

UNDERGRADUATE COURSE DETAILS

Course Title: Introduction to nanotechnology				Code : ÜDS1		Faculty or VS:		Programme:	
Education and Teaching Methods								Credits	
Lecture	Application	Lab.	Project/ Field Study	Homework	Other	Total	Credit T+A+L=Credit	ECTS	
28	—	—	—	—	47	75	2	3	
Semester			6		Language		Turkish		
Course Type	Basic Scientific ☐		Scientific ☐		Technical Elective ☒		Social Elective ☐		
Course Objectives	To teach the history of nanotechnology and its important as a multidisciplinary field, to teach nanomaterial production methods and characterization techniques and to cite the application fields of nanotechnology.								
Learning Outcomes and Competencies	You have knowledge of the historical development of nanotechnology and where the future technology can go. He has extensive knowledge about current techniques and methods applied in nanotechnology and their limitations. Describes the social and environmental dimensions of nanotechnology applications.								
Textbooks and/or References	1. <i>An Introduction to Nanoscience and Nanotechnology</i>, Alain Nouailhat. 2. <i>Nanoteknoloji Devrimini Anlamak</i>, Edward L. Wolf, Manasa Medikonda. 3. <i>Nanobilim ve Nanoteknoloji</i>, Prof. Dr. Fevzi Köksal. 4. <i>Pamuk Prenses ve Katrilyonlarca Cüce</i>, Hasan Tevfik.								
ASSESSMENT CRITERIA									
Theoretical Courses					Project Course and Graduation Study				
	If any, mark as (X)	Percent (%)		If any, mark as (X)	Percent (%)		If any, mark as (X)	Percent (%)	
Midterm Exams	x	40	Midterm Exams			Midterm Exams			
Quizzes			Midterm Controls			Midterm Controls			
Homework			Term Paper			Term Paper			
Term Paper, Project Reports, etc.			Oral Examination			Oral Examination			
Laboratory Work			Final Exam			Final Exam			
Final Exam	x	60	Other			Other			
Other									
Week	Subjects								
1	History of nanotechnology and its importance, Macro, micro and nano structures and their classification, Nano production methods, Chemical, physical and sol-gel methods, Characterization of nanomaterials, Structural analysis, Imaging analysis, Mechanical and thermal analysis, Particle size and pore distribution, The applications of nanotechnology, Medical and health applications, Applications in environment, food and agriculture, Applications in the field of materials, Final exam.								
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Instructor/s	Prof.Dr.Mehmet DOĞAN, Assoc. Prof. Dr. Yasemin TURHAN								
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