

SPECIAL CASTING METHODS

1	Course Title:	SPECIAL CASTING METHODS	
2	Course Code:	MAK6236	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	none	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. MUSTAFA SAFA YILMAZ	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	msafayilmaz@uludag.edu.tr 0224 2942637 U.U. Müh. Fak. Makine Müh. Böl. BURSA	
17	Website:		
18	Objective of the Course:	To introduce special casting methods. To comprehend the place and importance of special casting methods in industrial applications.	
19	Contribution of the Course to Professional Development:	Production techniques used in rare but valuable works in the sector will be learned.	
20	Learning Outcomes:		
		1	The student will have the knowledge to choose a particular casting method for a certain number of products and to produce the product.
		2	Have basic professional terminology and knowledge that Metallurgical and Materials Engineers will need in business life.
		3	Gains the ability to reveal the features that will be needed in the production and use of materials.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	plaster mold casting		
2	Investment casting (Shell and graded methods)		
3	Ceramic Mold casting		

4	Shell mold casting	
5	Casting with vacuum (V) process	
6	Full mold casting (Disappearing foam technique)	
7	Metal (permanent) mold casting	
8	Die Casting	
9	Low pressure casting, Compression casting	
10	Centrifugal casting	
11	vacuum filled casting	
12	Oriented and single crystal part castings	
13	The use of 3D printers in the foundry industry	
14	Other casting methods	

22	Textbooks, References and/or Other Materials:	<p>N.G. Kınıkoğlu Özel Döküm Yöntemleri ve Metalurjisi Ders Notları, YTÜ, 2000.</p> <p>Peter Beeley, Foundry Technology, Butterworth-Heinemann, 2001</p> <p>ASM, Metal Handbook, 9. baskı, Casting, 1991.</p>
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	2	14	3.00	42.00
Total		100.00		
Practicals/Labs		0	0.00	0.00
Self study and preparation		14	9.00	126.00
Homeworks		0	0.00	0.00
Projects		10.00	0.00	0.00
Field Studies		0	0.00	0.00
Course exams		1	3.00	3.00
Others		0	0.00	0.00
Final Exams		1	3.00	3.00
Total Work Load				177.00
Total work load/ 30 hr				5.80
ECTS Credit of the Course				6.00

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	0	0	5	4	0	0	0	2	0	3	0	0	0	0	0	0
ÖK2	0	0	5	4	0	0	0	2	0	3	0	0	0	0	0	0
ÖK3	0	0	5	4	0	0	0	2	0	3	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
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