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

Course Introduction and Application Information

Course Code:	UNI335
Course Name:	Advanced Extended Reality Projects
Semester:	Fall
Course Credits:	ECTS 5
Language of instruction:	English
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:	Dr. Öğr. Üy. SADİ KERİM DÜNDAR
Course Lecturer(s):	Sadi Kerim Dündar
Course Assistants:	

Course Objective and Content

Course Objectives:	Learning virtual reality, augmented reality and mixed reality technologies. Learning the usage areas of virtual reality technologies. Learning to project development processes and developing project ideas.
Course Content:	Examining the historical, development and use of virtual reality technologies with examples. Learning the production processes of a virtual reality project.

Learning Outcomes

The students who have succeeded in this course;

1) Learning about the use of virtual reality technologies in different sectors

2) Evaluation of XR projects for fields such as education, art, medicine, engineering

3) Learning the features that should be in a successful virtual reality project

Course Flow Plan

Week	Subject	Related Preparation
1)	Definition and history of AR, VR, XR Technologies	
2)	Social responsibility XR projects	
3)	Cultural Heritage and XR Technologies	
4)	XR Technologies in Education	
5)	Plastic Arts and XR Technologies	
6)	Performing Arts Arts and XR Technologies	
7)	Use of Xr Technologies for Business Development	
8)	Midterm Homework Submission	
9)	Medical Virtual Reality	
10)	Simulation Technologies and Virtual Reality	
11)	Augmented Reality Applications in Marketing	
12)	Virtual Reality in Cinema	
13)	Architectural Design XR Technologies	
14)	Final Assignment Submission	

Sources

Course Notes / Textbooks:	Extended Reality: A Comprehensive Book about the use of Augmented and Virtual Reality
References:	Extended Reality: A Comprehensive Book about the use of Augmented and Virtual Reality

Course - Program Learning Outcome Relationship

Course Learning Outcomes	1	2	3
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 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.			

Course Learning Outcomes	1	2	3
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.	
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.	

Assessment & Grading

Semester Requirements	Number of Activities	Level of Contribution
Midterms	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	14	42
Study Hours Out of Class	14	56
Homework Assignments	1	10
Midterms	1	10

Final	1	10
Total Workload		**128**