**Course Description Form**

| 1. Course Name: | | | |
| --- | --- | --- | --- |
| Microbiology I | | | |
| 1. Course Code: | | | |
| ClMm217 | | | |
| 1. Semester / Year: | | | |
| 1/2 | | | |
| 1. Description Preparation Date: | | | |
| 29/2/2024 | | | |
| 1. Available Attendance Forms: | | | |
| In person attendance | | | |
| 1. Number of Credit Hours (Total) / Number of Units (Total) | | | |
| 5/3 | | | |
| 1. Course administrator's name (mention all, if more than one name) | | | |
| | prof Dr. Maysoon abdul-zahra | maysoona.merdaw@copharm.uobaghdad.edu.iq |  | | --- | --- | --- | | assiss.prof. Zainab Majeed Hashim | zainab.atyia@copharm.uobaghdad.edu.iq |  | | Assiss lecturer Mohammad Hasan Muhammad | muhammad.h@copharm.uobaghdad.edu.iq |  | | assiss lecturer: Hiba Haidar Kadhum | heba.h@copharm.uobaghdad.edu.iq |  | | Sarah Nabil Abdul-Waduod | sarah.nabil@copharm.uobaghdad.edu.iq |  | | | | |
| 1. Course Objectives | | | |
| **Course Objectives** | * Understanding bacteria in terms of their presence in the environment and their nutritional requirements for growth and reproduction * Methods of transmission of bacteria and the diseases they cause * Treatments and resistance to antibiotics and environmental factors | | |
| 1. Teaching and Learning Strategies | | | |
| **Strategy** | | | Lectures  Tutorials  Google class room  Researches |
| 1. Course Structure | | | |
| | Week | Hours | Required Learning Outcomes | Unit | Learning method | Evaluation method | | --- | --- | --- | --- | --- | --- | | 1 | 3 | The history of microbiology and its importance  Anatomy of bacteria, surface appendages, capsule,  Bacterial cell wall G+ve & G-ve  Cytoplasmic membrane  Practical: shapes of bacteria | Introduction to microbiology | Lectures, Discussions, and Reports | Exam and classroom activities | | 2 | 3 | Physiology of bacterial cell, bacterial growth and bacterial requirement,  bacterial growth curve  Practical: staining of bacteria | Bacterial growth requirements | = | = | | 3 | 3 | Genetics definition of nucleic acids.  Genetic codes and types of mutations  Methods of transferring genetic material, biotechnology  Recombinant DNA  Practical: Bacterial movement | Bacterial genetics | = | = | | 4 | 3 | Bacterial sporulation  Practical: staining of spores and its position | Sporulation | = | = | | 5 | 3 | Sterilization: (chemical +  physical methods).  Practical: preparation and sterilization of media | Sterilization | = | = | | 6 | 3 | Chemotherapy (antibiotics, etc.)  Practical: isolation of bacterial colonies | Antibiotics | = | = | | 7 | Mid-term examination | | | | | | 8 | 3 | Pseudomonas and Neisseria  Practical: identification of bacterial colonies | Pseudomonas and Neisseria | = | = | | 9 | 3 | Staphylococcus and Streptococcus  Practical: biochemical reaction; oxidase and catalase test | Staphylococcus and Streptococcus bacteria | = | = | | 10 | 3 | Bacillus bacteria and Vibrio cholera  Practical: biochemical reaction; urease activity |  | = | = | | 11 | 3 | Clostridium bacteria  Practical: : bacterial reaction to citrate | Clostridium bacteria | = | = | | 12 | 3 | Diphtheria bacteria, acne bacteria,  and listeria  practical: IMVEC test | Diphtheria bacteria, acne  bacteria, and listeria | = | = | | 13 | 3 | Enterobacteriaceae family  Practical: identification of lactose fermenter and non-lactose fermenter bacteria | Enterobacteriaceae family | = | = | | 14 | 3 | Infectious spirochete bacteria and salmonella  Practical: identification of lactose fermenter and non-lactose fermenter bacteria | Infectious spirochete bacteria  and salmonella | = | = | | 15 | 3 | Tuberculosis and leprosy bacteria  Practical: antibiotics sensitivity test | Tuberculosis and leprosy  bacteria | = | = | | | | |
| 1. Course Evaluation | | | |
| Mid-term examination (15 marks)  Quiz and homework (5 marks)  Practical work (20 marks)  Final examination (60 marks) | | | |
| 1. Learning and Teaching Resources | | | |
| Required textbooks (curricular books, if any) | | Lippincotts illustrated review microbiology, 2nd ed.  -A color Atlas of microbiology by Ronald John Olds  -Jawetz, Melnick, & Adelberg's. Medical Microbiology 26th ed. | |
| Main references (sources) | |  | |
| Recommended books and references (scientific journals, reports...) | | -Bailey & Scott’s Diagnostic Microbiology  14th ed.  -Hugo and Russell's Pharmaceutical Microbiology;  8th. ed. | |
| Electronic References, Websites | |  | |