ESOGÜ DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE COURSE INFORMATION FORM

SEMESTER	Spring

COURSE CODE	821618029	COURSE NAME	Mathematical Computing with Visual C++ II

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	2	2	0	3	7	COMPULSORY (x) ELECTIVE ( )	Turkish

COURSE CATAGORY

		[if it contains considerable design, mark with (√)]	
		X	

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID-TERM	1st Mid-Term		
	2nd Mid-Term		
	Quiz		
	Homework	1	40
	Project		
	Report		
	Others (………)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None
COURSE DESCRIPTION	Numerical Methods Using Visual C++
COURSE OBJECTIVES	The main of the course is to introduce the concepts and techniques involved in the basic topics listed in this lecture and to develop skills in applying those concepts and techniques to the solution of mathematical problems using Visual C++.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	To get numerical solution for the mathematical problems using suitable algorithms
COURSE OUTCOMES	Using Visual C++ to obtain numerical solution for the mathematical problems.
TEXTBOOK	Computing for Numerical Methods Using Visual C++, S. Salleh, A. Zomaya, S. Bakar.
OTHER REFERENCES	**1)** Beginning Visual C++ 2008, Ivor Horton Numerical analysis, R. Burden and J. D. Faires.
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS

WEEK	TOPICS
1	Systems of Linear Equations
2	Nonlinear Equations
3	Interpolation and Approximation
4	Algorithms for the previous problems
5	Examples
6	Differentiation and integration
7	Eigenvalues and Eigenvectors
	Midterm
8	Ordinary Differential Equations
9	Ordinary Differential Equations
10	Examples
11	Partial Differential Equations
12	Partial Differential Equations
13	Examples and algorithms
14	Examples and algorithms
15,16	Final exam

DİKKAT!... Aşağıdaki PROGRAM ÇIKTILARI Mühendislik için yazılmıştır. BÖLÜM kendi eğitim amaç ve hedeflerini destekleyen Program Çıktılarını belirledikten sonra bu kısım hazırlanmalıdır. ŞABLON OLARAK KULLANMAYINIZ

NO	PROGRAM OUTCOMES	3	2	1
1	The ability to apply knowledges of Mathematics - Computer,	x		
2	To have sufficient theoretical and practical knowledge of Mathematics at international level,	x		
3	The ability of describing, modelling and solving of mathematical problems at Mathematics and related subjects,	x		
4	The skill to solve and design a problem process in accordance with a defined target,	x		
5	Skills to analyze data, interpret and apply to other datum and using these data on computer,	x		
6	The skill to use the modern techniques and computational tools needed for mathematical applications,	x		
7	The skill to make team work within the discipline and interdisciplinary,		x	
8	The ability to improve oneself by following the developments on other modern, scientific and technological subjects as well as Mathematics - Computer,	x		
9	The skill to communicate orally and in written way, in a clear and concise manner by having individual work skills and ability to independently decide and analytical thinking,	x		
10	The skill to have professional and ethical responsibility,		x	
11	The skill to have consciousness for quality issues and scientific research,		x	
12	The skill to be sensitive to environmental issues related with problems and development of living area and consistent in the social relations,		x	
13	Ability to solve problems in the working life faced to find an appropriate algoritms via mathematical modeling and to write computer programs,	x		
14	The skill to developed design of software systems at different complex levels,	x		
15	The credence of necessity of life-long learning and ability to apply the formation long-life learning.	x		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Prof. Dr. Dursun Irk

Signature: **Date:**