Theoretical and practical course plan form

Ilam University of Medical Sciences

\* Introduction to the course: Microbiology (virus, bacteria) \* The first semester:

\* School: Paramedical \* Department: Microbiology

\* Course Name and Number: Microbiology (Virus Bacteria)

\* Course and Degree: Bachelor of Anesthesiology

\* Day and time: Saturday 12-10 \* Venue: Paramedical School

\* Name of the person in charge of the course (course instructor):

 \* Prerequisite courses: None

\* Office Address: \* Email Address:

**General Objective of the course:** Familiarity of students with general characteristics and pathogenicity of bacteria

**The general topics of this course include the following:**

1. Explain the history of microbiology, the golden age of microbiology, and the role of scholars such as Pasteur and Koch.

2- To show the types of microbiology fields and the application of microbes in nature and the processes related to their pathogenesis.

3- Know and explain the morphology of bacteria

4. Explain the structure of bacteria and the difference between gram-positive and gram-negative bacteria

5-. Familiar with the types of bacterial structures such as pili-spores-capsules and flagella and be able to explain their function and structure

6-. Explain the types of important methods for classifying bacteria

**General purpose**

At the end of the training sessions, students are introduced to the history of microbiology and the importance of microorganisms and their role in pathogenesis and industry, and learn generalities about the shape and structure of microorganisms.

**Specific goals**

The student must be able to:

1. Explain the history of microbiology, the golden age of microbiology, and the role of scholars such as Pasteur and Koch.

 2- To show the types of microbiological fields and the application of microbes in nature and the processes related to their pathogenesis

 3- Know and explain the morphology of bacteria

 4. Explain the structure of bacteria and the difference between gram-positive and gram-negative bacteria

 5- Familiar with different types of bacterial structures such as pili-spores-capsules and flagella and be able to explain their function and structure

 6. Explain the types of important methods for classifying bacteria

**training method**

Presentations are given in the form of lectures using PowerPoint. After 45 minutes of presentation, students are given 5 minutes of rest, then the presentation continues for another 35 minutes. The class is divided into 4 working groups to discuss the topics explained at the end of the class, and then one person from the group is selected to give a brief explanation and is allowed to give about 5 minutes about the lesson. Has been spoken. There is a possibility of group discussion in class once in each session.

**Terms of implementation**

 **Student tasks** (student homework during the semester): Students should be able to learn and explain some of the issues raised in the specific and general objectives of the lesson while attending class on time.

**Main sources** (observing the principles of source writing and giving an address for their preparation, including library, bookstore, internet, ......):

**Teaching methods and teaching aids used**: 1- Materials are presented using PowerPoint. If there is a need for explanation and the student wants to provide more explanation, the writing process on the whiteboard is used.

Methods and time of assessment and evaluation of the student and the bar related to each evaluation: (Type of exams in terms of how to design a question - loading - time of exams and assignments should be mentioned)

|  |  |  |  |
| --- | --- | --- | --- |
| method | score | Date | time |
| Quiz, group discussion, seminar | 2 |  |  |
| midterm | 9 |  |  |
| End of semester | 9 |  |  |

Course Name: Microbiology Field: Anesthesiology School: Paramedical

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| session | day | date | time | topic | lecturer |
| 1 | Saturday |  | 10-12 | History, classification, structure and functions of bacteria |  |
| 2 | Saturday |  | 10-12 | Growth, metabolism and genetics of bacteria |  |
| 3 | Saturday |  | 10-12 | Antimicrobials (disinfectants and antibiotics) |  |
| 4 | Saturday |  | 10-12 | Gram-positive purulent cocci |  |
| 5 | Saturday |  | 10-12 | Gram-negative purulent bacteria |  |
| 6 | Saturday |  | 10-12 | Enterobacteriaceae and related bacteria |  |
| 7 | Saturday |  | 10-12 | Pseudomonas, fungi-like bacteria and zoonotic bacteria |  |
| 8 | Saturday |  | 10-12 | Uncommon bacteria (Mycoplasma, Rickettsia, Chlamydia, etc.) |  |
| 9 | Saturday |  | 10-12 | Legionella and spirochetes |  |
| 10 | Saturday |  | 10-12 | Toxin-producing bacteria and anaerobic bacteria without spores |  |
| 11 | Saturday |  | 10-12 | General virology and antiviral drugs |  |
| 12 | Saturday |  | 10-12 | DNA viruses (1) |  |
| 13 | Saturday |  | 10-12 | DNA viruses (2) |  |
| 14 | Saturday |  | 10-12 | RNA viruses (1) |  |
| 15 | Saturday |  | 10-12 | RNA viruses (2) |  |