

Course Title	Code	Semester	Theoretical (hours/week)	Practice (hours/week)	Laboratory (hours/week)	ECTS
Microbiology and Parasitology	HEM111	1. Year/1. Semester / Autumn	3	0	0	4
Prerequisites	None					
Language of Instruction	Turkish					
Course Type	Compulsory					
Learning and teaching techniques of the Course	Lecture, Discussion, Question & Answer, Observation, Team / Group Work, Experiment, Practice, Brain Storming, Other.					
Instructor(s)	Prof. Dr. Ayşen BAYRAM					
Goal	Morphological and cellular characteristics of microorganisms and parasites, reproductive, biochemical, disease characteristics and to teach you how to protect against infectious diseases.					
Learning Outcomes	<ol style="list-style-type: none"> <li>1. Properties of microorganisms and parasites to disease teaches. Diseases caused by microorganisms and teaches clinics.</li> <li>2. In the diagnosis of diseases caused microorganisms sampling techniques are taught.</li> <li>3. Interpretation of the results indicates Microbiology Lab sent.</li> <li>4. Microorganisms and parasitic infections will teach practical methods of protection</li> <li>5. Students will be working with clinical and disinfection of patient rooms used gives sufficient information about the sterilization of medical supplies.</li> <li>6. Person himself and his family environment teaches the necessity of good personal hygiene.</li> </ol>					
Content	The world of microorganisms, morphological descriptions, physical factors against behaviors, nutrition, reproductive and biochemical features, reviews and immunity in humans with the knowledge of specific bacteria and parasites that disease, clinics, treatment and prevention information is infections.					
References	<ol style="list-style-type: none"> <li>1. Klinik Mikrobiyoloji-Genel Bakteriyoloji. Prof. Dr. Fethi Serter, Prof. Dr. Hakkı Bilgehan</li> <li>2. Klinik Mikrobiyoloji (Özel Bakteriyoloji ve Bakteri Enfeksiyonları).Prof. Dr. Hakkı Bilgehan, 1994.</li> <li>3. Temel Mikrobiyoloji ve Bağışık Bilimi. Prof. Dr. Hakkı Bilgehan, 1989.</li> <li>4. Tıbbi Mikrobiyoloji (Çeviri). Prof.Dr.uvaffak Akman, Prof.Dr. Ekrem Gülmezoğlu, 1966/1982.</li> <li>5. Genel ve Pratik Mikrobiyoloji. Prof. Dr. Enver Tali Çetin, 1973.</li> <li>6. Bakteri Genetiği Teorik-Pratik. Prof. Dr. Muvaffak Akman, 1983.</li> <li>7. Genel Tıp Mikrobiyolojisi ve Enfeksiyon Hastalıkları Bilimi. Prof. Dr. Ekrem Kadri Unat, 1983.</li> <li>8. Temel Mikrobiyoloji. Prof Dr. Mustafa Arda, 1997.</li> <li>9. Genel Mikrobiyoloji ve İmmunoloji. Prof. Dr. Erol Akan, 1992.</li> <li>10. Tıbbi Mikrobiyoloji. Prof. Dr. Erol Akan, 1993.</li> <li>11. Klinik Mikrobiyoloji. Prof. Dr. Fethi Serter, Prof. Dr. Hakkı Bilgehan, 1994.</li> <li>12. Özel Bakteriyoloji ve Bakteri Enfeksiyonları. Prof. Dr. Hakkı Bilgehan, 1986.</li> <li>13. Klinik Viroloji. Prof. Dr. Fethi Serter, Prof. Dr. Demir Serter, 1986.</li> <li>14. Bağışıklığın Temelleri. Prof. Dr. Ekrem Gülmezoğlu,1983.</li> <li>15. Temel İmmunoloji. Prof. Dr. Yusuf Özbal, 1994.</li> <li>16. Klinik Parazitoloji. Prof. Dr. Ahmet Merdivenci, 1984.</li> <li>17. Tıbbi Parazitoloji. Prof. Dr. (Enver Tali Çetin, Özdem Anğ, Kurtuluş Töreci),1983.</li> <li>18. Tıp Mikolojisi. Doç. Dr. Emel Tümbay, 1983.</li> </ol>					

