Fizik Bölümü / PHYSICS /												
Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS						
FZK-3011	Advance Programming Languages in Physics	3.00	0.00	0.00	3.00	6.00						
Course Detail												
Course Language	: Turkish											
Qualification Degree	: Bachelor											
Course Type	: Optional											
Preconditions	: Not											
Objectives of the Course	ives of the Course : The aim of this course is to learn the MATLAB programming code and using it in scientific studies.											
Course Contents	zeros; graph, legend, linspace, xlabel, char, string, str2num, num2str, polinoms, xls	: Learning and using of function, script, for, if, while, switch, true, false, trigonometri, fprint, disp; function, Series, Matrix, complex num, abs, imag, real, ones, zeros; graph, legend, linspace, xlabel, char, string, str2num, num2str, polinoms, xlsread, xlswrite; symbolic, equ. solving, derivative, integral, subs, solve, roots; determination of max min values, spline cubik, interpolation, fmin, fmax; Fitting, polyfit, fmin search, noise calculation matlab functions.										
Recommended or Required Reading	: A Guide to MATLAB: For Beginners and Experienced Users; Brian R. Hunt, Ronald L Lipsman, Jonathan Rosenberg Matlab: a practical introduc programming and problem solving; Stormy Attaway											
Planned Learning Activities Teaching Methods	s and : Practice in course and homeworks											
Recommended Optional Programme Components	: Repetition of basic software knowledge is helpful											
Course Instructors	: Prof. Dr. Emre Coşkun											
Instructor's Assistants	: Assistant Dr. Çağlar PÜSKÜLLÜ											
Presentation Of Course	: Theoretical and experimental											

Upon the completion of this course a student:

1 to improve the programming skill
2 to analysis of a scientific research can be simplified after this course
3 to implement of preparing the simulation
4 to plot and comment professionally in scientific studies
5 to analyze experimental studies

Preconditions

Course Code Course Name Teorical Practice Laboratory Credits ECTS

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week	*Learning of legend, linspace, xlabel, char, string, str2num, num2str, polinomlar, xlsread, xlswrite commands				
2.Week	*Learning of function, series, matrixes, complex numbers, abs, imag, real, ones, zeros commands				
3.Week	*Learning of graphs, legend, linspace, xlabel, char, string, str2num, num2str, polynoms, xlsread, xlswrite commandsi				
4.Week	*Learning of symbolic, solving equations, differential, integral, subs, solve, roots commands				
5.Week	*Learning of determination of max and min values of a function, spline cubik, interpolasyon processes				
6.Week	*Learning of fitting, polyfit, fmin search command and noise calculation process.				
7.Week	*midterm				
8.Week		*Learning of graphs, legend, linspace, xlabel, char, string, str2num, num2str, polinomlar, xlsread, xlswrite commands			
9.Week		*Learning of function, series, matrixes, complex numbers, abs, imag, real, ones, zeros commands			
10.Week		*Learning of graphs, legend, linspace, xlabel, char, string, str2num, num2str, polynoms, xlsread, xlswrite commands			
11.Week		*Learning of symbolic, solving equations, differential, integral, subs, solve, roots commands			
12.Week		*Learning of determination of max and min values of a function, spline cubik, interpolasyon processes			
13.Week		*Learning of fitting, polyfit, fmin search command and noise calculation process.			

Assesment Methods %

1 Ara Sınav (Bütünlemede Kullanılan) : 40.000

2 Final : 60.000

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	3.00	3.00
Final	1	3.00	3.00
Theoretical Lecturing	13	6.00	78.00
Application/Practice	13	6.00	78.00
Presentation/Seminar	4	8.00	32.00

Total: 194.00

Sum of Workload / 30 (Hour): 6

ECTS: 6.00

Program And OutcomeRelation

	P.O. '	1 P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24
L.O. 1	3	2	5	3	2	3	5	4	5	4	4	5	4	3	0	0	0	0	0	0	0	0	0	0
L.O. 2	5	5	5	5	5	4	5	4	5	4	4	2	4	2	0	0	0	0	0	0	0	0	0	0
L.O. 3	5	5	5	4	3	4	5	4	5	2	3	3	5	3	0	0	0	0	0	0	0	0	0	0
L.O. 4	4	5	4	5	5	5	4	3	4	3	5	3	3	2	0	0	0	0	0	0	0	0	0	0
L.O. 5	3	5	4	5	4	5	3	3	3	3	3	3	4	4	0	0	0	0	0	0	0	0	0	0
4			'																					Þ

Ders/Program Çıktıları İlişkisi P.O. 1 P.O. 2 P.O. 3 P.O. 4 P.O. 5 P.O. 6 P.O. 7 P.O. 8 P.O. 9 P.O. 10 P.O. 11 P.O. 12 P.O. 13 P.O. 14 P.O. 15 P.O. 16 P.O. 17 P.O. 18 P.O. 19 P.O. 20 P.O. 21 P.O. 22 P.O. 23 P.O. 24 P.O. 2 4 5 5 4 5 5 4 5 4 3 5 4 5