**Medical Microbiology Courses – ECTS Credits**

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|  | | | | | |
| Code | Course Name | ECTS | T+U+L | T/S | Language |
| Fall Semester | | | | | |
| 521503302 | [STERILIZATION AND DISINFECTION APPLICATIONS](#DERS521501302) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521503303 | [PRODUCTION ENVIRONMENTS OF MICROORGANISMS](#DERS521501303) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521503304 | [FINE STRUCTURE, PHYSIOLOGY AND GENETICS IN BACTERIA](#DERS521501304) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521503305 | [ORGANIZATION OF CLINICAL MICROBIOLOGY LABORATORY](#DERS521501305) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521503306 | [ANTIMICROBIAL CHEMOTHERAPY](#DERS521501306) | 7.5 | 3+0+0 | COMPULSORY | TURKISH |
| 521505307 | [IMMUNODEFICIENT HOST INFECTIONS](#D521501307) | 5.0 | 2+1+0 | ELECTIVE | TURKISH |
| 521505308 | [HOSPITAL INFECTIONS](#DERS521501308) | 5.0 | 2+1+0 | ELECTIVE | TURKISH |
| 521503309 | [GENERAL PARASITOLOGY](#DERS521501309) | 7.5 | 3+0+0 | ELECTIVE | TURKISH |
| 521505310 | [TREATMENT OF PARASITIC DISEASES](#DERS521501310) | 5.0 | 2+0+0 | ELECTIVE | TURKISH |
| 521503312 | [TISSUE PROTOZOONS](#DERS521501312) | 7.5 | 3+0+0 | ELECTIVE | TURKISH |
| 521503313 | [HELMINTH INFECTIONS](#DERS521501313) | 7.5 | 3+0+0 | ELECTIVE | TURKISH |
| 521503315 | [HOST-PARASITE RELATIONSHIP](#DERS521501315) | 7.5 | 3+0+0 | ELECTIVE | TURKISH |
| 521501600 | [SPECIALIZED](file:///C:\Users\User\Desktop\ECTS%20BİLGİ%20KILAVUZU%2020.08.2014\ECTS%20BİLGİ%20KILAVUZU%20-%20Kopya\TIBBİ%20GENETİK%20AKTS\TIBBİ%20GENETİK%20%20YL%20TR.docx#DERS522401203) FIELD COURSE | 5 | 3+0+0 | COMPULSORY | TURKISH |
|  | |  |  |  |  |
| Spring Term | | | | | |
| 521504303 | [SPECIAL BACTERIOLOGY](#DERS521502303) | 7.5 | 2+2+0 | COMPULSORY | TURKISH |
| 521504304 | [CLINICAL IMMUNOLOGY](#DERS521502304) | 7.5 | 3+0+0 | ELECTIVE | TURKISH |
| 521504305 | [MYCOLOGY](#DERS521502305) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521504306 | [MOLECULAR DIAGNOSTIC METHODS USED IN MICROBIOLOGY](#DERS521502306) | 7.5 | 1+4+0 | ELECTIVE | TURKISH |
| 521504307 | [IMMUNOLOGICAL TECHNIQUES](#DERS521502307) | 7.5 | 1+4+0 | ELECTIVE | TURKISH |
| 521504308 | [ADVANCED VIROLOGY](#DERS521502308) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521504309 | [CLINICAL VIROLOGY](#DERS521502309) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521506310 | [EPIDEMIOLOGY OF PARASITIC DISEASES](#DERS521502310) | 5.0 | 2+0+0 | ELECTIVE | TURKISH |
| 521504311 | [UNUSUAL PARASITIC INFECTIONS](#DERS521502311) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521504312 | [PARASITOLOGICAL TECHNIQUES](#DERS521502312) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521504313 | [INFESTATIONS AND VECTORS](#DERS521502313) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521504314 | [OPPORTUNISTIC PARASITIC DISEASES](#DERS521502314) | 7.5 | 2+2+0 | ELECTIVE | TURKISH |
| 521506315 | [IMMUNITY IN PARASITIC DISEASES](#DERS521502315) | 5.0 | 2+0+0 | ELECTIVE | TURKISH |
| 521504316 | [ADVANCED IMMUNOLOGY](#DERS521502316) | 7.5 | 3+0+0 | ELECTIVE | TURKISH |
| 521501600 | [SPECIALIZED](file:///C:\Users\User\Desktop\ECTS%20BİLGİ%20KILAVUZU%2020.08.2014\ECTS%20BİLGİ%20KILAVUZU%20-%20Kopya\TIBBİ%20GENETİK%20AKTS\TIBBİ%20GENETİK%20%20YL%20TR.docx#DERS522401203) FIELD COURSE | 5 | 3+0+0 | COMPULSORY | TURKISH |
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| **COURSE CODE:** **521503302** | | **DEPARTMENT:** **MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: STERILIZATION AND DISINFECTION APPLICATIONS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **PROF. DR. YASEMİN ÖZ** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | | | **WEEKLY CLASS HOURS** | | | | **YOUR COURSE** | | | | |
| **Theoretical** | | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | | |
| Spring ****  Fall **X** | | | 2 | | 2 |  | 3 | 7.5 | MANDATORY **** ELECTIVE  **X** | | |
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| **EVALUATION CRITERIA** | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Type of activity** | | | | **Number** | **Percentage (%)** | |
| Midterm Exam | | | | **1** | **40** | |
| Quiz | | | |  |  | |
| Homework | | | |  |  | |
| Project | | | |  |  | |
| Oral examination | | | |  |  | |
| Other (………) | | | |  |  | |
| **Final Exam** | | | | | **60** | |
| **PREREQUISITE(S)** | | | | |  | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The content of the course is as follows: The importance of sterilization and disinfection, Sterilization and disinfection methods, The importance of choosing the right time, place and method, Hand washing, Disinfection and sterilization applications in daily life-1, Disinfection and sterilization applications in daily life-2, Water disinfection, Disinfection and sterilization applications in laboratory environments, Sterilization and disinfection of medical devices and instruments, Biosecurity, Safe transportation and disposal of medical waste, Storage of serum and vaccines, Disinfection policies in hospitals, Sterilization and disinfection control. | | | | | | |
| **COURSE AIMS** | | | | | The aim of the course is to provide knowledge and skills to apply conscious sterilization and disinfection in daily life and hospital environments. | | | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | | | The aim of the course is to provide the student with the ability to determine the correct time, place and method of disinfection and sterilization applications. | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Define sterilization and disinfection  Distinguish between sterilization/disinfection  Determine the areas of use of sterilization and disinfection  Count the methods applied for sterilization and disinfection  Explain sterilization control and methods  Define medical waste and explain medical waste management | | | | | | |
| **TEXTBOOK** | | | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | | | |
| **OTHER REFERENCES** | | | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020. Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | | | |  | | | | | | |
|  | **WEEKLY PLAN OF THE COURSE** | | | | | | | | |
| **WEEK** | **HISTORY** | | **TOPICS COVERED** | | | | | | |
| 1 |  | | Introduction and history | | | | | | |
| 2 |  | | Definition of sterilization and disinfection | | | | | | |
| 3 |  | | Sterilization methods | | | | | | |
| 4 |  | | Physical sterilization methods | | | | | | |
| 5 |  | | Chemical sterilants | | | | | | |
| 6 |  | | Rays | | | | | | |
| 7 |  | | Midterm Exam | | | | | | |
| 8 |  | | Sterilization control | | | | | | |
| 9 |  | | Disinfection methods | | | | | | |
| 10 |  | | Commonly used disinfectants | | | | | | |
| 11 |  | | Antisepsis and antiseptic substances | | | | | | |
| 12 |  | | Final Exam | | | | | | |
| 13 |  | |  | | | | | | |
| 14 |  | |  | | | | | | |
| 15 |  | |  | | | | | | |
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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  | **X** |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **PROF. DR. YASEMİN ÖZ** | **History**  28.02.2025 |

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| **COURSE CODE:** **521503303** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: PRODUCTION ENVIRONMENTS OF MICROORGANISMS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **PROF. DR. YASEMİN ÖZ** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Fall **X** | 2 | 2 |  | 3 | 7.5 | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | The importance of the production of microorganisms, tissue cultures, embryonated eggs, experimental animals, preparation of media, simple media, enriched media, selective media, differential media, specific media, rules to be followed in the preparation of media, quality control of media, storage of media, culture and cultivation techniques. | | | | |
| **COURSE AIMS** | | | The main objective of the course is to understand the purposes of producing microorganisms and to obtain information about the conditions required for the production of microorganisms. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Understanding the importance of microorganism cultivation in the diagnosis of infectious diseases | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Can explain the reasons for the production of microorganisms  Can list the production environments  Can list the rules for preparing media  Can explain the techniques for planting media  Can list the quality control methods of media | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.  Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Rules for collecting clinical samples |
| 2 |  | Substances necessary for microorganism growth |
| 3 |  | Environmental factors affecting microorganism growth |
| 4 |  | Microorganism Production Environments |
| 5 |  | General use media |
| 6 |  | Special media |
| 7 |  | Midterm Exam |
| 8 |  | Substances used in the preparation of media |
| 9 |  | Preparation and storage of media |
| 10 |  | Planting techniques |
| 11 |  | Introduction of media commonly used in routine |
| 12 |  | Evaluation of reproduction in media |
| 13 |  | Final exam |
| 14 |  |  |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  | **X** |  |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Prof. Dr. YASEMİN ÖZ**  **Signature** | **History**  8.02.2025 |

