

**BSc. Dental technician**

**Course Syllabi**

|  |  |
| --- | --- |
| **Course** | **MICROBIOLOGY WITH PARASITOLOGY** |
| Type | Semester | ECTS | Code |
| OBLIGATORY (O) | 3 | 4 |  |
| **Course Lecturer** | Prof. Asistent. Dr. Osman Fetoshi |
| **Course Assistant** | Prof. Asistent. Dr. Osman Fetoshi |
| **Aims and Objectives** | The objective of the course is students to gain knowledge of microbial biology, metabolism, genetics, taxonomy, ecology and behavior of microorganisms, including bacteria, viruses, fungi and parasites. These knowledge are essential to understanding their role in health, disease and the environment. Microbiology and Parasitology in the context of diseases, aims to identify and characterize pathogenic microorganisms.The purpose of this course is enable the student to know:* The role of microorganisms in causing infections and diseases in humans;
* This knowledge is essential to understand how diseases are caused, transmitted and how they can be prevented;
* Understand how the immune system works, how the immune system responds to pathogens, and how it maintains self-tolerance to prevent autoimmune diseases.
 |
| **Learning outcomes** | Upon satisfactory completion of the course, a student will be able to:* Understand the basic differences between bacteria, viruses, fungi and parasites;
* To understand how a patient with an infectious disease can be diagnosed;
* Students will be able to explain and apply laboratory tests from microbiology and parasitology laboratories;
* To apply methods of sterilization, disinfection with the aim of preventing infectious diseases;
* To understand and appreciate the positive aspects of microbiology and parasitology in disease prevention and control.
 |
| **Alignment of course learning outcomes with program learning outcomes** | 1. **Application of theoretical knowledge:**
* Bsc program (Outcome 2): Focuses on the differences between groups of micro-organisms such as bacteria, viruses, fungi and parasites.
1. **Evaluation and critical analysis:**
* BSc Program (Outcome 3,): Involves understanding the etiological factors of disease causation, and their prevention.
1. **Development of practical skills:**
* Bsc Program (Outcome 3, 4, 7, 14, 15): Includes understanding of sterilization and disinfection processes, and good laboratory practices.
 |
| **Content** | ***Weekly schedule*** | ***Week*** |
| Introduction to Microbiology and its history | 1 |
| Biological characteristics of microorganisms | 2 |
| Metabolism and diversity of microorganisms | 3 |
| Physiological flora of microorganisms in the human body | 4 |
| Diseases caused by bacteria | 5 |
| Basics of Immunology, host defense mechanisms | 6 |
| **The first colloquium** | 7 |
| Microbial growth control, sterilization and sterilization techniques | 8 |
| General characteristics of viruses, diseases caused by viruses | 9 |
| Antibiotics, their action and antibiotic resistance | 10 |
| Basics of Medical Mycology (construction, classification, replication and occurrence of mycotic diseases) | 11 |
| Basics of Medical Parasitology (construction, classification, replication of parasites and occurrence of parasitic diseases) | 12 |
| Epidemiology and nosocomial infections | 13 |
| **The second colloquium** | 14 |
| Final exam | 15 |
|  | ***Exercise Content/Weekly Plan*** | ***Week*** |
| Introduction to the Laboratory of Microbiology and Parasitology basic principles in their work | 1 |
| The microscope, its history, construction, types, use and care | 2 |
| Preparation of preparations for microscopy - printed point | 3 |
| Preparation of preparations for microscopy - dependent point | 4 |
| The difference between prokaryotic and eukaryotic cells – Preparation of preparations of epithelial cells and their staining | 5 |
| Preparation, staining and fixation of preparations Simple staining according to Gram | 6 |
| Composite Gram stain | 7 |
| Laboratory diagnosis ofSelected protozoal infections | 8 |
| Sterilization and sterilization equipment | 9 |
| Determination of biochemical and physiological properties of microorganisms – Staphylase test for determination of S. aureus. | 10 |
| Cultivation of microorganisms, preparation of nutrient grounds and planting | 11 |
| Antibiogram tests and their interpretation | 12 |
| **Teaching/****Learning****Methods** | **Learning activity** | **Weight (%)** |
| Lectures | 50% |
| Laboratory work | 30% |
| Study visit | 10% |
| Group presentations | 10% |
| Total | 100% |
| **Assessment methods** | **Assessment methods** | **Weight (%)** |
| Participation in lectures, exercises and activities (compulsory attendance of 2/3 of the lectures and exercises) | 10% |
| Seminar paper | 10% |
| Half-term exam I | 25% |
| Half-term exam II | 25% |
| Laboratory work | 30% |
| Final exam | 50% |
| Total | 100% |
| **Resources and means of concretization** | **Means****Number** |
| class |
| Laboratory, ward/clinic |
| Electronic platform - Moodle |
| Necessary learning technology (TV, computer, internet) |
| Written theoretical-practical materials, study materials, papers and research presentations in the narrow field of study |
| Report sheet for practical and research work |
| Study visits to public and private institutions |
| **ECTS Load** | **Activity type** | **Weekly hours** | **Total load** |
| Lectures | 2 | 24 |
| Literature research | 1 | 6 |
| Laboratory exercises | 1 | 12 |
| Study visit | 1 | 2 |
| The student's own study time | 4 | 48 |
| Time spent on assessment (exam, colloquium, quiz) | 2 | 4 |
| Consultations with teacher | 1 | 4 |
| Final exam preparation | 1 | 10 |
| Project presentations | 1 | 10 |
|  | **120h** |
| **Literature** | 1. Byku, B., "General Microbiology , Tirana, 2003.
2. Hmzaraj, E., "General Microbiology" Tirana, 2007.
3. Mullici, Gj. "Sampling in clinical microbiology, Pristina, 2005.
4. Murray, Rosenthal, Pfaller: Medical Microbiology, Tirana, 2018.
5. Plakolli, M., "General Microbiology ", Prishtina, 2001.
6. Plakolli, M., "Practicum for Microbiology", Prishtina, 2001
7. Madigan, M., Martinko, J., Bender, K., Buckley, D. and Stahl, D., “Brock Biology of Microorganisms” 16 Edition, Pearson, New York, USA, 2021.
8. Tortora, Funke, Case “Microbiology an Introduction” 13 Edition, 2019, USA.
9. Prescot, L. M. Harley., P. J. and D. A. Klein, “Microbiology” 11Edition, Mcgraw-Hill, 2020.
 |
| **Contact:** | Osman Fetoshi, osman.fetoshi@ubt-uni.net ; +383 44 784 421 |

