Dentistry			
Bachelor	TR-NQF-HE: Level 6	QF-EHEA: First Cycle	EQF-LLL: Level 6

Course Introduction and Application Information

Course Code:	UNI266
Course Name:	Cultural History of Physics
Semester:	Spring
Course Credits:	ECTS: 5
Language of instruction:	Turkish
Course Condition:	
Does the Course Require Work Experience?:	No
Type of course:	University Elective
Course Level:	Bachelor / TR-NQF-HE:6. Master`s Degree / QF-EHEA:First Cycle / EQF-LLL:6. Master`s Degree
Mode of Delivery:	E-Learning
Course Coordinator:	Öğr. Gör. HATİCE GÜREL ÖZDEMİR
Course Lecturer(s):	Dr. Şeyma PARLATAN
Course Assistants:	

Course Objective and Content

Course Objectives:	In this course, it is aimed to give information about the experimental and theoretical development process in physics and basic sciences. At the end of the course, students will have an idea about the historical development process and important scientific developments.
Course Content:	Information about important developments and important people in physical science will be given from ancient times to the present.

Learning Outcomes

The students who have succeeded in this course;
1) To have knowledge of Physics in Ancient, Medieval and New Age.
2) To be informed about the lives of important scientists who contributed to Physics and their contributions to science.

Course Flow Plan

Week	Subject	Related Preparation
1)	Physics in Antiquity and the Middle Ages	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
2)	Physics in New Age Europe	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
3)	Isaac Newton and the Law of Universal Gravity	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
4)	Daniel Bernoulli and the Law of Hydrodynamic Pressure	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
5)	Michael Faraday and the Law of Electromagnetic Induction	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
6)	Rudolf Clausius and the Second Law of Thermodynamics	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
7)	Albert Einstein and the Special Theory of Relativity	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
8)	Nikola Tesla and Alternating Current	Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson
9)	From Amber to Electron: The History of Electricity	Course Book
10)	The Development of	Course Book

	Thermodynamics and Temperature Measuring Instruments	
11)	The Story of Air Pressure and Barometers	Course Book
12)	The Story of the Steam Engine and Steam Vehicles	Course Book
13)	Studies on Atomic Physics and Radioactivity	Course Book
14)	On the History of Measures and Units	Course Book

Sources

Course Notes / Textbooks:	Öğretim elemanı ders notları / Lecturer notes
References:	Dünyayı Değiştiren 5 Denklem- Michael Guillen – TÜBİTAK Popüler Bilim Kitapları Fiziğin Kültürel Tarihi – Zeki Tez Doruk Yayıncılık Işığın Öyküsü- Hüseyin Gazi Topdemir- TÜBİTAK Popüler Bilim Kitapları Hemen Her Şeyin Kısa Tarihi- Bill Bryson Boyner Yayınları Five Equations That Changed the World - Michael Guillen Fiziğin Kültürel Tarihi – Zeki Tez Işığın Öyküsü- Hüseyin Gazi Topdemir A Short History of Nearly Everything - Bill Bryson

Course - Program Learning Outcome Relationship

Course Learning Outcomes	**1**	**2**
Program Outcomes		
1) Has basic and up-to-date knowledge in the field of dentistry, follows scientific publications, and applies evidence-based data to his/her professional practice.		
2) Knows well and effectively uses devices, tools, and materials specific to diagnosis and treatment in the field of dentistry.		
3) Evaluates the knowledge in the field of dentistry critically, integrates it with the knowledge of disciplines in the field of health, uses it by analyzing and synthesizing it.		
4) Produces projects related to the field of dentistry, can work with other health disciplines, takes part		