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| **COURSE CODE:** | **521503304** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: FINE STRUCTURE, PHYSIOLOGY AND GENETICS IN BACTERIA** | | | | | | |
| **TEACHING THE COURSE**  **ELEMENT:**  **Doç.Dr. FATMA ERDEM** | | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
|  |  | **X** |  |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | | **YOUR COURSE** | | |
| **Theoretical** | **APPLICATION** | | **Lab** | **Credit** | **ECTS** | **TYPE** |
| Spring  Fall X | 2 | 2 | | 0 | 3 | 7.5 | MANDATORY ELECTIVE **X** |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | **Number** | | **Percentage (%)** |
| Midterm Exam | | **1** | | **40** |
| Quiz | |  | |  |
| Homework | |  | |  |
| Project | |  | |  |
| Oral examination | |  | |  |
| Other (………) | |  | |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | None | | | | |
| **SHORT COURSE CONTENT** | | | Microscope, types and uses, Bacterial morphology, Bacterial genetics, Bacterial proliferation, Structure and function of bacterial cytoplasm, Structure of cytoplasmic membrane in bacteria, Function of cytoplasmic membrane in bacteria,Cell wall structure in bacteria,synthesis, Cell wall structure in bacteria, synthesis, Function of the cell wall in bacteria, Fimbria, flagella, capsule and glycocalyx, Spore formation, Reproduction of bacteria, Respiration in bacteria. | | | | |
| **COURSE AIMS** | | | To teach basic topics related to bacterial structures, bacterial physiology and genetics in order to understand the diagnosis and pathogenesis of infectious diseases. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Learning the morphology, ultrastructure, physiology and genetics of bacteria | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | List the features of simple light microscopes  Explain the basic rules of using a microscope  List the basic structural features of bacteria  Explain the functions of the cellular structures of bacteria  List the physiological features of bacteria  Explain the ways of genetic material transfer in bacteria | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.  Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Bacterial morphology |
| 2 |  | Bacterial cell structure |
| 3 |  | Ultrastructure and functions of bacterial cell walls |
| 4 |  | Ultrastructure and functions of the inner membrane in bacteria |
| 5 |  | Bacterial cytoplasm |
| 6 |  | Ultrastructure and functions of flagella and fimbriae in bacteria |
| 7 |  | Capsule and spore formation in bacteria |
| 8 |  | Midterm Exam |
| 9 |  | Bacterial physiology |
| 10 |  | Bacterial metabolism |
| 11 |  | Reproductive requirements in bacteria |
| 12 |  | Multiplication in bacteria |
| 13 |  | Genetic structure in bacteria |
| 14 |  | Genetic transfer mechanisms in bacteria |
| 15 |  | Bacterial virulence factors |
| 16 |  | Final exam |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  |  | **X** |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Course Instructor:**  **Doç.Dr. FATMA ERDEM**  **Signature** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521503305** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: ORGANIZATION OF CLINICAL MICROBIOLOGY LABORATORY** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Yasemin OZ** |  | |  | x |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **x** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | | **TYPE** | |
| Spring ****  Fall **x** | 2 | 2 | - | 3 | 7.5 | | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | | |
| **SEMESTER ACTIVITIES** | | **Type of activity** | | | | **Number** | | **Percentage (%)** |
| Midterm Exam | | | | **1** | | **40** |
| Quiz | | | |  | |  |
| Homework | | | |  | |  |
| Project | | | |  | |  |
| Oral examination | | | |  | |  |
| Other (………) | | | |  | |  |
| **Final Exam** | | | | **60** | |  |
| **PREREQUISITE(S)** | |  | | | | | | |
| **SHORT COURSE CONTENT** | | Functions and responsibilities of clinical microbiology laboratories, structuring the physical space in clinical microbiology laboratories in accordance with the purpose, supply and purchase of laboratory devices and equipment, placement, functions and maintenance of laboratory devices and equipment, determination of employee workload, efficient workload distribution, biosafety, biosafety practices, standardization of Class 1,2,3 safety cabinets, technical specifications of devices and consumables used in the laboratory, storage of laboratory materials, entry and exit tracking, reporting, delivery and storage of data. | | | | | | |
| **COURSE AIMS** | | Learning how to structure the clinical microbiology laboratory in accordance with its purpose, how to obtain, use and maintain appropriate devices and equipment, and how to acquire skills to increase efficiency. | | | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | The main objective of the course is to teach the structuring of the appropriate physical environment in clinical microbiology laboratories according to workload requirements, workforce planning, quality control and management. | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | Can list the duties and responsibilities of a clinical microbiology laboratory  Can state important rules for laboratory organization  Can list basic requirements for a clinical microbiology laboratory  Can explain the biosafety rules that must be followed and applied in clinical microbiology laboratories | | | | | | |
| **TEXTBOOK** | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | | | |
| **OTHER REFERENCES** | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.  Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022 | | | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | |  | | | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Definition and introduction of microbiology laboratory |
| 2 |  | Equipment and materials used in microbiology laboratories |
| 3 |  | Best approaches to laboratory design |
| 4 |  | Units of clinical microbiology laboratory |
| 5 |  | Clinical microbiology laboratory areas |
| 6 |  | Midterm exam |
| 7 |  | Safety in the microbiology laboratory |
| 8 |  | Biosafety cabinets |
| 9 |  | Quality control in microbiology laboratory |
| 10 |  | Waste management |
| 11 |  | Final exam |
| 12 |  |  |
| 13 |  |  |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  | **X** |  |
| LO 3 | Search and interpret scientific literature |  | **X** |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems | **X** |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  |  | **X** |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Prof. Dr. Yasemin OZ**  **Signature** | **History**  28.02.2025 |

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| **COURSE CODE:** **521503306** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: ANTIMICROBIAL CHEMOTHERAPY** | | | | | |
| **TEACHING THE COURSE**  **ELEMENT:**  **Prof. Dr. YASEMİN ÖZ** | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | | **YOUR COURSE** | | |
| **Theoretical** | **APPLICATION** | | **Lab** | **Credit** | **ECTS** | **TYPE** |
| Spring  Fall x | 3 | 0 | | 0 | 3 | 7.5 | MANDATORY **X** ELECTIVE |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | None | | | | |
| **SHORT COURSE CONTENT** | | | Definitions related to antimicrobial chemotherapeutic agents, mechanisms of action Beta-lactam group antimicrobial agents, Beta-lactamase inhibitors, Macrolides, Lincosamides, Aminoglycosides,Tetracyclines and chloramphenicol, Quinolones, Sulfonamides, Antimycobacterial drugs, Antifungal drugs, Antiparasitic drugs, Antiviral drugs. | | | | |
| **COURSE AIMS** | | | Learning about antimicrobial agents used in the treatment of infectious diseases | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching the mechanisms of action of antimicrobial drugs and their use in treatment . | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Define basic terms related to antimicrobial agents and susceptibility  Classify antibacterial agents and explain their mechanisms of action  Classify antifungal agents and explain their mechanisms of action  Classify antiparasitic agents and explain their mechanisms of action  Classify antiviral agents and explain their mechanisms of action  Explain mechanisms of resistance to antimicrobial agents  List antimicrobial susceptibility tests | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.   Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Definitions related to antimicrobial agents |
| 2 |  | Antimicrobial mechanisms of action |
| 3 |  | Beta lactam group antibiotics |
| 4 |  | Glycopeptides |
| 5 |  | Other antimicrobial drugs acting on the cell wall |
| 6 |  | Macrolide, Lincosamide, streptogramin group antibiotics |
| 7 |  | Aminoglycosides and other protein synthesis inhibiting antibiotics |
| 8 |  | Midterm Exam |
| 9 |  | Quinolones |
| 10 |  | Combined antimicrobial use |
| 11 |  | Antibiotic susceptibility test selection, limited result reporting, ADT interpretation |
| 12 |  | Antimicrobacterial drug |
| 13 |  | Antifungal drugs |
| 14 |  | Antiviral drugs |
| 15 |  | Antiparasitic drugs |
| 16 |  | Final exam |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| LO 5 | Learn how to use the experimental equipment effectively | **X** |  |  |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems | **X** |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Course Instructor:**  **Prof. Dr. YASEMİN ÖZ**  **Signature** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521505307** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: IMMUNODEFICIENT HOST INFECTIONS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Doç. Dr. FATMA ERDEM** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | | **TYPE** | |
| Spring ****  Fall **X** | 2 | 1 | - | 2.5 | 5.0 | | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | | |
| **SEMESTER ACTIVITIES** | | **Type of activity** | | | | **Number** | | **Percentage (%)** |
| Midterm Exam | | | | **1** | | **40** |
| Quiz | | | |  | |  |
| Homework | | | |  | |  |
| Project | | | |  | |  |
| Oral examination | | | |  | |  |
| Other (………) | | | |  | |  |
| **Final Exam** | | | | | | **60** |
| **PREREQUISITE(S)** | | None | | | | | | |
| **SHORT COURSE CONTENT** | | The concept of immunocompromised host, impaired and/or lack of immunity, increased susceptibility to infections | | | | | | |
| **COURSE AIMS** | | To understand the pathogenesis, clinical presentation and follow-up of infections occurring in immunocompromised hosts. | | | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | The main objective of the course is to understand the mechanisms, causative agents and clinical presentations of infections occurring in immunocompromised hosts. | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | Explain the immune system and its importance  List the causes of immunodeficiency  List the characteristics of the agents in immunocompromised host infection  List the characteristics of immunocompromised host infections  Specify the rules of protection and prevention | | | | | | |
| **TEXTBOOK** | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | | | |
| **OTHER REFERENCES** | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.   Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | |  | | | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Identification of immunocompetent host |
| 2 |  | Conditions and factors that make a person immunocompromised. |
| 3 |  | Natural resistance disorders and deficiencies |
| 4 |  | Acquired resistance disorders and deficiencies |
| 5 |  | Formation of an infectious disease, Infection chain, Virulence factors |
| 6 |  | Definition of community and hospital acquired infections, |
| 7 |  | Characteristics of infections occurring in immunocompromised hosts, the systems in which they are frequently located and their clinical presentations |
| 8 |  | Midterm exam |
| 9 |  | Opportunistic Infection Agents-1 |
| 10 |  | Opportunistic Infection Agents-2 |
| 11 |  | Prevention and protection against infections in immunocompromised hosts |
| 12 |  | Nosocomial surveillance, |
| 13 |  | Sterilization and Disinfection methods, their importance and applications |
| 14 |  | Antimicrobial Drug Usage Policies |
| 15 |  | Final exam |
| 16 |  |  |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Doç.Dr.FATMA ERDEM**  **Signature** | **History**  **28.02.2025** |

