Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Nanoscience and Nanotechnology in Physics	FİZ401	7. Semester	3 + 0	3.0	7.0

Prerequisites	None

Language of Instruction	English
Course Level	Bacheclor's Degree (First Cycle)
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Assoc. Prof. Dr. Kıvanç SEL
Instructors	
Assistants	
Course Objectives	this course aims to give students knowledge about the advance of science and technology, applications and developments in nanoscience and nanotechnology, carbon in nanoscience and nanotechnology, clusturs in nanoscience and nanotechnology, measurement and analysis methods in nanoscience and nanotechnology
Course Content	Introduction,The advance of science and technology,The advance of science and technology The advance of science and technology,Applications and developments in nanoscience and nanotechnology,Applications and developments in nanoscience and nanotechnology,Applications and developments in nanoscience and nanotechnology
Course Learning Outcomes	1) Apply the basic science knowledge. 2) Describe the natural phenomena. 3) Relate the obtained information with technology and industry. 4) Identify the problems that must be solved in future 5) Relate the obtained knowledge with technology and industry

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Introduction	Lecture and recitation	
2. Week	The advance of science and technology	Lecture and recitation	
3. Week	The advance of science and technology	Lecture and recitation	
4. Week	The advance of science and technology	Lecture and	

Quick Access

Physics
- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

Course Information
- Course Information
- Weekly Course Content
- Resources
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

		recitation	
5. Week	Applications and developments in nanoscience and nanotechnology	Lecture, recitation and homework	
6. Week	Applications and developments in nanoscience and nanotechnology	Lecture and recitation	
7. Week	Applications and developments in nanoscience and nanotechnology	Lecture and recitation	
8. Week	Midterm exam	Written exam	
9. Week	Carbon in nanoscience and nanotechnology	Lecture and recitation	
10. Week	Carbon in nanoscience and nanotechnology	Lecture and recitation	
11. Week	Clusturs in nanoscience and nanotechnology	Lecture and recitation	
12. Week	Clusturs in nanoscience and nanotechnology	Lecture and recitation	
13. Week	Measurement and analysis methods in nanoscience and nanotechnology	Lecture, recitation and homework	
14. Week	Measurement and analysis methods in nanoscience and nanotechnology	Lecture and recitation	
15. Week	Measurement and analysis methods in nanoscience and nanotechnology	Lecture and recitation	
16. Week	Final exam	Written exam	

RESOURCES

Recommended Sources
‘Nanobilim ve Nanoteknoloji’, Şakir ERKOÇ, ODTÜ Geliştirme Vakfı Yayıncılık, 9944344289
Selected papers
‘Introduction to Nanoscience and Nanotechnology’ Chris Binns, Wiley, 0471776475 (ISBN-13: 978-0471776475), 2010

ASSESSMENT

Measurement and Evaluation Methods and Techniques
Written exam, homework and presentations. (60% Final, 30% midterm, 10% homework and presentation)

COURSE CATEGORY

Course Category	Percentage
Core Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
PY1	5	5	5	5	5	5
PY2	5	5	5	5	5	5
PY3	4	4	4	4	4	4
PY4	5	5	5	5	5	5
PY5	5	5	5	5	5	5
PY6	5	5	5	5	5	5
PY7	3	3	3	3	3	3

PY8	2	2	2	2	2	2
PY9	4	4	4	4	4	4
PY10	3	3	3	3	3	3
PY11	3	3	3	3	3	3
PY12	4	4	4	4	4	4
PY13	4	4	4	4	4	4
PY14	4	4	4	4	4	4
PY15	5	5	5	5	5	5

*DK = Course's Contrubution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

.

ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	14	3	42
Final Exam Preparation	1	28	28
Mid Term Exam Preparation	1	27	27
Further Study	14	3	42
Assignment 1	1	18	18
Final Exam	1	2	2
Mid Term Exam 1	1	2	2
Assignment 2	1	18	18
		Total Workload	179
		Total Workload / 25.5 (s)	7.02
		ECTS Credit of the Course	7