Course Learning Outcomes	1	2
as a member of the research team and evaluates and reports the results obtained at a scientific level.		
5) Uses information that will contribute to the dentistry profession during practice, takes responsibility, and produces solutions in unforeseen situations.		
6) Shares, compares, and exchanges dental knowledge with professional colleagues in social and scientific environments in written, verbal, and visual forms.		
7) Within the framework of social, scientific, and ethical values including patient privacy, communicates with patients and their relatives, knows all the characteristics of the patient, and recommends the most appropriate treatment with a patient-centered approach.		
8) Follows technological developments, participates in national and international studies, and shares and presents own observations, experiences, and research to further advance dental practices.		
9) By adopting the principle of lifelong learning throughout the dentistry profession, follows current evidence-based dental knowledge and uses it during his professional practice.		
10) During dental practice, in cases such as abuse and addiction, performs the treatment by exhibiting the behaviors required by social ethics and legal rules, and collects and records the relevant data.		
11) Uses basic and current knowledge in the field of dentistry during professional practice for the benefit of society within the framework of national values and country realities.		
12) In natural disasters and emergency cases, takes the protective measures required by the dentistry profession; performs professional practices that benefit patients and society		
13) Generates ideas regarding health policy in dentistry, prioritizes individual and public health, and carries out preventive and therapeutic medical practices within the framework of scientific, ethical, and quality processes.		
14) Differentiates the signs and symptoms commonly encountered in the dentistry profession, makes a treatment plan and refers when necessary, and manages diseases and clinical situations regarding their urgency and patient priority.		
15) Can assume the leadership responsibility of the team he/she works for, manage it following scientific criteria, and support the professional development of the team.		

Course - Learning Outcome Relationship

No Effect	1 Lowest	2 Average	3 Highest

	Program Outcomes	Level of

		Contribution
1)	Has basic and up-to-date knowledge in the field of dentistry, follows scientific publications, and applies evidence-based data to his/her professional practice.	
2)	Knows well and effectively uses devices, tools, and materials specific to diagnosis and treatment in the field of dentistry.	
3)	Evaluates the knowledge in the field of dentistry critically, integrates it with the knowledge of disciplines in the field of health, uses it by analyzing and synthesizing it.	
4)	Produces projects related to the field of dentistry, can work with other health disciplines, takes part as a member of the research team and evaluates and reports the results obtained at a scientific level.	
5)	Uses information that will contribute to the dentistry profession during practice, takes responsibility, and produces solutions in unforeseen situations.	
6)	Shares, compares, and exchanges dental knowledge with professional colleagues in social and scientific environments in written, verbal, and visual forms.	
7)	Within the framework of social, scientific, and ethical values including patient privacy, communicates with patients and their relatives, knows all the characteristics of the patient, and recommends the most appropriate treatment with a patient-centered approach.	
8)	Follows technological developments, participates in national and international studies, and shares and presents own observations, experiences, and research to further advance dental practices.	
9)	By adopting the principle of lifelong learning throughout the dentistry profession, follows current evidence-based dental knowledge and uses it during his professional practice.	
10)	During dental practice, in cases such as abuse and addiction, performs the treatment by exhibiting the behaviors required by social ethics and legal rules, and collects and records the relevant data.	
11)	Uses basic and current knowledge in the field of dentistry during professional practice for the benefit of society within the framework of national values and country realities.	
12)	In natural disasters and emergency cases, takes the protective measures required by the dentistry profession; performs professional practices that benefit patients and society	
13)	Generates ideas regarding health policy in dentistry, prioritizes individual and public health, and carries out preventive and therapeutic medical practices within the framework of scientific, ethical, and quality processes.	
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	situations regarding their urgency and patient priority.	
15)	Can assume the leadership responsibility of the team he/she works for, manage it following scientific criteria, and support the professional development of the team.	

Assessment & Grading

Semester Requirements	Number of Activities	Level of Contribution
Homework Assignments	1	% 40
Final	1	% 60
total		**% 100**
PERCENTAGE OF SEMESTER WORK		% 40
PERCENTAGE OF FINAL WORK		% 60
total		**% 100**

Workload and ECTS Credit Calculation

Activities	Number of Activities	Workload
Course Hours	13	26
Study Hours Out of Class	13	104
Midterms	1	1
Final	1	1
Total Workload		**132**