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| **COURSE CODE:** **521505308** | | **DEPARTMENT:** **MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: HOSPITAL INFECTIONS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **PROF. DR. YASEMİN ÖZ** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** |
| Spring ****  Fall **X** | 2 | 1 |  | 2.5 | 5.0 | MANDATORY **** ELECTIVE **X** |
|  | | | | | | |
| **EVALUATION CRITERIA** | | | | | | |
| **SEMESTER ACTIVITIES** | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | |  | | | | |
| **SHORT COURSE CONTENT** | | Hospital Infections, Definitions, Epidemiology, Organization, Control Programs, Infection Control Committees, National-International Communication, Sterilization-Disinfection Practices, The Role of Microbiology Laboratory, Hospital Infection Agents, Hospital Infections Regarding Systems, Bacterial, Fungal, Viral, Parasitic Agents, Laboratory Infections, Quality Control, Correct Antimicrobial Use and Policies, Multi-resistant Agents, Prevention Practices of Hospital Infections. | | | | |
| **COURSE AIMS** | | The aim of the course is to define hospital infections and their agents from a microbiological perspective and to explain resistance problems. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | The aim of the course is to provide students with skills such as recognizing, observing, monitoring, treating and preventing hospital infections. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | Define basic concepts related to hospital infections  Explain the importance of hospital infections  Explain the characteristics of hospital infection agents  List common hospital infections and their agents  List strategies to prevent hospital infections | | | | |
| **TEXTBOOK** | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.   Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Definition and introduction of hospital infections |
| 2 |  | Historical development of hospital infections |
| 3 |  | Normal flora and its relationship with hospital infections |
| 4 |  | Sterilization practices in hospital infections |
| 5 |  | Disinfection practices in hospital infections |
| 6 |  | Waste management |
| 7 |  | Midterm exam |
| 8 |  | Types of waste generated in hospitals |
| 9 |  | Characteristics of hospital infection agents |
| 10 |  | Gram positive bacteria |
| 11 |  | Gram negative bacteria |
| 12 |  | Fungal and viral hospital infection agents |
| 13 |  | Infection control committees and their duties |
| 14 |  | Final exam |
| 15 |  |  |
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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  |  | **X** |
| LO 2 | Ask scientific questions and form hypothesis |  | **X** |  |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  |  | **X** |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **PROF. DR. YASEMİN ÖZ** | **History**  28.02.2025 |

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| **COURSE CODE: 521503309** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: GENERAL PARASITOLOGY** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nihal DOGAN** |  | | X |  |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **x** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** |
| Spring ****  Fall x | 3 | 0 | 0 | 3 | 7.5 | MANDATORY **** ELECTIVE **X** |
|  | | | | | | |
| **EVALUATION CRITERIA** | | | | | | |
| **SEMESTER ACTIVITIES** | | **Type of activity** | | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | | **1** | **40** |
| Quiz | | | |  |  |
| Homework | | | |  |  |
| Project | | | |  |  |
| Oral examination | | | |  |  |
| Other (………) | | | |  |  |
| **Final Exam** | | | | | **60** |
| **PREREQUISITE(S)** | |  | | | | | |
| **SHORT COURSE CONTENT** | | Types of parasites and parasitism, epidemiology, effects of parasites on the host, source of parasitosis and entry routes into the body, diagnosis and treatment routes for parasites, structure of protozoa, intestinal protozoa, flagellates (digestive and urogenital system), flagellates (blood and tissue), Sporozoa class, structure and general characteristics of helminths, roundworms, flatworms, leafworms, arthropods and parasitism, arthropods causing poisoning | | | | | |
| **COURSE AIMS** | | Identification of medically important parasites with their general characteristics | | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | Acquisition of basic parasitological concepts | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | Count the mechanisms of parasitic infections  List the treatment protocols of important parasitic infections  List general treatment protocols according to species  Count the mechanisms of action of antiparasitic drugs used in parasitic diseases. | | | | | |
| **TEXTBOOK** | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Doi:10.1128/9781555819002, Washington DC:2016.  3.Intestinal Parasites - New Developments in Diagnosis, Treatment, Prevention and Future Directions, Editor Nihal Dogan Doi10.5772/intechopen.1002145, 30 October, 2024  4.Roundworms - A Survey From Past to Present Editor Nihal Doğan Doi10.5772/intechopen, 2023 | | | | | |
| **OTHER REFERENCES** | | 5. CDC Yellow Book 2020, Oxford PressGary W. Brunette, ‎Jeffrey B. Nemhauser · 2019 | | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | |  | | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Types and epidemiology of parasites and parasitism |
| 2 |  | Effects of parasites on the host, |
| 3 |  | The source of parasites and their entry into the body, |
| 4 |  | Diagnosis and treatment methods for parasites, |
| 5 |  | Structure of protozoa |
| 6 |  | Intestinal protozoa, |
| 7 |  | Flagellates (digestive and urogenital system, |
| 8 |  | Flagellates (blood and tissue), |
| 9 |  | Helminths structure and general characteristics |
| 10 |  | Roundworms |
| 11 |  | Flatworms |
| 12 |  | MIDTERM EXAM |
| 13 |  | Leafy worms, |
| 14 |  | Arthropods and their parasitism |
| 15 |  | Arthropods that cause poisoning |
| 16 |  | FINAL EXAM |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521505310** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: TREATMENT OF PARASITIC DISEASES** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Prof. Dr. Nihal DOĞAN** | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
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**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Fall **x** | 2 | 0 | 0 | 2 | 5.0 | MANDATORY **** ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Treatment methods in parasitic infections, General treatment protocols according to species, Alternative drugs in protozoan infections, Treatment protocols in visceral and cutaneous leishmaniasis, Old and new treatment methods in malaria treatment, Treatment in trichomoniasis, Treatment in nematodes, Treatment in tissue nematodes, Treatment in larva migrans agents, Treatment in cestodes, Treatment protocols and resistance mechanisms in cyst hydatid disease, Treatment in blood and tissue trematodes, Treatment in intestinal trematodes, Resistance mechanisms in antiparasitic drugs, Treatment protocols in arthropods causing allergies and poisoning. | | | | |
| **COURSE AIMS** | | | Learning about drugs used in the treatment of parasitic diseases | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching the usage features and action mechanisms of drugs used in antiparasitic treatment. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | List the systematics of tissue protozoa,  Can make epidemiologic map of tissue protozoa  Identify prevention and control strategies for tissue protozoa  List the methods used in diagnosis. | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Doi:10.1128/9781555819002, Washington DC:2016.  3.Chemotheraphy of Parasitic Diseases, Ed William C Campbell and Robert S Rew, Plenum Press,2013**.** | | | | |
| **OTHER REFERENCES** | | | **4.**Parasitic Diseases: Treatment & Control Max J. Miller, ‎Edgar Love · CRC press, 2020 | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Treatment methods for parasitic infections, General treatment protocols according to species, |
| 2 |  | Alternative drugs for protozoan infections |
| 3 |  | Treatment protocols for visceral and cutaneous leishmaniasis |
| 4 |  | Old and new treatment methods in malaria treatment |
| 5 |  | Treatment of Trichomoniasis |
| 6 |  | Treatment in nematodes |
| 7 |  | Treatment of tissue nematodes |
| 8 |  | Treatment of larva migrans agents |
| 9 |  | Treatment in cestodes |
| 10 |  | Treatment protocols and resistance mechanisms in hydatid cyst |
| 11 |  | MIDTERM EXAM |
| 12 |  | Treatment of blood and tissue trematodes |
| 13 |  | Treatment of intestinal trematodes |
| 14 |  | Resistance mechanisms in antiparasitic drugs |
| 15 |  | Treatment protocols for arthropods causing allergies and poisoning |
| 16 |  | FINAL WEEK |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date:** 28.02.2025 |

