AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title		Gamma Rings					
Course Code		MTK645		Couse Level		Third Cycle (Doctorate Degree)	
ECTS Credit	7.5	Workload	188 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		This course gives the fundamental concepts of gamma rings.					
Course Content		Definitions and examples of gamma rings, operator rings, ideals, homomorphisms and residue class gamma rings, prime, primitive and simple gamma rings, density theorem, semi-prime gamma rings with Min-r condition, simple gamma rings with Min-r condition, gamma rings with Min-r and Min-l conditions, prime radical, Levitzki Nil Radical, Jacobson Radical, relation among radicals of R, of L and of M.					
Work Placement		N/A					
Planned Learning Activities and Teaching Methods			Explanation (Presentation), 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	Gamma Rings, S.Kyuno

Week	Weekly Detailed Course Contents	
1	Theoretical	Definitions and examples of gamma rings
2	Theoretical	Operator rings
3	Theoretical	Ideals, homomorphisms, simple gamma rings with min-r condition,
4	Theoretical	Residue class gamma rings
5	Theoretical	Prime Gamma Rings
6	Theoretical	Primitive and simple gamma rings
7	Theoretical	Density theorem
8	Intermediate Exam	Midterm exam
9	Theoretical	Semi-prime gamma rings with Min-r condition
10	Theoretical	Gamma rings with Min-r and Min-l conditions
11	Theoretical	Prime radical
12	Theoretical	Levitzki Nil Radical
13	Theoretical	Jacobson Radical
14	Theoretical	Jacobson Radical

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	3	84
Assignment	2	0	20	40
Midterm Examination	1	25	2	27
Final Examination	1	35	2	37
			Total Workload (Hours)	188
			[Total Workload (Hours) / 25*] = **ECTS**	7.5
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To give fundamental properties of gamma rings
2	To give relations between gamma rings and other fields of algebra

3	To improve some theoretical approach on gamma rings
4	To improve outstunding on gamma rings
5	To relate gamma rings with some other algebraic fields

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	4	4	5	5	4
P2	3	5	4	4	5
P3	4	5	4	5	5
P4	3	4	4	4	4
P5	3	5	5	5	4
P6	4	5	5	5	5
P7	3	3	5	4	4
P9	3	4	5	4	5