	Algorithm analysis	
14	Algorithm analysis	

22	Textbooks, References and/or Other Materials:	
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23	Assesment	
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00

Activites	Number	Duration (hour)	Total Work Load (hour)
Course: Theoretical	of the course, mid-term and end-of-year exams are considered	3.00	12.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	4.00	56.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	24.00	24.00
Others	14	2.00	28.00
Final Exams	1	36.00	36.00
Total Work Load			186.00
Total work load/ 30 hr			6.20
ECTS Credit of the Course			6.00

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	1	3	3	2	1	1	1	1	1	1	2	1	2	2	2	1
ÖK2	2	3	3	3	2	1	1	1	1	1	3	1	2	2	2	1
ÖK3	2	3	3	3	2	1	1	1	1	1	3	1	2	2	2	1
ÖK4	1	4	4	3	3	2	1	1	1	1	3	1	2	3	3	2

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