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| **COURSE CODE:** **521503312** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: TISSUE PROTOZOONS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nihal DOĞAN** |  | | X |  |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **x** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Fall x | 3 | 0 | 0 | 3 | 7.5 | MANDATORY ELECTIVE  ** X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Tissue protozoa, Systematics and epidemiology of tissue protozoa, Methods used in diagnosis, Factors playing a role in spread (source-intermediate host), Protozoa living in other body parts, Trichomonas vaginalis, Toxoplasma gondii, Pneumocystis carini, Plasmodium spp., Babesia sp., Visceral leishmaniasis, Cutaneous leishmaniasis, African Trypanosomiasis, American Trypanosomiasis, Treatment control. | | | | |
| **COURSE AIMS** | | | Teaching blood and tissue parasites of clinical importance | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching blood and tissue parasites of clinical importance. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | |  | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Washington DC:2016.  3.Roundworms - A Survey From Past to Present Editor Nihal Doğan Doi10.5772/intechopen. 2023  4.Textbook of Medical Parasitology  ‎ by [Abhishek Mewara](https://www.amazon.co.uk/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Abhishek+Mewara&text=Abhishek+Mewara&sort=relevancerank&search-alias=books-uk) (Author), [Sumeeta Khurana](https://www.amazon.co.uk/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Sumeeta+Khurana&text=Sumeeta+Khurana&sort=relevancerank&search-alias=books-uk) (Author) Orient Blackswan Pvt Ltd (1 July 2021) ISBN-13 ‏ : ‎ 978-9389211894 | | | | |
| **OTHER REFERENCES** | | | **1.** García, L.S. 2001). Diagnostic Medical Parasitology Fourth Ed.  2.Markell and Voge's.(2006). Medical Parasitology. Ninth Edit. Elsevie  3.Saygı , G.(2009) Parasitic diseases and parasites  4.Dogan N.(2010) Medical Parasitology, Anadolu University Publications 1st Edition. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Tissue protozoa, |
| 2 |  | Systematics and epidemiology of tissue protozoa. |
| 3 |  | Methods used in diagnosis |
| 4 |  | Factors playing a role in spreading (source-intermediate host) |
| 5 |  | Protozoa living in other body parts |
| 6 |  | Trichomonas vaginalis, |
| 7 |  | Toxoplasma gondii, |
| 8 |  | Pneumocystis carinii, |
| 9 |  | Plasmodium spp., |
| 10 |  | Babesia sp |
| 11 |  | Visceral leishmaniasis, |
| 12 |  | MIDTERM EXAM |
| 13 |  | Cutaneous leishmaniasis |
| 14 |  | African Trypanosomiasis, American Trypanosomiasis, |
| 15 |  | Treatment Control |
| 16 |  | FINAL EXAM |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521503313** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: HELMINTH INFECTIONS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nihal DOĞAN** |  | | X |  |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **x** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Fall **X** | 3 | 0 | 0 | 3 | 7.5 | MANDATORY ELECTIVE  ** X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Helminth infections overview, Pathogenesis of helminth infections, Methods used in diagnosis, Intestinal nematodes pathogenesis and diagnostic methods, Tissue nematodes pathogenesis and diagnostic methods, Filarial nematodes pathogenesis and diagnostic methods, Zoonotic nematodes pathogenesis and diagnostic methods, Intestinal cestodes pathogenesis and diagnostic methods, Tissue cestodes pathogenesis and diagnostic methods, Echinocus granulosus epidemiology, pathogenesis, Intestinal trematodes, Pathogenesis of lung and liver trematodes, Pathogenesis of blood trematodes and diagnostic methods, Zoonotic nematodes, Leeches-Aconthocephalans and their parasitism. | | | | |
| **COURSE AIMS** | | | Learning about helminth infections | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | To know the general characteristics and epidemiology of helminths. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Classify helminths that cause human infection,  Count the identification of helminths according to their localization. Can tell the diagnostic methods used in helminth diseases. Know the geography of distribution of helminth infections and list prevention and control strategies | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Intestinal Parasites - New Developments in Diagnosis, Treatment, Prevention and Future Directions, Editor Nihal Dogan Doi10.5772/intechopen.1002145, 30 October, ISBN 2024978-0-85466-571-6 Print ISBN978-0-85466-572-3 eBook (PDF) ISBN978-0-85466-573-0  3.Roundworms - A Survey From Past to Present Editor Nihal Doğan Doi10.5772/intechopen.102153 ISBN978-1-80356-714-3 Print ISBN978-1-80356-713-6 eBook (PDF) ISBN978-1-80356-715-0 , 2023 | | | | |
| **OTHER REFERENCES** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Intestinal Parasites - New Developments in Diagnosis, Treatment, Prevention and Future Directions, Editor Nihal Dogan Doi10.5772/intechopen.1002145, 30 October, ISBN 2024978-0-85466-571-6 Print ISBN978-0-85466-572-3 eBook (PDF) ISBN978-0-85466-573-0  3.Roundworms - A Survey From Past to Present Editor Nihal Doğan Doi10.5772/intechopen.102153 ISBN978-1-80356-714-3 Print ISBN978-1-80356-713-6 eBook (PDF) ISBN978-1-80356-715-0 , 2023 | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Overview of helminth infections, |
| 2 |  | Pathogenesis of helminth infections, methods used in diagnosis |
| 3 |  | Intestinal nematodes pathogenesis and diagnostic methods, |
| 4 |  | Pathogenesis and diagnostic methods of tissue nematodes |
| 5 |  | Filarial nematodes pathogenesis and diagnostic methods |
| 6 |  | Pathogenesis and diagnostic methods of zoonotic nematodes |
| 7 |  | Intestinal cestodes pathogenesis and diagnostic methods |
| 8 |  | Tissue cestodes pathogenesis and diagnostic methods |
| 9 |  | Echinoccosu granulosus epidemiology, pathogenesis |
| 10 |  | Intestinal trematodes |
| 11 |  | Pathogenesis of lung and liver trematodes, |
| 12 |  | MIDTERM EXAM |
| 13 |  | Pathogenesis and diagnostic methods of blood trematodes |
| 14 |  | Zoonotic nematodes, |
| 15 |  | Leeches - Aconthocephalans and their parasitism |
| 16 |  | FINAL EXAM |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521503315** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: HOST-PARASITE RELATIONSHIP (PATHOGENESIS OF INFECTIOUS DISEASES)** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Prof. Dr. NİLGÜN KAŞİFOĞLU** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring ****  Fall **X** | 3 | - | - | 3 | 7.5 | MANDATORY **** ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Importance of infectious diseases, Mechanism of infectious diseases, Agent-host relationship, Agent-host-environment relationship, Epidemiology of infectious diseases, Ways of microorganism transmission, Factors related to microorganisms in the formation of infection, Host factors | | | | |
| **COURSE AIMS** | | | To teach microorganism-host relationship and infection formation mechanisms. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | To ensure understanding of the factors and mechanisms that are effective in the formation of infectious diseases. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Define infection, infectious disease and related concepts  Explain the basic mechanism of infectious diseases  Explain the infection chain  Count the sources of infection and transmission routes  Count the host and agent factors that play a role in the formation of infection | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.  Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Importance of infectious diseases |
| 2 |  | Agent-host relationship |
| 3 |  | Agent-host-environment relationship |
| 4 |  | Mechanism of infectious diseases |
| 5 |  | Infectious microorganisms |
| 6 |  | MIDTERM EXAM |
| 7 |  | Epidemiology of infectious diseases |
| 8 |  | Microorganism transmission routes |
| 9 |  | Factors related to microorganisms in the formation of infection (Virulence factors) |
| 10 |  | Host factors (Defense mechanisms) |
| 11 |  | Host factors (Defense mechanisms) |
| 12 |  | Immunization |
| 13 |  | FINAL EXAM |
| 14 |  |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  |  | **X** |
| LO 7 | Identify, formulate, and solve medical problems |  |  | **X** |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. NİLGÜN KAŞİFOĞLU** | **History**  28.02.2025 |

