ENGINEERING MATHEMATICS											
1	Course Title:	ENGINE	ERING MATHEMATICS								
2	Course Code:	INS2002									
3	Type of Course:	Compuls	ory								
4	Level of Course:	First Cyc	le								
5	Year of Study:	2									
6	Semester:	4									
7	ECTS Credits Allocated:	6.00									
8	Theoretical (hour/week):	4.00									
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.	BABÜR DELİKTAŞ								
15	Course Lecturers:										
16	Contact information of the Course Coordinator:	bdeliktas@uludag.edu.tr 224 2900744 Uludağ Univ. Müh.Mim Fak. İnşaat Müh. Böl. Görükle, Bursa									
17	Website:										
18	Objective of the Course:	to provide basic concepts of linear algebra and its application to engineering problems									
19	Contribution of the Course to Professional Development:										
20	Learning Outcomes:										
	•	1	Be able to describe special type of matrices and vectors								
		2	Be able to characterize matrices and vectors properties								
		3	Be able to perform matrices and vectors operations such as addition, multiplication, inverse, etc.								
		4	Be able to recognize the difference between the algebraic and matrices operations.								
		5	Be able to establish set of system of equation if it is required at any of engineering problem								
		6	Be able to solve the system of equations and able to interpret the results.								
		7									
		8									
		9									
		10									
21	Course Content:										
		urse Content:									
Week	Theoretical		Practice								
1	Matrices; Matrix Operations, Propert Matrix Operations, Special Types of	ies of Matrices									

2	Solvin Colur Form Gaus	ng L mn ( n of a ss-Jo	inear Opera Matr ordan	Syste tions; ix; Ga Metho	ms; E (reduo uss E od	lement ced) Ro liminat	ary Ro ow Ec ion an	ow an helon id	ld									
3	Home	Homogeneous Systems.																
4	Elem of a N Detei Detei	ienta Matri rmin rmin	iry Ma ix by l ants; ants	itrices Jsing Definit	and F Eleme tion a	Finding entary ( nd Proj	the Ir Opera perties	iverse tions s of	9									
5	Cofa Using	ctor g Co	Expar factor	nsion; s	Findir	ng Inve	erses b	ру										
6	Cram	ner's	Rule.	Rank	ofal	Matrix												
7	Vecto	or Sp	baces	: Defir	nition;	Subsp	aces											
8	Span	n and	Line	ar Inde	epend	lence												
9	Basis	s and	d Dim	ensior	าร													
10	Eiger Matri	nvalı x	ues ar	nd Eig	envec	ctors of	a Squ	lare										
11	Diagonalization and the Cayley–Hamilton Theorem																	
12	Linear Transformation																	
13	Revie	ew o	f Basi	c Con	cepts													
14																		
								- TARÈ	Numb	ber		Dura	ition (	Total Work Load (hour)				
Drestie										0					38.00			
Practica	Tracticals/Labs									0						70.00		
Homew	enzstudy and preperation 0								10.0	8					18.00			
Pimie										5000					0.00			
Field St										0						0.00		
Cliptiens	tite: multiconstruction (Year) Learning Activities to									50100						4.00		
Others	Dthers									0						0.00		
Finatrie	Antibutions of Final Exam to Success Grade									5 <b>0</b> 100					3.00			
Total W	Total Work Load														181.00			
Metasur															6.03			
ECTS Credit of the Course										6.00								
24	ECI	5/	WOI	KK L	OAD	IAB	LE											
25	25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																	
	P	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16	
ÖK1	0	)	0	4	0	0	3	4	0	0	0	0	0	0	0	0	0	
ÖK2	0	)	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0	
ÖK3	0	)	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
ÖK4	0	)	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	

ÖK5	0	5	4	0	0	4	0	0	0	0	0	0	0	0	0	0
ÖK6	0	5	4	0	0	4	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			