AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Compact Riemann Surfaces								
Course Code	MTK628		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit	7.5	Workload	188 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The purpose of this course is to present the students with the subjects in the course content at the graduate level.								
Course Content	Manifolds, Riemann surfaces of analytic functions, topological classification of compact Riemann surfaces, geometry of Riemann surfaces, harmonic maps, Teichmüller spaces, Fenchel-Nielsen coordinates, geometric structures on Riemann surfaces, algebraic curves.								
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	20
Final Examination	1	60
Quiz	2	10
Assignment	1	10

Recommended or Required Reading	
1	Compact Riemann Surfaces, Jost J., Springer,1997.
2	Complex Functions, Jones G.A. and Singerman D., Cambridge university Press, 1987

Week	Weekly Detailed Course Contents	
1	Theoretical	Manifolds
2	Theoretical	Riemann surfaces of analytic functions
3	Theoretical	Topological classification of compact Riemann surfaces
4	Theoretical	Geometry of Riemann surfaces
5	Theoretical	Geometry of Riemann surfaces
6	Theoretical	Harmonic maps
7	Theoretical	Teichmüller spaces
8	Intermediate Exam	MIDTERM EXAM
9	Theoretical	Teichmüller spaces
10	Theoretical	Teichmüller spaces
11	Theoretical	Fenchel-Nielsen coordinates
12	Theoretical	Geometric structures on Riemann surfaces
13	Theoretical	Geometric structures on Riemann surfaces
14	Theoretical	Algebraic curves
15	Final Exam	FINAL EXAM

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	3	84
Assignment	1	0	18	18
Quiz	2	12	1	26
Midterm Examination	1	26	2	28

Final Examination	1	30	2	32
			Total Workload (Hours)	188
			[Total Workload (Hours) / 25*] = **ECTS**	7.5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Expressing the concept of a Riemann surface
2	Determining the Riemann surfaces of analytic functions
3	Expressing the topological properties of compact Riemann surfaces
4	Defining the concept of a harmonic map
5	Expressing the concept of a Teichmüller space
6	Expressing the geometric structures on Riemann surfaces

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	L6
P1	1	1	1	1	1	1
P3	3	3	3	3	3	3
P6	2	2	2	2	2	2
P7	1	1	1	1	1	1