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| **COURSE CODE: 521504 303** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: SPECIAL BACTERIOLOGY** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Prof. Dr. YASEMİN ÖZ** | **COURSE LANGUAGE**  **Turkish: X**  **English:** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn | 2 | 2 | | 0 | 3 | 7.5 | MANDATORY ELECTIVE **X** | |
|  | | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | | **1** | **40** |
| Quiz | | | |  |  |
| Homework | | | |  |  |
| Project | | | |  |  |
| Oral examination | | | |  |  |
| Other (………) | | | |  |  |
| **Final Exam** | | | | | **60** |
| **PREREQUISITE(S)** | | | None | | | | | |
| **SHORT COURSE CONTENT** | | | Classification of bacteria, Staphylococci, Streptococci, Enterococci, Enteric bacteria-general characteristics, E.coli, Samonella, Shigella, Klebsiella, Proteus, Yersinia etc.Nonfermentative negative rods, Neisseria, Moraxella, Corynebacterium, Haemophilus, Bordetella Pasteurella, Brucella and other various pathogenic bacteria, Bacillus genus, Anaerobic bacteria, Mycobacteria, Chlamydia, Rickettsia, Mycoplasma, Spirochetes. | | | | | |
| **COURSE AIMS** | | | Knowing the disease-causing bacteria and learning the methods used in the identification of these bacteria. | | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching the identification of bacteria and disease pathogenesis. | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Can classify common bacterial agents that cause infection in humans  Can list bacterial agents frequently encountered in infections  Can explain basic structural features of these bacteria  Can list virulence features of frequently encountered bacteria  Can explain infections and protection measures of these bacteria | | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.  Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | | |
| **NECESSARY TOOLS AND EQUIPMENT IN THE COURSE** | | |  | | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Introduction to special bacteriology |
| 2 |  | Staphylococci |
| 3 |  | Streptococci |
| 4 |  | Enterococci |
| 5 |  | Bacillus genus bacteria |
| 6 |  | Haemophilus, Bordetella, Brucella |
| 7 |  | Neisseria |
| 8 |  | Midterm Exam |
| 9 |  | Enterobacteriaceae 1 |
| 10 |  | Enterobacteriaceae 2 |
| 11 |  | Pseudomonas, Stenotrophomonas, Acinetobacter |
| 12 |  | Vibrio and Campylobacter |
| 13 |  | Mycoplasma, Rickettsia, Chylamdia and Chlamydophila |
| 14 |  | Spirochetes |
| 15 |  | Anaerobic bacteria |
| 16 |  | Final exam |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  | **X** |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Course Instructor:**  **Prof. Dr. YASEMİN ÖZ**  **Signature** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521504304** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: CLINICAL IMMUNOLOGY** | |  | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. NİLGÜN KAŞİFOĞLU** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | **3** | **0** | **-** | **3** | 7.5 | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | None | | | | |
| **SHORT COURSE CONTENT** | | | Diseases and lab parameters related to the immune system | | | | |
| **COURSE AIMS** | | | Explaining the situations in which the immune system balance is disrupted | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | The main objective of the course is to teach the pathogenesis and formation mechanisms of diseases that occur on an immunopathological basis. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Explain the structure of the immune system  Count the organs and cells of the immune system  Explain the structure of antigens and antibodies  Classify immunoglobulins  Count the properties of immunoglobulins  Explain normal and abnormal immune response reactions | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Introduction and history of clinical immunology, |
| 2 |  | Properties of Antigens and Antibodies |
| 3 |  | Immune system tissues and organs, |
| 4 |  | Immune system cells, |
| 5 |  | Humoral immune response and its consequences, lab parameters in normal and disordered |
| 6 |  | Cellular immune response and its consequences, lab parameters in normal and disordered |
| 7 |  | Congenital and acquired immunodeficiency diseases |
| 8 |  | Midterm exam |
| 9 |  | Hypersensitivity reactions, |
| 10 |  | Autoimmunity and autoimmune diseases |
| 11 |  | Immune complex diseases and their formation mechanisms, |
| 12 |  | Tumor immunology. |
| 13 |  | Transplantation immunology. |
| 14 |  | Final exam |
| 15 |  |  |
| 16 |  |  |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  |  | **X** |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Prof. Dr. NİLGÜN KAŞİFOĞLU**  **Signature** | **History**  **28.02.2025** |

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| **COURSE CODE:** | **521504305** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: MYCOLOGY** | | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Prof. Dr. Yasemin OZ** | | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  | |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 2 | 2 | - | 3 | 7.5 | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | The content of the course is as follows: General characteristics of fungi, Spore structures, Cell structure, Production environments, Diagnostic methods, Antifungal drugs, Candida, Cryptococci and other yeast fungi, Mold fungi, Dermatophytes, Aspergillus, Mucarales order, Fusarium, dimorphic fungi and Saprophytic molds. | | | | |
| **COURSE AIMS** | | | The main objective of the course is to understand the morphological structures of fungi and the frequently encountered yeasts, molds and dimorphic fungi. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | To learn about micro and macromorphology of fungi and yeast, mold and dimorphic fungi | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Explain the cellular properties of fungi  Classify medically important fungi according to their morphological characteristics  Explain the reproductive characteristics of medically important fungi  List the diagnostic methods of fungal infections  List the basic phenotypic properties of common fungal agents  Classify antifungal drugs and explain their mechanisms of action | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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| **WEEKLY PLAN OF THE COURSE** | | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Fungal cell structure |
| 2 |  | Classification of mushrooms |
| 3 |  | Epidemiology and Pathogenesis |
| 4 |  | Superficial mycosis agents |
| 5 |  | Subcutaneous mycosis agents |
| 6 |  | Systemic mycosis agents |
| 7 |  | Midterm exam |
| 8 |  | Opportunistic fungal infection agents |
| 9 |  | Yeast Fungi |
| 10 |  | Mold Fungi |
| 11 |  | Diagnostic methods for fungal infections |
| 12 |  | Antifungal agents |
| 13 |  | Mycotoxins |
| 14 |  | Final exam |
| 15 |  |  |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Yasemin OZ** | **History**  **28.02.2025** |

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| **COURSE CODE:** **521504306** |  | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: MOLECULAR DIAGNOSTIC METHODS USED IN MICROBIOLOGY** | | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Doç.Dr. Fatma ERDEM** | | **COURSE LANGUAGE**  **Turkish: +**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
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**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **+** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **+**  Autumn **** | 1 | 4 | 0 | 3 | 7.5 | MANDATORY **** ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | \_ | | | | |
| **SHORT COURSE CONTENT** | | | Detection of genetic material of microorganisms that cause infection in humans in disease samples and learning the basic principles and application areas of molecular techniques (PCR, Hybridization, real-time PCR, hybrid capture, DNA sequence analysis, etc.). | | | | |
| **COURSE AIMS** | | | In the field of Medical Microbiology, it aims to teach the importance and areas of use of molecular diagnostic methods in showing the place of various microorganisms, especially viruses, that cause diseases in humans in the etiology. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | The main objective of the course is to teach the application and interpretation of molecular diagnostic tests in the diagnosis of infectious diseases, their importance and algorithms in laboratory diagnosis. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Explain the basic principle of molecular diagnosis  Count molecular diagnosis methods used in microbiology  Count the advantages of molecular diagnostic methods  Count the procedures of molecular methods frequently used in microbiology | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | The place and importance of molecular biology and biotechnology in Microbiology. |
| 2 |  | Molecular diagnostic methods: classification-1 |
| 3 |  | Molecular diagnostic methods: classification-2 |
| 4 |  | Nucleic acide extraction methods from clinical samples |
| 5 |  | Hybridization techniques (Solid phase, liquid phase, in situ). |
| 6 |  | Blotting Methods (Southernblot, northern blot, western blot etc.). |
| 7 |  | Nucleic acid amplification methods classification and PCR working principle. |
| 8 |  | Midterm exam |
| 9 |  | Principle of signal amplification method |
| 10 |  | Nested PCR, RT-PCR, Multiplex PCR, TMA, SDA, LCR |
| 11 |  | Real-Time PCR and its application areas in Microbiology |
| 12 |  | Molecular cloning, plasmid and sequencing, sequence analysis methods |
| 13 |  | Design of molecular diagnostic laboratory, its layout, working method and laboratory rules. |
| 14 |  | Detection methods of the amplification product, electrophoresis and its types |
| 15 |  | Use of molecular diagnostic methods in microbiology |
| 16 |  | Final exam |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **Doç.Dr. Fatma ERDEM** | **History**  28.02.2025 |