**Pre-requirements for the course**

This course does not have any pre-requirements.

**Assessment of Competence**

For the class to reach a master’s level of learning, students must prepare by reading the given material, complete all assignments for each class. Students will be evaluated for participation as:

* Full participation in class activities and group work.
* Participation in class discussions (without dominating the conversation).
* Demonstrating understanding of the content of the material read.
* Providing critical thinking about the subject matter.
* Adding ideas to class discussion.
* Helping others clarify an idea.
* Supporting others as they share their ideas and speak in class.
* Raising new ideas and questions.
* Arriving on time and staying throughout the lesson.

**Participation policy**

Students are expected to attend all lectures and exercises. The importance of class attendance is reflected in the percentage of the grade associated with attendance. You cannot receive attendance grades if you are not in class. If you have an emergency and cannot attend class, please email me in advance to let me know. Class will start on time to honor everyone's commitment. If you are late, please enter the classroom quietly. Participation marks will be deducted for lateness.

**Students must be present at least 2/3 lectures and exercise**

**Rules and Regulations**

**Attendance**

UBT College undertakes the responsibility of training future professionals to the highest standards. One of these standards is taking responsibility for personal actions. If a student misses a particular session, the student has lost that instruction forever. They can never be repeated. When a student is late to class, the entire class is interrupted. Such interruptions will not be tolerated. Students have a responsibility and a contract to stay in class for the duration of the sessions, for each day. Students who leave sessions early, even if they leave with permission, cause disciplinary problems that will not be tolerated.

You made a contract with the UBTs to be in class and attentive throughout the learning process. Every student must be in every session, every day that is scheduled, throughout the semester.

All teaching sessions begin at their designated times in the lesson timetable. All sessions start and end at designated times in the class schedule. Any student who leaves the class session early will be considered absent.

**Electronic Devices**

It is distracting to everyone in the classroom when cell phones ring during class. This is even worse if it happens during a test or quiz. Since this is a classroom and not a room for listening and/or viewing electronic devices such as smart phones, personal laptops and/or other electronic devices will not be allowed.

The classroom will be a cell phone free zone. If you must bring a cell phone to class, it must be turned off or set to vibrate. It is distracting for a classroom to have students constantly answering cell phones during class. If you absolutely must answer the call, leave the classroom. A student who accepts calls during class will be asked to leave class. Hearing devices will not be allowed in the classroom for any reason.

**Tests And Quizzes**

Tests and quizzes are usually scheduled at the beginning of the lesson. Tests and quizzes are one-way teachers measure a student's knowledge. Failure to participate in tests or quizzes interferes with this process. UBT College does not reward students who do not take their tests or quizzes on time; therefore, the teacher cannot allow students to take tests or quizzes after the deadline.

Tests and quizzes must be taken by each student, any student who asks for help or helps other students during a test or quiz will be removed from the test and will be graded zero for that test or quiz. It is the student's responsibility to prepare for tests and quizzes at all times. It is the student's responsibility to know when there are tests or quizzes to take.

**Seminars and Projects**

Seminars and projects must be done on the student's own time, not during class.

Never allow another student to copy your seminars and projects.

Never copy another student's seminars and projects.

**Due Dates**

One thing all professionals must learn is to be on time. Excuses do not make the student and teacher feel better about their wasted time. For all assigned tasks, sufficient time is given to complete, and all work must be completed in the time set by the teacher. **No delay in the completion of the works will be accepted**.

**Proper Attire**

Professionals must dress appropriately. Any student who does not dress appropriately during class time will not be allowed to participate in class activities.

**Conduct**

Students at UBT College must learn to work in groups, regardless of group composition. Tolerance, courtesy, respect, and a peaceful environment are required in the classroom.

All students are expected to be respectful to other students and to the teacher during class and in dealing with class matters. Disrespectful behavior will affect your participation grade. Examples of respectful behavior in the classroom include, but are not limited to:

* Listening to each other and exchanging ideas.
* Arrival and departure according to the class schedule, except in cases of emergency.
* Turn off the cell phone ringer and do not receive calls in class.
* Speak so that others can hear and understand what you are saying.
* Engaging in class discussion (avoiding side conversations during class and dominating class discussion).
* Listening (not speaking) when the teacher or other students are addressing the class.
* Working collaboratively with a specific or selected group.
* Completion of class work on time.
* Focusing on class topics and not on personal matters or work unrelated to the class.
* Viewing your computer and/or cell phone only when related to class work.
* Raising questions when there is no clarification about the work in class.

**Academic Dishonesty**

Violations of Academic Integrity include, but are not limited to, the following actions:

* Cheating on an exam.
* Plagiarism.
* Working together on an individual assignment, paper, or project when the instructor has specifically stated students should not do so.
* Submitting the same term paper to more than one instructor or allowing another individual to assume one’s identity for the purpose of enhancing one’s grade.