ESOGÜ Mathematics and Computer Sciences Department
COURSE INFORMATION FORM

SEMESTER	Fall

COURSE CODE	821617014	COURSE NAME	Quadratic Geometries I

SEMESTER	WEEKLY COURSE PERIOD					COURSE OF	
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
7	2	2	0	3	5	COMPULSORY ( ) ELECTIVE (x)	Turkish

COURSE CATAGORY				
Mathematics	**Computer**			**Social Science**
X				

ASSESSMENT CRITERIA			
MID-TERM	**Evaluation Type**	**Quantity**	**%**
	Mid-Term	1	40
	Quiz		
	Homework		
	Project		
	Report		
	Others (………)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None.
COURSE DESCRIPTION	Möbius geometry, Euclidean circle and Möbius circle, angle, planar sections of the sphere, speer and zykel, model of cylinder, Blaschke transformation, isotrpic model, Laguerre geometry, Dual numbers, Dual numbers in Laguerre geometry, (D) group, isotropic angle
COURSE OBJECTIVES	To introduce Möbius and Laguerre geometry, study models and properties.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Students should be learn Möbius and Laguerre geometry. They should be learn to make use of libraries, papers and internet.
COURSE OUTCOMES	To analyze the data, evaluating, and ability to perform. Ability to apply knowledge of basic mathematics. Formulate and solve related problems. Ability to use computers, computer software, such modern methods, technique. Effective written and oral communication skills. Mathematical ability to understand the efficacy of national and global solutions. Understand the importance of lifelong learning and application skills.
TEXTBOOK	Vorlesung über Geometrie (Prof. Dr. Walter Benz)
OTHER REFERENCES	Books, papers and thesis implicating Möbius and Laguerre geometry.
TOOLS AND EQUIPMENTS REQUIRED	None.

<table>
<tr><td colspan="2">COURSE SYLLABUS</td></tr>
<tr><td>WEEK</td><td>TOPICS</td></tr>
<tr><td>1</td><td>Möbius geometry</td></tr>
<tr><td>2</td><td>Euclidean circle and Möbius circle</td></tr>
<tr><td>3</td><td>Angle</td></tr>
<tr><td>4</td><td>Planar sections of the sphere</td></tr>
<tr><td>5</td><td>Midterm</td></tr>
<tr><td>6</td><td>Speer and zykel</td></tr>
<tr><td>7</td><td>Model of zykel</td></tr>
<tr><td>8</td><td>Model of zykel</td></tr>
<tr><td>9</td><td>Model of cylinder</td></tr>
<tr><td>10</td><td>Midterm</td></tr>
<tr><td>11</td><td>Blaschke transformation</td></tr>
<tr><td>12</td><td>Isotrıpic model</td></tr>
<tr><td>13</td><td>Laguerre geometry</td></tr>
<tr><td>14,15</td><td>Dual numbers</td></tr>
<tr><td>16,17</td><td>Final</td></tr>
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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):

Signature: **Date:**