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| **COURSE CODE:** **521504307** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: IMMUNOLOGICAL TECHNIQUES** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. NİLGÜN KAŞİFOĞLU** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | **1** | **4** | **-** | **3** | 7.5 | MANDATORY **** ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | None | | | | |
| **SHORT COURSE CONTENT** | | | Immunological techniques, contents and preparation. | | | | |
| **COURSE AIMS** | | | It is aimed to know the types, implementation and application situations of immunological techniques. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | **Definition:** The main objective of the course is to learn the structure and interpretation of immunological tests used in the diagnosis of infectious diseases. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Explain the characteristics of antigen-antibody interaction  List the tests based on the principle of antigen-antibody interaction  Explain the tests using labeled antibodies and their principles  List the clinical examples suitable for immunological tests | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Properties of Antigen-Antibody combination, Prezone, Zone, Zone and Post-zone status |
| 2 |  | Preparation of serum and other body fluids for immunological experiments, |
| 3 |  | Agglutination tests and their types, |
| 4 |  | Slide and tube agglutination experiments |
| 5 |  | Hemagglutination tests Direct – Indirect, Co-agglutination, |
| 6 |  | Precipitation mechanism and test types,Toxin and antitoxin tests, |
| 7 |  | Midterm exam |
| 8 |  | Fluorescent antibody tests (Antibody search) |
| 9 |  | Fluorescent antibody tests (Antigen search), |
| 10 |  | Autoantibodies |
| 11 |  | Enzyme Immunoassay (EIA) mechanism, EIA types and application areas |
| 12 |  | Complement Binding Assay, |
| 13 |  | Methods used to determine cellular immunity (FACS, chemotaxis assay, NBT, skin tests, etc.). |
| 14 |  | Final exam |
| 15 |  |  |
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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  | **X** |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  |  | **X** |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  | **X** |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Prof. Dr. NİLGÜN KAŞİFOĞLU**  **Signature** | **History**  **28.02.2025** |

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| **COURSE CODE:** **521504308** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: ADVANCED VIROLOGY** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Doç. Dr. Fatma Erdem** | **COURSE LANGUAGE**  **Turkish: +**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  |  | |  | + |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **+**  Autumn **** | 2 | 2 | 0 | 3 | 7.5 | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | \_ | | | | |
| **SHORT COURSE CONTENT** | | | Classification of medically important viruses and detailed examination of their basic properties. | | | | |
| **COURSE AIMS** | | | It is the detailed teaching of viral pathogens that cause disease in humans. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Learning all the features of medically important viruses  Learning the fine structure, general characteristics and laboratory diagnostic methods of viruses that cause a wide variety of diseases in humans. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | List the structure and general characteristics of viruses  Classify viruses  Explain the mechanisms of viral infections  List microbiological diagnostic methods in viral infections  Explain antiviral drugs and their mechanisms of action | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Introduction and history of virology |
| 2 |  | Classification of viruses |
| 3 |  | Virus morphology and ultrastructure (capsid structure, envelope, viral NA) |
| 4 |  | Virus-host cell relationship |
| 5 |  | Viral genetics |
| 6 |  | Bacteriophages |
| 7 |  | Midterm exam |
| 8 |  | Pathogenesis in viral diseases |
| 9 |  | Viral Immunity |
| 10 |  | Production of viruses (Embryonic eggs and laboratory animals) |
| 11 |  | Production of viruses (Cell Culture Systems) |
| 12 |  | Immunological Diagnostic Methods in Viral Diseases |
| 13 |  | Rapid diagnostic methods for viral diseases |
| 14 |  | Antiviral therapy and interferons |
| 15 |  | Protection from viral diseases |
| 16 |  | Final exam |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis |  | **X** |  |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  | **X** |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **Doç. Dr. Fatma Erdem** | **History**  28.02.2025 |

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| **COURSE CODE:** **521504309** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: CLINICAL VIROLOGY** | |  | | | |
| **TEACHING THE COURSE**  **STAFF**  **Doç. Dr. Fatma ERDEM** | **COURSE LANGUAGE**  **Turkish: +**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
|  |  | |  | + |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **+** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **+**  Autumn **** | 2 | 2 | 0 | 3 | 7.5 | MANDATORY **** ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | \_ | | | | |
| **SHORT COURSE CONTENT** | | | Diseases caused by medically important viruses, which are the first in the etiology of infectious diseases in humans, and their diagnosis and prevention methods are discussed in detail on a causative basis. | | | | |
| **COURSE AIMS** | | | The aim of the course is to introduce viral infection agents and teach diagnostic methods. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Learning all the features of medically important viruses  Learning the fine structure, general characteristics and laboratory diagnostic methods of viruses that cause a wide variety of diseases in humans. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Classify viruses that cause infection in humans  List common viral infections and causative agents  Explain the clinical and epidemiological features of these infections  List microbiological diagnostic methods in viral infections | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Classification of Human Viruses. |
| 2 |  | Adenoviruses: Diseases caused by, pathogenesis, diagnosis. |
| 3 |  | Herpesviruses: Diseases, pathogenesis and diagnostic methods. |
| 4 |  | EBV and CMV: Clinical significance, diagnostic tests |
| 5 |  | Pox virus, Parvovirus: Structure, Clinic, diagnosis. |
| 6 |  | Oncogenic viruses: Classification, oncogenesis and clinical significance. |
| 7 |  | Picornaviruses and Rhabdovirus: structure, pathogenesis, clinical features, diagnostic methods. |
| 8 |  | Midterm exam |
| 9 |  | Myxoviruses: Classification, pathogenesis, clinical significance, epidemiology, diagnosis |
| 10 |  | Paramyxoviruses: Classification, clinic, pathogenesis, diagnosis, |
| 11 |  | Viruses causing gastroenteritis: Classification, pathogenesis, clinical laboratory diagnosis. |
| 12 |  | Hepatitis viruses (A,B,D): Classification, clinical significance, laboratory diagnosis |
| 13 |  | Hepatitis viruses (C, E, others): Classification, clinical significance, laboratory diagnosis |
| 14 |  | Retroviruses: HIV-1, 2: structure, epidemiology, clinical diagnosis. |
| 15 |  | Arbovirus: Diseases caused by viruses related with vector; epidemiology, diagnosis. |
| 16 |  | Final exam |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  | **X** |  |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  |  | **X** |
| LO 7 | Identify, formulate, and solve medical problems |  | **X** |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Signature**  **Doç. Dr. Fatma ERDEM** | **History**  28.02.2025 |

