

QF01/0408-4.0E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Mathematics Department
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Study plan No.	2021/2022	University Specialization	Bachelor of Mathematics			
Course No.	0101231	Course name	Euclidean Geometry			
Credit Hours	3	Prerequisite/ Co-requisite	Foundations of Mathematics			
Course type	<input type="checkbox"/> MANDATORY UNIVERSITY REQUIREMENT	<input type="checkbox"/> UNIVERSITY ELECTIVE REQUIREMENTS	<input type="checkbox"/> FACULTY MANDATORY REQUIREMENT	<input type="checkbox"/> Support course family requirements	<input checked="" type="checkbox"/> Mandatory requirements	<input type="checkbox"/> Elective requirements
Teaching style	<input type="checkbox"/> Full online learning		<input type="checkbox"/> Blended learning		<input checked="" type="checkbox"/> Traditional learning	
Teaching model	<input type="checkbox"/> 1 Synchronous: 1 asynchronous		<input type="checkbox"/> 1 face to face : 1 asynchronous		<input checked="" type="checkbox"/> 2 Traditional	

Faculty member and study divisions' information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail	
Division number	Time	Place	Number of students	Teaching style	Approved model

Brief description

Postulates, The congruent concept, Isosceles triangles, Equilateral triangles, Other cases of congruent triangles, The parallel concept, The Euclidean parallel postulate, Parallelograms, Quadrilaterals, Similarity concept, The basic similarity theorems, Pythagoras theorem, The area postulate, Area of polygons, Equivalence of polygons, Circles.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc)	Introduction to Geometry, Hassan Al-Zoubi, Dar Alam Al-Thaqafa 2014.				
Supportive learning resources (Books, databases, periodicals, software, applications, others)	1.- Elementary Geometry, Daniel C. Alexander, GERALYN M. KOEBERLEIN, Fifth Edition, Brooks/Cole 2013 2.- Foundations of Geometry, Wylie, R. (2009), New York, Dover Publications, ISBN-10: 0486472140 3Foundations of Geometry, -Venema, G. 2 nd edition, UK, (2011), Pearson Education, ISBN-10: 0136020585.				
Supporting websites	<ul style="list-style-type: none"> http://www.intmath.com/Plane-analyticgeometry/Intro.php https://math.berkeley.edu/~wodzicki/160/Hilbert.pdf http://www.calvin.edu/~venema/geometrybook.html 				
The physical environment for teaching	<input checked="" type="checkbox"/> Class room	<input type="checkbox"/> labs	<input type="checkbox"/> Virtual educational platform	<input type="checkbox"/> Others	
Necessary equipment and					

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software	
Supporting people with special needs	
For technical support	

Course learning outcomes (S= Skills, C= Competences K= Knowledge.)

No.	Course learning outcomes	The associated program learning output code
Knowledge		
K1	Illustrate knowledge of the historical development of Euclidean geometry.	MK 1
K2	Compare between a postulate, a theorem and a definition	MK 1
K3	Practice the basic concepts of congruent polygons	MK 2
K4	Recognize the concepts of similar triangles.	MK 1
K5	State and solve different problems related to circles and areas of polygons.	MK 1
K6	Explain differences between similarity and equivalent polygons	MK 2
Skills		
S1	Build engineering models to solve various problems	MS2
S2	Measure the deep understanding of the concepts students learned in this course	MS4
	Use the basic theorems in the various topics of Euclidean geometry	MS1
Competences		
C1	Apply geometric models to solve given problems in various work sectors.	MC 1
C 2	Develop the individual's ability to communicate and interact with other mathematical courses	MC 1

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm exam	30%	30%	30%	30%
Participation / practical applications	0	0	20%	30%
Asynchronous interactive activities	30%	30%	0	0
Final exam	40%	40%	50%	40%

Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	learning style	Reference
1	Distance postulate, Ruler postulate, Betweenness, line segments Rays	Lecture	27-39
2	Line and plane in space, Angles, Triangles, Polygons	Lecture	39-69
3	Congruence concepts, congruence postulate, Isosceles triangles, Equilateral triangles,	Lecture	71-86

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4	The theorem of exterior angle, inequalities of triangles	Lecture	86-96
5	Other cases of congruent triangles	Lecture	96-117
6	The parallel concept, The Euclidean parallel postulate	Lecture	119-135
7	Parallelograms,	Lecture	135-143
8	Quadrilaterals	Lecture	143-150
9	Back to triangles Mid Exam	Lecture	150-169
10	Similar triangles and polygons, The basic similarity theorems	Lecture	171-202
11	Similarity of right triangles, Pythagoras theorem	Lecture	203-211
12	The area postulate, Area and equivalent polygons,	Lecture	213-244
13	Circles, Arcs of circles,	Lecture	246-279
14	Tangents of a circle,	Lecture	279-290
15	Four sides circular polygon, Intersecting of two circles	Lecture	291-306
16	Final Exam		