



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Synthetic Gemstones							
Course Code		KTT217		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The student is intended to teach the concept of synthetic gem stones.							
Course Content		The concept describes synthetic gem stones such as production methods and can be distinguished from natural							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Murat Hatipoglu, colored precious stones.
2	Murat Hatipoğlu, Ornamental Stones Mineralogy.

Week	Weekly Detailed Course Contents	
1	Theoretical	The concept of synthetic gem stone.
2	Theoretical	Synthetic gem stone production methods.
3	Theoretical	Verneuil flame fusion method (Verneuil Flame Fusion).
4	Theoretical	Verneuil flame fusion method (Verneuil Flame Fusion).
5	Theoretical	Enlargement of the solutions (Flux - Grown).
6	Theoretical	Grow from the melt (Melt - Grown).
7	Theoretical	Synthetic diamond production.
8	Theoretical	HPHT synthetic diamond production method.
9	Theoretical	CVD method in the production of synthetic diamonds.
10	Intermediate Exam	MIDTERM
11	Theoretical	Distinguishing between natural and synthetic diamonds.
12	Theoretical	Distinguishing between natural and synthetic ruby.
13	Theoretical	Distinguishing between natural and synthetic emeralds.
14	Theoretical	Synthetic pearls, cultured pearls and natural pearls discrimination methods.
15	Theoretical	Distinguishing between synthetic and natural amber.

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Assignment	1	0	5	5
Midterm Examination	1	12	2	14
Final Examination	1	12	2	14
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To learn the concept of synthetic gems.
2	Learning the synthetic gem stone production method.
3	Being able to distinguish synthetic gem stone and natural stone jewelry.



4	To learn synthetic diamond production methods.
5	Be able to distinguish natural diamond with synthetic diamond.

Programme Outcomes (*Jewellery and Jewellery Design*)

1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	-

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3
P1	4	4	4
P2	4	4	4
P3	5	5	5
P8	4	4	4
P11	5	5	5
P12	5	5	5
P17	2	2	2