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| **COURSE CODE:** | **521506310** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME:** | **EPIDEMIOLOGY OF PARASITIC DISEASES** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Prof. Dr. Nihal DOĞAN** | | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
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**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **x** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **x**  Autumn **** | 2 | 0 | 0 | 2 | 5.0 | MANDATORY **** ELECTIVE **x** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Introduction to epidemiology, Spread strategies of parasitic diseases, General epidemiological principles, Factors related to the parasite in the formation of infection, Factors related to the host and environment, Resistance and immunity in infections, Methods of fighting against parasitic diseases, Fighting against parasites transmitted by water and food, Fighting against parasites transmitted by contact, Fighting against parasites transmitted by air and soil, Fighting against parasites transmitted by vectors, Epidemiological methods used in the fight, Vaccines and serums, Examples of parasite epidemiology in our country | | | | |
| **COURSE AIMS** | | | To provide basic epidemiological principles for protection against parasitic diseases. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching general epidemiological principles in parasitic diseases. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Classify parasites that cause infection in humans  List common parasitic infections and their causative parasites  Explain the clinical and epidemiologic features of these parasitic infections. List the factors that play a role in epidemiology | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Washington DC:2016.  3.CDC Yellow Book 2020, Oxford PressGary W. Brunette, ‎Jeffrey B. Nemhauser · 2019  4.Epidemiology of Parasitic Diseases, Vijaya Lakshmi Nag veJitu Mani Kalita Springer press 24 July 2020 | | | | |
| **OTHER REFERENCES** | | |  | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Introduction to epidemiology |
| 2 |  | Spread strategies of parasitic diseases |
| 3 |  | General epidemiological principles |
| 4 |  | Parasite factors in the formation of infection |
| 5 |  | Host and environmental factors |
| 6 |  | Resistance and immunity to infections |
| 7 |  | Methods of combating parasitic diseases |
| 8 |  | Fighting parasites transmitted through water and food |
| 9 |  | Fighting contact-transmitted parasites |
| 10 |  | Fighting parasites through air and soil |
| 11 |  | MIDTERM EXAM |
| 12 |  | Fighting vector-borne parasites |
| 13 |  | Epidemiological methods used in the fight |
| 14 |  | Vaccines and serums |
| 15 |  | Examples from parasite epidemiology in our country |
| 16 |  | FINAL WEEK |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521504311** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: UNUSUAL PARASITIC INFECTIONS** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nihal DOĞAN** |  | |  |  |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **x**  Autumn **** | 2 | 2 | 0 | 3 | 7.5 | MANDATORY ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | General characteristics of unusual parasitic infections, Zooparasite systematics and unusual parasites, Unusual parasitic infections in immunocompromised hosts, Unusual parasites in the Protozoa class, Unusual parasites in the Nematode class, Unusual parasites in the Cestode class, Unusual parasites in the Trematode class, Unusual parasites in the Pentastomid class, Unusual parasites in the Acanthocephala class, Definition of unusual parasitic infections, Difficulties in diagnosis, Artifacts, Incidence in the world and in our country, Unusual parasites settled in the intestines, Unusual parasites settled in blood and tissues, Treatment and protection | | | | |
| **COURSE AIMS** | | | Teaching about rare and unusual parasitic infections | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Identification of unusual parasitic infections, Teaching of rare unusual parasitic infections | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Classify unusual parasites that cause infection in humans,  Tell the geography of distribution and transmission routes of unusual parasitic infections. Explain the clinical features of these parasitic infections | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Washington DC:2016.  3.CDC Yellow Book 2020, Oxford PressGary W. Brunette, ‎Jeffrey B. Nemhauser · 2019 | | | | |
| **OTHER REFERENCES** | | | Epidemiology of Parasitic Diseases, Vijaya Lakshmi Nag veJitu Mani Kalita Springer press 24 July 2020 | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | General characteristics of unusual parasitic infections |
| 2 |  | Zooparasite systematics and unusual parasites |
| 3 |  | Unusual parasitic infections in immunocompromised hosts, |
| 4 |  | Unusual parasites in the protozoa class |
| 5 |  | Unusual parasites in the nematode class |
| 6 |  | Unusual parasites in the cestodes class |
| 7 |  | Unusual parasites in the trematode class |
| 8 |  | Unusual parasites in the Pentastomid class |
| 9 |  | Unusual parasites of the acanthocephalan class |
| 10 |  | Identification of unusual parasitic infections |
| 11 |  | MIDTERM EXAM |
| 12 |  | Diagnostic difficulties, artifacts, incidence in the world and in our country |
| 13 |  | Unusual parasites that settle in the intestines, |
| 14 |  | Unusual parasites that settle in blood and tissues |
| 15 |  | Treatment and prevention |
| 16 |  | FINAL WEEK |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521504312** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: PARASITOLOGICAL TECHNIQUES** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Prof. Dr. Nihal DOĞAN** | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
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**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **x**  Autumn **** | 2 | 2 | 0 | 3 | 7.5 | MANDATORY****  ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Collection of samples, Equipment, safety and working procedures in the parasite laboratory, Methods used in the diagnosis of intestinal protozoa, Methods used in the diagnosis of intestinal helminths, Blood examination methods, Examination of bone marrow and endoscopic material, Histopathological examination of tissue samples, Other diagnostic materials and appropriate methods, Media, Stains used in parasitology, Fixatives and solutions used in parasitology, Special diagnostic methods, Animal inoculations and Xenodiagnosis, Artefacts and other mixed materials, Immunological diagnostic methods. | | | | |
| **COURSE AIMS** | | | Teaching diagnostic procedures | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Practical teaching of different methods in the diagnosis of parasites. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Knows the application of different methods in the diagnosis of parasites. | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2. Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Doi:10.1128/9781555819002, Washington DC:2016.  3.Intestinal Parasites - New Developments in Diagnosis, Treatment, Prevention and Future Directions, Editor Nihal Dogan Doi10.5772/intechopen.2024 | | | | |
| **OTHER REFERENCES** | | |  | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Equipment, safety and working procedures in the parasite laboratory |
| 2 |  | Methods used in the diagnosis of intestinal protozoa |
| 3 |  | Unusual parasitic infections in immunocompromised hosts, |
| 4 |  | Methods used in the diagnosis of intestinal helminths, |
| 5 |  | Blood examination methods |
| 6 |  | Examination of bone marrow and endoscopic material |
| 7 |  | Histopathological examination of tissue samples |
| 8 |  | Other diagnostic materials and appropriate methods, Media |
| 9 |  | Dyes used in parasitology |
| 10 |  | Fixatives and solutions used in parasitology |
| 11 |  | MIDTERM EXAM |
| 12 |  | Specific diagnostic methods |
| 13 |  | Animal inoculations and Xenodiagnosis, |
| 14 |  | Artifacts and other mixed materials |
| 15 |  | Immunological diagnostic methods. |
| 16 |  | FINAL WEEK |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Prof. Dr. Nihal DOĞAN** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521504313** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: INFESTATIONS AND VECTORS** | | | | | |
| **TEACHING THE COURSE**  **STAFF**  **Assoc. Prof. Dr. Nihal Dogan** | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
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**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **x**  Autumn | 2 | 2 | 0 | 3 | 7.5 | MANDATORY ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Medical entomology systematics, Arthropods important for human health, Adaptation of arthropods to internal and external parasitism, Identification of infestation and vector, Biological and mechanical vector, Mosquito vectors and control, Phlebotomus spp vectors and control, Ceratopogonids and their parasitological importance, Tabanids importance, Myiasis and pathology in humans, Lice, Fleas, Scabies agents and their parasitological importance, Mites causing allergy and dermatitis, Control of arthropods of medical importance. | | | | |
| **COURSE AIMS** | | | Learning about arthropods that affect humans in various ways; transmitting diseases, being parasitic, causing poisoning and allergic reactions. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Learning about arthropods of medical importance | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Knows medically important arthropods, lists the infestation factors | | | | |
| **TEXTBOOK** | | | 1.Medical Entomology 2nd Ed (A Handbook of Medically Important Insects and other Arthropods): ISBN: 9789389832365, Scientific Publishers 2022  2.Medical Entomology: A Textbook on Public Health and Veterinary Problems Caused by Arthropods Paperback – 31 December 2003 by B.F. Eldridge, J.D. Edman (Eds) | | | | |
| **OTHER REFERENCES** | | |  | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Medical entomology systematics |
| 2 |  | Arthropods important for human health |
| 3 |  | Adaptation of arthropods to internal and external parasitism |
| 4 |  | Infestation and vector identification |
| 5 |  | Biological and mechanical vector |
| 6 |  | Mosquito vectors and control |
| 7 |  | Phlebotomus spp vectors and control |
| 8 |  | Ceratopogonids and their parasitological importance |
| 9 |  | The importance of Tabanids |
| 10 |  | Myiasis and its pathology in humans |
| 11 |  | MIDTERM EXAM |
| 12 |  | Lice, Fleas, |
| 13 |  | Scabies agents and their parasitological importance |
| 14 |  | Mites that cause allergies and dermatitis |
| 15 |  | Control of medically important arthropods. |
| 16 |  | FINAL WEEK |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Signature**  **Assoc. Prof. Dr. Nihal Dogan** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521504314** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: OPPORTUNISTIC PARASITIC DISEASES** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: x**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nihal DOĞAN** |  | | x |  |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **x** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn **** | 2 | 2 | 0 | 3 | 7.5 | MANDATORY**** ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | General characteristics of opportunistic parasitic diseases, Entamoeba histolytica, Free-living amoebas, Toxoplasma gondii, Giardia lamblia, Cryptosporidium parvum, Cyclospora cayetanesis, Isospora belli, Sarcocystis spp, Strongyloides stercoralis, Plasmodium spp, Leishmania spp, Babesia spp, Scabies agents, Methods used in the diagnosis of opportunistic parasitic infections. | | | | |
| **COURSE AIMS** | | | Learning about parasitic infections in immunocompromised individuals | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching the clinic, diagnosis and treatment protocols of opportunistic parasitic diseases **.** | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Lists the parasites seen in immunocompromised diseases, lists the mechanism of action of parasites that cause disease in immunocompromised host | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Doi:10.1128/9781555819002, Washington DC:2016.  3.Pathology of Opportunistic Infections: An Illustrative Atlasbooks. Ramesh K. Gupta, ‎Pallav Gupta · 2016, Springer. | | | | |
| **OTHER REFERENCES** | | | Opportunistic Infections: Toxoplasma, Sarcocystis, and Microsporidia (World Class Parasites, 9) 2004th Ed. by David S. Lindsay, Louis M. Weiss (Eds) ISBN-13 ‏ : ‎ 978-1402078149 | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | General characteristics of opportunistic parasitic diseases |
| 2 |  | Entamoeba histolytica; Free-living amoeba |
| 3 |  | Toxoplasma gondii |
| 4 |  | Giardia lamblia |
| 5 |  | Cryptosporidium parvum |
| 6 |  | Cyclospora cayetanesis |
| 7 |  | Isospora is clear |
| 8 |  | Sarcocystis spp |
| 9 |  | Strongyloides stercoralis |
| 10 |  | MIDTERM EXAM |
| 11 |  | Plasmodium |
| 12 |  | Leishmania spp |
| 13 |  | Babesia spp |
| 14 |  | Scabies agents |
| 15 |  | Methods used in the diagnosis of opportunistic parasitic infections |
| 16 |  | FINAL EXAM |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  |  |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  |  |
| LO 3 | Search and interpret scientific literature |  |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  |  |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  |  |
| LO 6 | Function on multi-disciplinary teams |  |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  |  |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  |  |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Prof. Dr. Nihal DOĞAN**  **Signature** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521506315** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: IMMUNITY IN PARASITIC DISEASES** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nihal DOĞAN** |  | | X |  |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **x**  Autumn **** | 2 | 0 | 0 | 2 | 5.0 | MANDATORY **** ELECTIVE **X** | |
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| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | |  | | | | |
| **SHORT COURSE CONTENT** | | | Mechanisms of immune response in parasitic diseases Antigenic properties and immunological tests, Vaccines and sera, Description of immune response, Humoral immunity, Cellular immunity, Immunosuppression, Immunity in toxoplasmosis, Immunity in amoebiasis, Immunity in malaria, Immunity in leishmaniasis, Immunity in Chagas disease, Immunity in schistosomiasis, Immunity in filariasis, Immunity in echinococcosis (in cestodes). | | | | |
| **COURSE AIMS** | | | Teaching basic concepts related to the immunology of parasitic diseases | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Teaching the basic concepts of immunology of parasitic diseases. | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Defines immunity in parasitic diseases. List the pathogenicity of opportunistic parasitic diseases. List the prevention and control strategies of opportunistic parasitic diseases. | | | | |
| **TEXTBOOK** | | | 1.Markell & Voge's Medical Parasitology EBook - 10th Sea Ed [David T. John](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22David+T.+John%22), [William A. Petri](https://www.google.com.tr/search?tbo=p&tbm=bks&q=inauthor:%22William+A.+Petri%22) Elsevier Health Sciences, Jul 23, 2020  2.Diagnostic Medical parasitology, 6th Edition, Lynne Shore Garcia, ASM Press, Doi:10.1128/9781555819002, Washington DC:2016.  3.Immunity to Parasitic Infectionbooks. Tracey Lamb Willey Blackwell 2012 ISBN 978-0-470-97247-2 | | | | |
| **OTHER REFERENCES** | | | Immunoparasitology: A Unique Interplay Between Host and Pathogenbooks .Xun Suo, ‎Hyun Soon Lillehoj, ‎Wenbin Tuo · Frontiers 2020 | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | Immune response mechanisms in parasitic diseases |
| 2 |  | Antigenic properties and immunological tests, |
| 3 |  | Vaccines and serums |
| 4 |  | Defining the immune response, |
| 5 |  | Humoral immunity |
| 6 |  | Cellular immunity |
| 7 |  | Immunosuppression, |
| 8 |  | Immunity in amoebiasis, |
| 9 |  | Immunity in malaria, |
| 10 |  | Immunity in leishmaniasis |
| 11 |  | Immunity in Chagas disease |
| 12 |  | MIDTERM EXAM |
| 13 |  | Immunity in schistosomiasis, |
| 14 |  | Immunity in filariasis |
| 15 |  | Immunity in echinococcosis (in cestodes |
| 16 |  | FINAL EXAM |

