

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

Course Introduction and Application Information

Course Code:	DENT007		
Course Name:	Advanced Technologies in Dentistry		
Semester:	Spring		
Course Credits:	<div>ECTS</div> <div>2</div>		
Language of instruction:	English		
Course Condition:			
Does the Course Require Work Experience?:	No		
Type of course:	Departmental Elective		
Course Level:	<div> <div>Bachelor</div> <div>TR-NQF-HE:6. Master`s Degree</div> <div>QF-EHEA:First Cycle</div> <div>EQF-LLL:6. Master`s Degree</div> </div>		
Mode of Delivery:	E-Learning		
Course Coordinator:	Dr. Öğr. Üy. BEGÜM ASLAN		
Course Lecturer(s):	DR.ÖĞR.ÜY.BEGÜM ASLAN		
Course Assistants:			

Course Objective and Content

Course Objectives:	The purpose of this course is to provide information about recent technological advancements in the field of dentistry and their applications in recent years.
Course Content:	In this course, contemporary advances in the field of recording in dentistry, fabrication processes, and applied treatment tools will be discussed.

Learning Outcomes

The students who have succeeded in this course;

- 1) Has knowledge about technological developments in diagnostic tools
- 2) Knows 3D Digital Design Softwares in dentistry

Course Flow Plan

Week	Subject	Related Preparation
1)	Introduction to technological developments in dentistry field	-
2)	Technological Developments in Diagnostic Tools (Panoramic X-ray, CBCT)	
3)	Technological developments in diagnostic tools (Intraoral scanners, Dynamic occlusal record devices)	-
4)	Technological developments in diagnostic tools (Intraoral scanners, Dynamic occlusal record devices)	-
5)	3D Digital Design Softwares (Smile design, Cephalometric Design programs, Clincheck Software vb.)	
6)	3D Digital Design Softwares (Smile design, Cephalometric Design programs, Clincheck Software vb.)	-
7)	3D Digital Design Softwares (Smile design, Cephalometric Design programs, Clincheck Software vb.)	
8)	Midterm Exam	
9)	3D Digital Printers	-
10)	Developments in Clinical Application Field	-
11)	Developments in Clinical Application	
12)	Developments in Clinical Application	
13)	Overall review	

Sources

Course Notes / Textbooks:	Masri, R., & Driscoll, C. F. (2022, December 12). Clinical Applications of Digital Dental Technology. John Wiley & Sons. Cortes, A. R. G. (2022, April 26). Digital Dentistry. John Wiley & Sons. Masri, R., & Driscoll, C. F. (2022, December 12). Clinical Applications of Digital Dental
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	Technology. John Wiley & Sons.
References:	<p>Masri, R., & Driscoll, C. F. (2022, December 12). Clinical Applications of Digital Dental Technology. John Wiley & Sons.</p> <p>Cortes, A. R. G. (2022, April 26). Digital Dentistry. John Wiley & Sons.</p> <p>Masri, R., & Driscoll, C. F. (2022, December 12). Clinical Applications of Digital Dental Technology. John Wiley & Sons.</p>

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	2
2) Knows well and effectively uses devices, tools, and materials specific to diagnosis and treatment in the field of dentistry.	2	2
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.	1	1
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.	1	1
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.	1	2
Course Learning Outcomes		
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
2)	Knows well and effectively uses devices, tools, and materials specific to diagnosis and treatment in the field of dentistry.	2
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.	1
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.	1
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	Preparation for the	Spent for the	Completing the Activity	Workload
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	Activities	Activity	Activity Itself	Requirements	
Course Hours	26	1	1		52
Midterms	1	4	1		5
Final	1	4	1		5
Total Workload					62