MAPLE APPLICATIONS

1	Course Title:	MAPLE APPLICATIONS	
2	Course Code:	MAT5321	
3	Type of Course:	Optional	
4	Level of Course:	Third 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:	Prof. Dr. BASRİ ÇELİK	
15	Course Lecturers:	Doç. Dr. Atilla AKPINAR Dr. Öğr. Üyesi Fatma ÖZEN ERDOĞAN	
16	Contact information of the Course Coordinator:	Prof.Dr.Basri ÇELİK E-posta: basri@uludag.edu.tr Telefon: +90 224 2941762 Adres: Uludağ Üniversitesi Fen-Edebiyat Fakültesi Matematik Bölümü 16059 Görükle-Bursa-TÜRKİYE	
17	Website:		
18	Objective of the Course:	Using the Maple computer program to find the solution of problems faced in Math which taken excessively long time when done manually.	
19	Contribution of the Course to Professional Development:	To be able to practice the professional applications of mathematical and geometric concepts with using computer.	
20	Learning Outcomes:		
		1	Learns the calculations on trigonometry with Maple.
		2	Solves the application problems of sequences and serials.
		3	Calculates limits and finds continuality.
		4	Makes and applications of derivation wit Maple.
		5	Learns to calculating integrals with Maple and makes some applications of integral.
		6	Makes vectoral operations with Maple.
		7	Solves the linear equations systems with Maple.
		8	Solves the ordinary differential equations with Maple.
		9	Makes fundamental statistical calculations with Maple.
		10	Learns the essential Maple commands and knows to using these in problems.
21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Description of course.	
2	Trigonometry and trigonometric functions with Maple.	
3	Sequences and series with Maple.	
4	Limit and continuity with Maple.	
5	Derivation and its applications with Maple.	
6	Integral and its applications with Maple.	
7	Vectors and vectorial operations with Maple.	
8	Matrices and matrix operations with Maple.	
9	Calculating trace, eigenvalues and eigenvectors with Maple.	
10	Solutions of linear equations system with Maple.	
11	Solutions of ordinary differential equations with Maple.	
12	Fundamentals of statistics with Maple.	
13	Sample applications.	
14	Sample applications.	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	9.00	126.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	0	0.00	0.00
Final Exams	1	12.00	12.00
Total Work Load			180.00
Total work load/ 30 hr			6.00
ECTS Credit of the Course			6.00

22 Textbooks, References and/or Other Materials: Maple ve Maple ile Matematik, Bash Çelik, Bora Taymaz, 2.baskı, 2010, Bursa.

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	0	0.00
Quiz	0	0.00
Home work project	0	0.00
Final Exam	1	100.00
Total	1	100.00
Contribution of Term (Year) Learning Activities to		0.00

Contribution of Final Exam to Success Grade	100.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	Homeworks and online exams

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	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0

ÖK2	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK9	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK10	5	0	0	5	0	0	0	0	0	0	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**