



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Group Theory							
Course Code		MTK568		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	200 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		To acquaint students with new developments in group theory. To study some specific groups							
Course Content		Fundamental concepts of group theory, Decompositions of groups, Soluble and Nilpotent 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	30
Final Examination	1	50
Assignment	1	20

Recommended or Required Reading

1	A course in the theory of the groups, Derek R. J. Robinson
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Week	Weekly Detailed Course Contents	
1	Theoretical	Groups, subgroups
2	Theoretical	Normal groups, divisible groups, homomorphism theorems
3	Theoretical	Commutators
4	Theoretical	Semidirect and Wreath products
5	Theoretical	Abelian groups
6	Theoretical	Free groups
7	Theoretical	Divisible abelian groups
8	Theoretical	Sylow Theorems
9	Intermediate Exam	Midterm
10	Theoretical	Classify small groups
11	Theoretical	Soluble groups
12	Theoretical	Nilpotent groups
13	Theoretical	Locally finite groups
14	Theoretical	Finite soluble groups
15	Theoretical	Hall Pi-groups
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	3	84
Assignment	1	20	2	22
Midterm Examination	1	40	2	42
Final Examination	1	50	2	52
Total Workload (Hours)				200
[Total Workload (Hours) / 25*] = ECTS				8

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to obtain abstract thinking
2	To be able to prove Sylow Theorems



3	To be able to construct the new group from the old group
4	To be able to construct infinite group from finite group
5	To be able to classify the groups

Programme Outcomes (Mathematics Master)

1	To be able to have an adequate theoretical and practical domain knowledge.
2	To be able to comprehend the interdisciplinary interaction associated with Mathematics.
3	To be able to use theoretical and practical domain knowledge gained in the field of Mathematics.
4	To be able to interpret knowledge from different disciplines integrating knowledge in the field of mathematics and produce new information.
5	To be able to define, analyse, model and to solve the problems by scientific methods in Mathematics.
6	To be able to conduct a math related specialistic study independently.
7	To be able to develop new strategic approaches to solve problems occurred in unforeseen and complex math-related applications by taking responsibility.
8	To be able to lead in situations that require solving problems related to the mathematics.
9	To be able to criticize his/her knowledge and skills acquired in the field mathematics.
10	To be able to transfer his/her ideas and suggestions for solutions to problems by supporting quantitative or qualitative data verbally and in writing.
11	To be able to communicate both orally and written in a foreign language.
12	To be able to use computer hardware and information technologies with software required by Mathematics.
13	To be able to contribute to the solution of the social, scientific, cultural and ethical problems related to the Mathematics, and being able to support the development of social, scientific, cultural and ethical values.
14	To be able to develop mathematics-related strategies, policies and operational plans, and to evaluate the results obtained within the framework of quality processes.
15	To be able to use his/her knowledge in the field of mathematics and practical problem-solving skills in interdisciplinary studies.

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	5	3	4	5	5
P2	5	5	4	4	5
P3	4	4	5	5	4
P4	5	4	5	5	5
P5	4	5	5	5	4
P6	3	3	3	3	3
P7	2	3	4	5	3
P11					4
P15	2	4	4	5	5

