COMPUTER GRAPHICS

1	Course Title:	COMPUTER GRAPHICS	
2	Course Code:	BMB3013	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	3	
6	Semester:	5	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Dr. Ögr. Üyesi CEYDA NUR ÖZTÜRK	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:		
17	Website:		
18	Objective of the Course:	To gain ability to apply theoretical and practical information about computer graphics for modeling and solving engineering problems; To gain ability to determine, define, formalize and solve complex engineering problems which encountering in computer graphics with selecting proper analysis and modeling method;	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To gain ability to apply theoretical and practical information about computer graphics for modeling and solving engineering problems;
		2	To gain ability to determine, define, formulize and solve complex engineering problems which encountering in computer graphics with selecting proper analysis and modeling method;
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21	Course Content:		

Course Content:

Week	Theoretical	Practice

1	Introduction	
2	Graphics Hardware	
3	Graphics Software	
4	Basic Mathematics for Computer Graphics	
5	2D Translation	
6	3D Translation	
7	Projections	
8	Rendering	
9	Rendering	
10	Illuminations and shading	
11	Illuminations and shading	
12	Clipping	
13	Colors	
14	Virtual Reality and Computers Graphics	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	2.00	28.00
Homeworks	10	3.00	30.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	25.00	25.00
Others	0	0.00	0.00
Final Exams	1	25.00	25.00
Total Work Load			150.00
Total work load/ 30 hr			5.00
ECTS Credit of the Course			5.00

Recommended - Textbook: Interactive Computer Angel, Dave Shreiner, 2012, 6/E, Pearson Education, Inc.

OpenGL, Donald D. Hearn, M. Pauline Baker, Warren Carithers, 4/E, Pearson Education, Inc.

Recommended - Textbook: Procedural Elements for Computer Graphics, David F. Rogers, 1998, 2/E, McGraw-Hill

Recommended - Textbook: Computer Graphics Principles Sklar, J. D. Foley, S. K. Feiner, K. Akeley, 2014, 3/E, Addison-Wesley Professional (Pearson Education, Inc.)

Recommended - Textbook: Mathematical Elements for Computer Graphics, D.F. Rogers and J.A. Adams , 1990, 2/E, Mc-Graw Hill

Required - Software: OpenGL Graphics Library - The Industry's Foundation for High Performance Graphics, Khronous Group , 2014, OpenGL 4.5, Khronous Group

Recommended - Software: Microsoft Visual Studio .NET (C++ or Java) , Microsoft Co., 2008, Microsoft Co. [download]

23	Assesment

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00

Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24 ECTS / WORK LOAD TABLE

25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS

	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**