**Course Outline Weekly:**

Weeks	Topics
1. Week	Introduction to microbiology, <ul style="list-style-type: none"><li>- History of Microbiology</li><li>- Classification of Microorganisms</li></ul>
2. Week	Bacteria, viruses, fungi and parasites, general features,
3. Week	The body's normal microbial flora
4. Week	Receipt of clinical samples, transporting and storing <ul style="list-style-type: none"><li>- Selection of the samples taken from the patients and</li><li>- Relocation of the samples to the laboratory</li><li>- Blood Samples</li><li>- Sterile Body Fluid Samples</li><li>- Respiratory Tract Samples</li><li>- Ear Samples</li><li>- Eye Samples</li><li>- Genital System Samples</li><li>- Gastrointestinal System Samples</li><li>- Texture, Wound and Abscess Samples</li><li>- Urinary Tract Samples</li><li>- Microbiological Samples for testing will not be accepted</li></ul>
5. Week	Sterilization, antiseptics and disinfection, <ul style="list-style-type: none"><li>- Fundamental Principles and Definitions</li><li>- Disinfectants and Disinfection Methods Selection Principles</li><li>- Antiseptic Agents and Uses</li><li>- Sterilization Methods</li><li>- Sterilization and Monitoring Stages</li></ul>
6. Week	<ul style="list-style-type: none"><li>- Direct Microbiological Tests</li><li>- Macroscopic / Microscopic Examination</li><li>- Culture and Isolation of the pathogen</li><li>- Used in immunoserological tests</li><li>- Molecular Methods</li><li>- Indirect Microbiological Tests</li><li>- Immunoserological Tests</li></ul>
7. Week	Antimicrobial drugs <ul style="list-style-type: none"><li>- Antimicrobial Drugs and Mechanisms</li><li>- Antibacterial Drugs</li><li>- Antimycobacterial Drugs</li><li>- Antiviral Drugs</li><li>- Antiparasitic Drugs</li><li>- Antifungal Drugs</li><li>- Resistance to Antibacterial Drug Development</li><li>- Antimicrobial Susceptibility Testing</li></ul>
8. Week	<b>I. MIDTERM EXAM,</b> Host parasite relationship, the host and microorganisms of the Factors Basic Immunology and Immune <ul style="list-style-type: none"><li>- Definitions and General Properties</li><li>- Key Elements of the Immune System</li><li>- Natural and Acquired Immune</li><li>- Immunological Terms</li></ul>
9. Week	Humoral, cellular immunity and Hypersensitivity Reactions Vaccines and Immunization Practices <ul style="list-style-type: none"><li>- Immunogenic, antigen, epitope</li><li>- Antibodies (immunoglobulins)</li><li>- Humoral Immune Response Types and Stages</li><li>- Antigen Antibody Reactions</li><li>- Complement</li><li>- Immunological Terms</li><li>- T cells to recognize antigens</li><li>- Maturation of T lymphocytes</li><li>- Type-I Hypersensitivity Reaction</li></ul>

	<ul style="list-style-type: none"> <li>- Type-II Hypersensitivity Reaction</li> <li>- Type III hypersensitivity reaction</li> <li>- Type-IV hypersensitivity reaction</li> <li>- Active Immunization</li> <li>- Bacterial and Viral Vaccines</li> <li>- Vaccine Interactions</li> <li>- Vaccination Schedule</li> <li>- Childhood Vaccine Applications</li> <li>- Adult Vaccine Applications</li> <li>- Travel Case Vaccine Applications</li> <li>- Passive Immunization</li> </ul>
10. Week	Airborne Infections and Factors Food and Waterborne Infections and Factors
11. Week	Sexually Transmitted Diseases and Factors Wound and skin Infections and Factors
12. Week	Arthropod-borne infections and Factors Blood and Blood Components Transfusion Transmitted Infections
13.	Biological Warfare Agents
14. Week	Hospital Infections - Hospital Infections: Definitions and Epidemiology - Operation of the Infection Control Committee - Surveillance for infection control
15.	- Isolation Precautions - Hand Hygiene - Infection Control in Health Care Workers - Rational Antibiotic Use in Hospitals - Hospital Waste Management in
16. Week	<b>FINAL EXAM</b>

### Evaluation System

Mid-Term Studies	Number	Contribution
Midterm exams	1	%50
Quiz		
Laboratory		
Practice		
Field Study		
Course Internship (If There Is)		
Homework's		
Presentation and Seminar		
Project		
Other evaluation methods		
<b>Total Time To Activities For Midterm</b>		%50
<b>Final works</b>		
Final	1	%50
Homework		
Practice		
Laboratory		
<b>Total Time To Activities For Midterm</b>		%50
Contribution Of Midterm Studies On Grades		%50
Contribution Of Final Exam On Grades		%50
<b>Total</b>		100

**ECTS (Student Work Load Table)**

<b>Activities</b>	<b>Number</b>	<b>Duration</b>	<b>Total Work Load</b>
Course Duration (X14 )	14	3	42
Laboratory			
Practice			
Field Study			
Study Time Of Outside Of Class (Pre-Study, Practice, Etc.)	14	2	28
Presentations (Video shoot/Poster preparation/Oral presentation, Etc.)			
Seminars	1	10	10
Project			
Case study			
Role playing, Dramatization			
Writing articles, Critique			
Time To Prepare For Midterm Exam	2	6	12
Final Exam Preparation Time	1	8	8
<b>Total Work Load ( hour) / 25(s)</b>	100 / 25=4		
<b>ECTS</b>	4		

The relationship between learning outcomes and the program qualifications of the courses

Program Qualifications	Learning outcomes					
	L.O.1	L.O.2	L.O.3	L.O.4	L.O.5	L.O.6
1. Competent and has the capabilities to fulfill their occupational duties.	5	5	5			
2. Knows the theories and models that form the basis of Professional practice.					5	
3. Has the general knowledge required to be both an individual and a member of the occupation.	3	4	3			
4. Carries out nursing practice based on the principles and standards.				5		5
5. Meets the health-care needs of the individuals, families and the society with a holistic approach.						
6. Makes use of effective communication.						
7. Utilizes information and care technologies in professional practice and research.						
8. Uses scientific principles and techniques in Nursing practice.			5			
9. Follows the latest advances and communicates with colleagues in a foreign language.						
10. Behaves according with the professional ethics and values.						
11. Takes the related legislation and regulations into account in Nursing practice.						
12. Follows the politics and regulations affecting the Nursing profession.						
13. Uses the learning-teaching and management processes in Nursing practice.						
14. Uses the life-long learning, problem-solving and critical thinking abilities.						
15. With a sense of social responsibility takes part in studies, projects and some other activities with other team members and other disciplines.						
16. Joins in activities that can contribute to professional development.						
17. Sets as a model for colleagues and the society with their professional identity.						
18. Protects the basic values and social rights.						
<b>Contribution to the level of proficiency: 1. Lowest, 2. Low / Medium, 3. Average, 4. High, 5. Excellent</b>						