ESOGÜ Mathematics and Computer Sciences COURSE INFORMATION FORM

SEMESTER	Fall

COURSE CODE	821615001	COURSE NAME	Abstract Algebra

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
5	3	0	3	3	5	COMPULSORY (x) ELECTIVE ( )	Turkish

COURSE CATAGORY			
Mathematics	Computer		Social Science
x			

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID-TERM	1st Mid-Term	1	50
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	50

PREREQUIEITE(S)	None.
COURSE DESCRIPTION	Groups and Rings.
COURSE OBJECTIVES	Recognizing algebraic structures.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Having ability to writing a concise algebraic proof and thinking analytically.
COURSE OUTCOMES	Having general knowledge about the notion of the Abstract Algebra.
TEXTBOOK	Modern Algebra – An Introduction , (J.R.Durbin)
OTHER REFERENCES	A First Course in Abstract Algebra , (J.B.Fraleigh)
TOOLS AND EQUIPMENTS REQUIRED	None.

COURSE SYLLABUS	
WEEK	**TOPICS**
1	General Introduction to Abstract Algebra
2	Groups / Introduction
3	Groups / Subgroups and Cosets
4	Groups / Subgroups and Cosets
5	Groups / Group Homomorphisms
6	Groups / Group Homomorphisms
7	Groups / Generating New Groups
8	Midterm Exam
9	Groups / Generating New Groups
10	Rings / Introduction
11	Rings / Ring Types
12	Rings / Ring Types
13	Rings / Ideals and Quotient Rings
14	Rings / Ideals and Quotient Rings
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	The ability to apply knowledges of Mathematics and Computer Sciences,		**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 and Computer Sciences,		**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. Zekeriya ARVASİ

Signature: **Date:**