



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		History of Natural Sciences							
Course Code		ÇS310		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The main objective is for the students to learn which important events, have influenced the development of science and chemistry, and to analyse the methods of scientists at important events in history							
Course Content		Important developments in the history of science will be discussed. This includes important developments in Physics introduced by Galileo and Newton. Important events in chemistry will make up more than half of the course and will include studies of scientists such as Dalton, Lavoisier and Mendeleev.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion					
Name of Lecturer(s)		Lec. Mert SOYSAL							

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	History of Science and Technology
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Week	Weekly Detailed Course Contents	
1	Theoretical	The solar system: Copernicus, Tycho, Kepler
2	Theoretical	The first scientist: Galileo, Newton, Halley
3	Theoretical	Gases and steam: Boyle, Black, Watt
4	Theoretical	Chemistry: Cavendish, Priestley, Lavoisier
5	Theoretical	The atom: Dalton, Avogadro
6	Theoretical	Electrochemistry: Volta, Davy, Faraday
7	Theoretical	Light: Young, Maxwell, Einstein
8	Intermediate Exam	Midterm
9	Theoretical	Periyodik cetvel
10	Theoretical	The development of thermodynamics as a science
11	Theoretical	Cathode rays and the electron
12	Theoretical	x-rays, radioactivity and atomic structure
13	Theoretical	Emission spectra and the electronic structure of the atom
14	Theoretical	Bonding and molecular structure
15	Theoretical	Bonding and molecular structure

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Midterm Examination	1	2	1	3
Final Examination	1	4	1	5
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = ECTS				2

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	1. Be able to describe the important events in the development of science
2	2. Be able to analyse the important contributions of scientist in the development of science.
3	3. Be able to summarise in good scientific style the important contributions of a scientist in the development of science.



4	Scientific Development
5	The lives of famous scientists

**Programme Outcomes (Physiotherapy)**

1	To be able to recall the information of research methods and statistics so as to follow the developments, monitor and interpret scientific literature
2	To have the appropriate knowledge of basic sciences at the level of interest, to use specific medical terms and terminology of physical therapy
3	To be able to recall knowledge of the general structure and properties of musculoskeletal system and the joints and to evaluate the story of musculoskeletal diseases.
4	To be able to comprehend the methods of measurement of the range of motion of joints and to measure it.
5	To be able to implement a general evaluation of posture analysis and gait analysis.
6	To be able to recall the knowledge about general characteristics of musculoskeletal diseases, osteoporosis, osteoarthritis, rheumatoid arthritis, ankylosing spondylitis, especially rheumatic diseases, mechanical low back and neck pain, disc herniation, soft tissue disorders and to apply appropriate physiotherapy.
7	To be able to recall the knowledge and gain skills about the devices and the agents of heater used in physical therapy, indications and contraindications of using, and the necessary information about how to apply on patients.
8	To be able to recall the knowledge of the electromagnetic field.
9	To be able to recall what Elektroakunktur, Laser, Biofeedback, cervical and lumbar traction systems, pneumatic compression therapy are, and how to apply them, which one is applicable to patients.
10	To be able to recall what manipulation-mobilization is and which patients are suitable for this application.
11	To be able to recall what massage and hydrotherapy treatments are and which patients are suitable for these applications.
12	To be able to gain the professional and ethical awareness, apply gained knowledge and skills in real life situations and transfer gained knowledge to individuals around her/his environment, and improve behavior of life-long learning.
13	To gain knowledge about methods of diagnosis, protection and treatment of diseases
14	To be able to recall the knowledge and gain skills about physical therapy and rehabilitation methods to be applied to neurological disorders.
15	To be able to recall the knowledge and gain skills about physical therapy and rehabilitation methods to be applied to cardiopulmonary disorders.
16	To be able to recall the knowledge and gain skills about physical therapy and rehabilitation methods to be applied to pediatric patients.
17	To be able to gain knowledge about the effects of fitness and exercise on metabolism and responses of body systems to them.
18	To have knowledge about rehabilitation services
19	To become individuals who can do interdisciplinary team work, with a sense of social responsibility and entrepreneur.
20	To be able to recall the knowledge about Atatürk's Principles and the History of Turkish Revolution.
21	To be able to gain the knowledge and ability to become contemporary individuals who can use Turkish language grammar well and know a foreign language knowledge necessary to follow the developments in the profession.

**Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High**

	L1	L2	L3	L4	L5
P1	4	4	4	4	4

