

Course Title-Course Code: İLT531 NANOTECHNOLOGY II.							Name Of The Programme: ADVANCED TECHNOLOGIES			
Semester	Teaching Methods							Credits		
	Lecture	Recite	Lab.	Field Study		Other	Total	Credit	ECTS Credit	
	42							3	7.5	
Language	Turkish									
Compulsory / Elective	Compulsory									
Prerequisites	Introduction to Nanotechnology I									
Course Contents	Nanostructures ,Nanomaterials Synthesis and Applications,, Synthesis and characterization of Carbon nanosphere ,Carbon Nanotube, Synthesis Carbon Nanotube ,Growth mechanisms of carbon nanotubes, Properties of Carbon Nanotubes, Carbon Nanotube-Based Nano-Objects, Applications of Carbon Nanotubes, Nanowires , Synthesis Nanowires, Characterizations of Nanowires, Applications of Carbon Nanowires, Core-Shell Structures,Synthesis and characterization of CdS/ CdSe, Nanoelectromechanical Systems and Applications, Industrial Applications									
Course Objectives	The aim of the course is to learning fundamentals of nanostructures.									
Learning Outcomes and Competences	The students who have taken this course can learn fundamentals of nanostructures.									
Textbook and /or References	<ol style="list-style-type: none"> 1. Handbook of Nanotechnology, Bharat Bhushan Spinger-Verlag Berlin Heidelberg New York 2004 2. Nanophysics and nanotechnology, Edward L. Wolf A John Wiley & Sons, Inc., Publication New York 2004 Nanostructured Materials Philippe Knauth, Joop Schoonman Kluwer Academic Publishers New York 2004 3. Nanoscale Materials in Chemistry, Kenneth J. Klabunde A John Wiley & Sons, Inc., Publication 2001 									
Assessment Criteria								<i>If any, mark as (X)</i>	Percent (%)	
	Midterm Exams							x	30	
	Quizzes									
	Homeworks							x	20	
	Projects									
	Term Paper									
	Laboratory Work									
	Other									
	Final Exam							x	50	
Instructors	Assist. Prof. Dr. Şükrü ÇAVDAR, cavdar@gazi.edu.tr									
Week	Subject									
1	Nanostructures									
2	Nanomaterials Synthesis and Applications									
3	Synthesis and characterization of Carbon nanosphere									
4	Carbon Nanotube, Synthesis Carbon Nanotube									

5	Growth mechanisms of carbon nanotubes, Properties of Carbon Nanotubes
6	Carbon Nanotube-Based Nano-Objects, Applications of Carbon Nanotubes
6	Nanowires
7	Midterm
8	Nanowires
9	Synthesis Nanowires
10	Characterizations of Nanowires, Applications of Carbon Nanowires
11	Core-Shell Structures
12	Synthesis and characterization of CdS/ CdSe
13	Nanoelectromechanical Systems and Applications
14	Industrial Applications