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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences | **X** |  |  |
| LO 2 | Ask scientific questions and form hypothesis | **X** |  |  |
| LO 3 | Search and interpret scientific literature | **X** |  |  |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  |  | **X** |
| LO 6 | Function on multi-disciplinary teams | **X** |  |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  |  |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences | **X** |  |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  | **X** |  |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  | **X** |  |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  |  |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  |  |  |

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| **Instructor of the Course**  **Prof. Dr. Nihal DOĞAN**  **Signature** | **Date: 28.02.2025** |

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| **COURSE CODE:** **521504316** | | **DEPARTMENT: MEDICAL MICROBIOLOGY** | | | |
| **COURSE NAME: ADVANCED IMMUNOLOGY** | | | | | |
| **TEACHING THE COURSE**  **STAFF** | **COURSE LANGUAGE**  **Turkish: X**  **English: ** | | **Category of the Course** | | |
| Technical | Medical | Other(……) |
| **Prof. Dr. Nilgün Kaşifoğlu** |  | |  | X |  |

**COURSE LEVEL**

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| **SCIENTIFIC PREPARATION** | **DEGREE** | **DOCTORATE** | **SPECIALIZED FIELD COURSE** |
| **** | **** | **X** | **** |

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| **SEMESTER** | **WEEKLY CLASS HOURS** | | | **YOUR COURSE** | | | |
| **Theoretical** | **APPLICATION** | **Lab** | **Credit** | **ECTS** | **TYPE** | |
| Spring **X**  Autumn | 3 | - | - | 3 | 7.5 | MANDATORY ****  ELECTIVE **X** | |
|  | | | | | | | |
| **EVALUATION CRITERIA** | | | | | | | |
| **SEMESTER ACTIVITIES** | | | **Type of activity** | | | **Number** | **Percentage (%)** |
| Midterm Exam | | | **1** | **40** |
| Quiz | | |  |  |
| Homework | | |  |  |
| Project | | |  |  |
| Oral examination | | |  |  |
| Other (………) | | |  |  |
| **Final Exam** | | | | **60** |
| **PREREQUISITE(S)** | | | None | | | | |
| **SHORT COURSE CONTENT** | | | The basis of our body's immune system, its structure, function and how it works, its role in disease formation and protection. | | | | |
| **COURSE AIMS** | | | Advanced learning of the basic concepts of immunology, which are directly or indirectly related to many medical disciplines. | | | | |
| **COURSE CONTRBUTION TO THE PROFESSIONAL EDUCATION OBJECTIVES** | | | Learning the basic components of the human immune system and their roles in diseases | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | Explain types of immune responses  Count acquired immune response mechanisms  Explain antigen structure and properties  Count antibody structure and types  List the roles of antibody types in immune response  Define cells involved in acquired immune response | | | | |
| **TEXTBOOK** | | | Carrol KC, Pfaller MA, Karlowsky JA, Landry ML, McAdam AJ, Patel R, Pritt BS. Manual of Clinical Microbiology, (ASM Books) 4 Volume Set, 13th Edition. [Wiley-Blackwell](https://linklock.titanhq.com/analyse?url=https%3A%2F%2Fwww.nobelkitabevi.com.tr%2F195_wiley-blackwell&data=eJxNjEEOgjAQAF9DbzZAkcihB2LixRd4Mi1dYWXLmlJs8PXWm8ncZjKDbmsHXa1U2TxOpXCax02C22QMwmtu-_ZcuTTdrk6s2oXdrOBx4U_RlKM3SHJgL4KOaC16nANb3Jn4iTn4W216ivG1Fqov6ksmpSQXtkAzRmPhjb9PDrOquuM9IcF-sGSGOQHRFx-WOUc%25), 2023 | | | | |
| **OTHER REFERENCES** | | | Murray PR, Rosenthal KS, Pfaller MA. Medical Microbiology, 9th Edition. Elsevier, 2020.Levinson W, Chin- Hong P, Joyce EA, Nussbaum J, Schwartz B. Levinson - Tıbbi Mikrobiyoloji ve İmmünoloji, 16th Edition. Güneş Tıp Kitabevi, 2022. | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | |  | | | | |

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|  | **WEEKLY PLAN OF THE COURSE** | |
| **WEEK** | **HISTORY** | **TOPICS COVERED** |
| 1 |  | General principles in immunology |
| 2 |  | Antigen types and structure, Adjuvant and hapten, |
| 3 |  | Antibody structure, Antibody synthesis mechanisms and synthesis theories, |
| 4 |  | Immunoglobulin types, structure and functions |
| 5 |  | Organs involved in the immune response, their structure and functions, |
| 6 |  | Cells involved in the immune response, their structure and functions, |
| 7 |  | Midterm exam |
| 8 |  | Antibody and antigen combination mechanisms, |
| 9 |  | The mechanism of immune response and its consequences, |
| 10 |  | Humoral immune response and its characteristics, |
| 11 |  | Cellular immune response and its characteristics |
| 12 |  | Cytokines, |
| 13 |  | Immunological tolerance and immunosuppression. |
| 14 |  | Final exam |
| 15 |  |  |
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| **CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAM LEARNING OUTCOMES** | | **Contribution Level** | | |
| **NO** | **LESSON OUTCOMES** | **1**  **Little** | **2**  **Middle** | **3**  **High** |
| LO 1 | Gather as well as apply knowledge of health sciences |  | **X** |  |
| LO 2 | Ask scientific questions and form hypothesis |  |  | **X** |
| LO 3 | Search and interpret scientific literature |  |  | **X** |
| LO 4 | Design and conduct experiments as well as analyze and interpret the data |  | **X** |  |
| LO 5 | Learn how to use the experimental equipment effectively |  | **X** |  |
| LO 6 | Function on multi-disciplinary teams |  | **X** |  |
| LO 7 | Identify, formulate, and solve medical problems |  |  | **X** |
| LO 8 | Use computer effectively both in conducting the experiments and analyzing the data |  | **X** |  |
| LO 9 | Understand the impact of experimental solutions on national and international sciences |  | **X** |  |
| LO 10 | Use effective written and oral communication/presentation skills |  | **X** |  |
| LO 11 | Get an understanding of professional and ethical responsibility |  |  | **X** |
| LO 12 | Get a recognition of the need for, and an ability to engage in lifelong learning |  |  | **X** |
| LO 13 | Ability to Recognize Basic Concepts in Medical Education |  |  | **X** |
| LO 14 | Ability to Approach Ethical Problems by Focusing on Basic Concepts |  | **X** |  |

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| **Instructor of the Course**  **Prof. Dr. Nilgün Kaşifoğlu**  **Signature** | **History**  **28.02.2025** |