

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

## Course Introduction and Application Information

Course Code:	DENT210		
Course Name:	Oral Microbiology - Immunology		
Semester:	Spring		
Course Credits:	<div>ECTS</div> <div>3</div>		
Language of instruction:	English		
Course Condition:			
Does the Course Require Work Experience?:	No		
Type of course:	Compulsory Courses		
Course Level:	<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>		
Mode of Delivery:	Face to face		
Course Coordinator:	Dr. Öğr. Üy. AYHAN MEHMETOĞLU		
Course Lecturer(s):	İbrahim Çağatay Acuner, Pınar Yurdakul Mesutoğlu, Ayhan Mehmetoğlu, Deniz Sertel Şelale		
Course Assistants:			

## Course Objective and Content

Course Objectives:	In this course, it is aimed to convey basic information about the oral microbiota, the role of microorganisms in dental plaque, dental caries, endodontic and periodontal diseases, the structure and components of the immune system and the immune response.
Course	This course includes Medical Immunology and Oral Microbiology.

## Learning Outcomes

The students who have succeeded in this course;

- 1) Describes the microenvironments of the mouth and oral microbiota
- 2) Explains the stages of dental plaque formation and microorganisms found in dental plaques
- 3) Defines microorganisms that play an active role in the formation of dental caries and the factors affecting its formation.
- 4) Explains the role of microorganisms in dental and gingival diseases.
- 5) Describes tissue and organs of the immune system
- 6) Defines the cells of the immune system and their function
- 7) Explains innate and adaptive immune response mechanisms

## Course Flow Plan

Week	Subject	Related Preparation
1)	Introduction to oral microbiology	-
2)	Oral Cavity and Microorganisms	-
3)	Isolation, Classification and Identification of Oral Bacteria	-
4)	Acquisition, Colonization and Communication of Oral Bacteria	-
5)	Dental Caries: Etiology and Pathogenesis	-
6)	Periodontal Diseases: Etiology and Diseases	-
7)	Midterm exam	-
8)	Endodontic Infections: Etiology and Pathogenesis	-
9)	Systemic Diseases and Oral Microbiota	-
10)	Introduction to Immunology, Structure and Components of the Immune System	-
11)	Innate Immune Response	-
11)	Innate Immune Response	-
12)	Adaptive Immune Response: The Cellular Immune System	-
13)	Adaptive Immune Response: Humoral Immune System	-
14)	Oral Cavity Immunology	-

## Sources

Course Notes / Textbooks:	Lamont RJ, Hajishengallis GN, Koo H, Jenkinson HF (eds). Oral Microbiology and Immunology, Third Edition. 2014; ASM Press. ISBN: 978-1-683-67290-6
References:	Abbas A, Lichtman AH, Pillai S (eds). Basic Immunology Functions and Disorders of the Immune System, 6th ed. 2019; Elseiver. ISBN: 9780323639095 Murray P, Rosenthal K, Pfaller M (eds). Medical microbiology, 9th ed. 2020; Elseiver. ISBN: 9780323674508

## Course - Program Learning Outcome Relationship

Course Learning Outcomes	1	2	3	4	5	6	7
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.	3	3	3	3	3	3	3
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.	3	3	3	3	3	3	3
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.	3	3	3	3	3	3	3
5) Uses information that will contribute to the dentistry profession during practice, takes responsibility, and produces solutions in unforeseen situations.	3	3	3	3	3	3	3
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.	1	2	3	4	5	6	7
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.	3
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.	3
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.	3
5)	Uses information that will contribute to the dentistry profession during practice, takes responsibility, and produces solutions in unforeseen situations.	3
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	Preparation for the Activity	Spent for the Activity Itself	Completing the Activity Requirements	Workload
Course Hours	26	1	1		52
Midterms	1	4	1		5
Final	1	4	1		5
Total Workload					62