SYLLABUS

Science and Nanotechno			als Engineering	
Year/Semester	Methods of Education			Credit (ECTS)
	Lecture (h/week)	Project/	Quiz	
		Field Study	(#/semest	ter) 4
2021-2022/	3	1	2	7
Spring Semester		1		
Language	English			
Compulsory (C)	С			
/Elective (E)	N			
Prerequisites Course Contents	None			
Course Contents	Introduction to materials science and engineering.			
	Atomic structure and interatomic bonding. The structure and interatomic bonding.			
	The structure of crystalline solids. The structure of crystalline solids.			
	• Imperfections in solids.			
	 Mechanical properties of materials. Failure. 			
	 Properties and applications of materials. Overview of panetechnology and panematerials. 			
Course Objectives	Overview of nanotechnology and nanomaterials. Provide herica in metarials exists and nanotechnology away to be trust uses imporfections in			
	Provide basics in materials science and nanotechnology; crystal structures, imperfections in solid structures, machanical properties of materials failure mechanism, panetochnology, and			
	solid structures, mechanical properties of materials, failure mechanism, nanotechnology and nanomaterials.			
Learning Outcomes		activisan muomantias mians	atmiating and mu	accessing of farmous and not
and Competences	 Compute the relation between properties, micro-structure, and processing of ferrous and non ferrous materials. 			
	 Demonstrate ability to compose a paper (term project). 			
Textbook and /or	Course Book:	compose a paper (term p	noject).	
References		David G. Pathwisch, Mat	arial Sciance and I	Engineering Oth Edition S
References	 William D. Callister, David G. Rethwisch, Material Science and Engineering, 9th Edition, SI Version, Wiley, 2016. 			
	Other Books:			
	• william D. Callister, I	David G. Rethwisch, Fund	damentals of Mate	rials Science and
		David G. Rethwisch, Fundon, SI Version, Wiley, 20		rials Science and
	Engineering, 5th Edition	n, SI Version, Wiley, 20	16.	
		n, SI Version, Wiley, 20	16.	
Assessment Criteria	Engineering, 5 th Edition Donald R. Askeland, T	n, SI Version, Wiley, 20	16. ring of Materials, [*]	
Assessment Criteria	Engineering, 5 th Edition Donald R. Askeland, T	on, SI Version, Wiley, 20 The Science and Engineer If any, mark	16. ring of Materials, [*]	7 th Edition, Cengage
Assessment Criteria	Engineering, 5 th Editio Donald R. Askeland, The Learning, 2015.	If any, mark	16. ring of Materials, 7 as (X)	7 th Edition, Cengage Percentage (%)
Assessment Criteria	Engineering, 5 th Editio Donald R. Askeland, 7 Learning, 2015. Midterm Exams	If any, mark	16. ring of Materials, as (X)	Percentage (%)
Assessment Criteria	Engineering, 5 th Editio Donald R. Askeland, 7 Learning, 2015. Midterm Exams Quiz	If any, mark	16. ring of Materials, as (X)	Percentage (%)
Assessment Criteria	Engineering, 5 th Editio Donald R. Askeland, 7 Learning, 2015. Midterm Exams Quiz Homework	If any, mark	as (X) X) X)	Percentage (%) 30 10
Assessment Criteria	Engineering, 5 th Editio Donald R. Askeland, 7 Learning, 2015. Midterm Exams Quiz Homework Projects	If any, mark	as (X) X) X)	Percentage (%) 30 10
	Engineering, 5th Edition Donald R. Askeland, The Learning, 2015. Midterm Exams Quiz Homework Projects Laboratory work	If any, mark	16. ring of Materials, ' as (X) X) X) X) X)	Percentage (%) 30 10
Instructor	Engineering, 5th Edition Donald R. Askeland, The Learning, 2015. Midterm Exams Quiz Homework Projects Laboratory work Final Exam	If any, mark	16. ring of Materials, ' as (X) X) X) X) X)	Percentage (%) 30 10
Instructor Week 1	Engineering, 5th Editio Donald R. Askeland, The Learning, 2015. Midterm Exams Quiz Homework Projects Laboratory work Final Exam Assist. Prof. Dr. Hande YA Subject Introduction to materials s	If any, mark and Engineer and E	16. ring of Materials, ' as (X) X) X) X) X)	Percentage (%) 30 10
Instructor Week	Engineering, 5th Editio Donald R. Askeland, The Learning, 2015. Midterm Exams Quiz Homework Projects Laboratory work Final Exam Assist. Prof. Dr. Hande YA Subject Introduction to materials so	If any, mark and Engineer and Engineering.	16. ring of Materials, ' as (X) X) X) X) X)	Percentage (%) 30 10
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Instructor Week 1 2-3	Engineering, 5th Editio Donald R. Askeland, The Learning, 2015. Midterm Exams Quiz Homework Projects Laboratory work Final Exam Assist. Prof. Dr. Hande YA Subject Introduction to materials so Atomic structure and intermediate the structure of crystallin Imperfections in solids. Mechanical properties of the structure of crystallin Imperfections in solids.	If any, mark and Engineers and Engineering.	16. ring of Materials, ' as (X) X) X) X) X) X)	Percentage (%) 30 10 10 50
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Instructor Week 1 2-3 4 5-7	Engineering, 5th Editio Donald R. Askeland, The Learning, 2015. Midterm Exams Quiz Homework Projects Laboratory work Final Exam Assist. Prof. Dr. Hande YA Subject Introduction to materials so Atomic structure and intermediate The structure of crystallin Imperfections in solids. Mechanical properties of the deformation, hardness. Week 6: Quiz #1	If any, mark and Engineers and Engineering.	16. ring of Materials, ' as (X) X) X) X) X) X)	Percentage (%) 30 10 10 50
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