Medical Bacteriology Syllabus (Practical)

Semester : second	**Academic Year:2025**
Level: medica Students	**Major:**
Course Title: Practical medical bacteriology	**Department: Department of Microbiology, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran**
Course Code: 1274029	**University Professor or Faculty member**
Class NO: General lab of Bacteriology and Virology Department	**Class Hours: Wednesday 10-12**
Prerequisite:	**Credit Units: 1**
Responsible for the lesson: Dr. Hosseini	**Tel:+983137929147 (Dr.Hosseini)**
Office Address: Department: Department of Bacteriology, School of Medicine	**E-mail** nafisehhosseini@yahoo.com

Main Objective: Learning practical microbiology and its application in medical microbiology

Course Description:

The study of bacterial shape and morphology, working with a variety of microscopes, bacteria staining, preparation of culture media and sterilization of instruments and culture media, isolation of bacteria from clinical samples, and susceptibility of bacteria to antibacterial compounds.

Learning Outcomes:

On completion of the course, the student is expected to be able to:

1. Describe the importance of laboratory of bacteriology in the clinic.
2. Describe the types and methods of clinical sampling.
3. Prepare clinical samples for direct examination and staining (especially hot staining).
4. Describe the culture method and suggest appropriate analysis based on clinical information.
5. Explain the importance and purpose of antibiotic susceptibility testing.
6. Perform and interpret antibiotic susceptibility testing

Assessment Methods

The Assessment Methods that will be Used to Test Students Learning outcomes & the Skills & Competencies Stated in learning Outcomes

Assessment	Score From 20
Mid Exam	0
Final theoretical Exam	8.5
Final Practical Exam	8.5
Assignments and lab report	3
Total Marks	20

Main References (Text Books): Medical Microbiology 8th Edition

Diagnostic Microbiology. Bailey & Scott's

References for More Reading:

Student's Responsibilities:

- To be on time
- Considering the Immune instruction and obey the lab rules
- Participate in Class discussions and practical activities

Attendance Rules:
The students should be present on all lectures.

Final Exam Date: By student s coordinati

Session NO.	Main Topic	Teacher's name	Date	Practical Activity
1	Laboratory safety, and Physical methods of sterilization Introduction of Medical Bacteriology lab, Instruments. To prove Microorganism are all over	Dr.Hosseini	2025/02/19	Preparing environmental culture (from different places)
2	Investigation of macroscopic and microscopic properties of bacteria, Staining methods	Dr.Hosseini	2025/02/26	Investigating last session cultures Preparing smears and simple staining
3	Specimen Management and direct microscopic examination	Dr.Hosseini	2025/03/05	Throat direct smear and culture Doing gram staining
4	Clinical laboratory diagnosis of *Streptococcus spp.*	Dr.Hosseini	2025/03/12	Get familiar with some clinical diagnostic tests of *Streptococcus spp.* As CAMP test, OP test,…..
5	Clinical laboratory diagnosis of *Staphylococcus spp.*	Dr.Hosseini	2025/04/09	Get familiar with some clinical diagnostic tests of Staphylococus spp. Dnase. MSA, catalase, Coagulase
6	Urine Specimens – Types of / Collection and Processing Clinical laboratory diagnosis of *Enterobacteriaceae*	Dr.Hosseini	2025/04/16	Urine Culture Get familiar with some clinical diagnostic tests *of Enterobacteriaceae (E.coli & Klebsiella)*
7	Stools specimens / indications for culture Pathogens isoloated from faecal specimen (*Salmonella, and Shigella)*	Dr.Hosseini	2025/04/23	Get familiar with some clinical diagnostic tests of Enterobacteriaceae Salmonella, and Shigella)
8	Blood culture / Automated processing of blood culture. Pseudomonas, and Proteus	Dr.Hosseini	2025/04/30	Get familiar with some clinical diagnostic tests of Pseudomonas, and Proteus
9	Antimicrobial Susceptibility Test (Antibiogram)	Dr.Hosseini	2025/05/07	Doing Antibiogram test by disk diffusion method
10	Rapid review of prepared Slides	Dr.Hosseini	2025/05/14	Observing some prepared microscopic Slides