

Course Title-Course Code: EBE 511 MATHEMATICAL METHODS IN ELECTRONICS I							Name of the Programme: ELECTRONICS AND COMPUTER EDUCATION		
Semester	Teaching Methods							Credits	
	Lecture	Recite	Lab.	Project	Homework	Other	Total	Credit	ECTS Credit
3	42				52	93	187	3	7,5
Language	Turkish								
Compulsory / Elective	Elective								
Prerequisites	-								
Course Contents	Infinite series, power series, Fourier analysis, some theorem, results and techniques in differential and integral calculus. Generalised integrals. Laplace transform Matrix algebra Eigen values and Eigen vectors, Selected subjects in multivariable functions.								
Course Objectives	To upgrade research background of students by giving some necessary mathematical basics about Electronics.								
Learning Outcomes and Competences	<ul style="list-style-type: none"> To learn Fourier Analysis, Laplace Transform and some notions related with matrix theory 								
Textbook and /or References	<ol style="list-style-type: none"> Bernard Kolman, David R. Hill, Uygulamalı Lineer Cebir, Palme Yayıncılık, Ankara, 2002. (7. Baskıdan Çeviri, Çeviri Editörü: Prof. Dr. Ömer AKIN) Hüseyin Halilov, Diferensiyel Denklemler ve Lineer Cabirin Elemanları, Literatür Yayınları, İstanbul, 2003. Serge Lang, Calculus of Several Variables, Second Edition, Addison-Wesley Publishing Company, 1979. Hüseyin Halilov, Alemdar Hasanoğlu, Mehmet Can, Yüksek Matematik 2, Literatür Yayınları, İstanbul, 2001. Robert L. Barrelli, Countrey s. Coleman, Differential Equations Amodelling Perspective, John Wiley&Sons,1998. Ahmet H. Kayran, Sayısal İşaret İşleme, İstanbul Teknik Üniversitesi, 1990. 								
Assessment Criteria								<i>If any,mark as (X)</i>	Percent (%)
	Midterm Exams							x	30
	Quizzes								
	Homeworks							x	20
	Projects								
	Term Paper								
	Laboratory Work								
	Other								
	Final Exam							x	50
Instructors	Assist. Prof. Dr. Nurettin DOĞAN								
Week	Subject								

1	Series
2	Series
3	Fourier Analysis
4	Fourier Analysis
5	Differentiation and Integral
6	Laplace Transformation and Inverse Laplace Transformation
7	Laplace Transformation and Inverse Laplace Transformation
8	Laplace Transformation and Inverse Laplace Transformation
9	Matrices and Linear Algebraic Equations Systems
10	Matrices and Linear Algebraic Equations Systems
11	Matrices and Linear Algebraic Equations Systems
12	Some Topics in The Theory of Multivariable Functions
13	Some Topics in The Theory of Multivariable Functions
14	Some Topics in The Theory of Multivariable Functions