AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Group Theory I					
Course Code		MTK607		Couse Level	Third Cycle (Doctorate Degree)		
ECTS Credit	7.5	Workload	189 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		To give new developments in group theory. To work some specific groups.					
Course Content		Finite Groups, Solvable, nilpotent, commutative groups, Locally finite groups.					
Work Placement		N/A					
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Discussion, Individual Study, Problem Solving				
Name of Lecturer(s)							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	25
Final Examination	1	60
Assignment	2	15

Recommended or Required Reading

1	A course in the theory of the groups, Derek R. J. Robinson
2	An introduction to theory of the groups, Rotman J.J.

Week	Weekly Detailed Course Contents	
1	Theoretical	Commutative Groups
2	Theoretical	Torsion, Divisible, Torsion Free groups
3	Theoretical	Pure Subgroups
4	Theoretical	Finitely generated abelian groups
5	Theoretical	Soluble Groups
6	Theoretical	Nilpotent Groups
7	Theoretical	Hall Pi-Groups
8	Intermediate Exam	Midterm Exam
9	Theoretical	Permutation Groups
10	Theoretical	Representations
11	Theoretical	Fixed-point free automorphisms
12	Theoretical	Locally nilpotent groups
13	Theoretical	Locally solvable groups
14	Theoretical	Finiteness properties

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	3	84
Assignment	2	10	0	20
Midterm Examination	1	33	2	35
Final Examination	1	48	2	50
			Total Workload (Hours)	189
			[Total Workload (Hours) / 25*] = **ECTS**	7.5

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To think in abstract terms
2	To prove Sylow Theorems
3	To construct the new group from the old group

4	To construct infinite group from finite group
5	To classify the groups

Programme Outcomes *(Mathematics Doctorate)*

1	To be able to develop the current and advanced knowledge of mathematics domain to expertise level by an original idea or research, based on the level of its knowledge at the graduate level, and to be able to reach original definitions that will bring innovation to Mathematics.
2	To be able to comprehend the interdisciplinary interaction associated with Mathematics.
3	To be able to use and evaluate the new knowledge in the field of Mathematics with a systematic approach.
4	To be able to develop an idea, a method, a design or an application that will bring innovation to Mathematics, to use well known ideas, methods, designs or applications on a different research area, or to search, comprehend, design, adapt and apply an original subject matter.
5	To be able to criticize, analyze, synthesize and evaluate new and complex ideas.
6	To be able have high-level skills in research methods related to studies on Mathematics.
7	To be able to expand the frontiers knowledge in the field of Mathematics via generating or interpreting an original study, or publishing at least a scientific paper in national/international refereed journals.
8	To be capable of leadership in the positions that require the analyses of problems related to the field of Mathematics.
9	To be able to defend his/her original ideas among the experts in the discussion of math related issues, and to be able to communicate effectively to show his/her competence in the field of Mathematics.
10	To be able to contribute to the solution of the social, scientific, cultural and ethical problems related to the Mathematics, and to be able to support the development of social, scientific, cultural and ethical values.
11	To be able to have both oral and written communication using a foreign language.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	3	3	4	3	4
P2	3	3	4	3	4
P3	4	4	4	4	4
P4	3	3	4	3	4
P5	4	4	4	4	4
P6	4	4	4	4	4
P7	2	2	3	2	3
P8	4	4	4	4	4
P9	3	3	3	3	3
P10	2	2	3	2	3
P11	4	4	4	4	4