



Information about the subject

Degree: Bachelor of Science Degree in Human Nutrition and Dietetics

Faculty: Faculty of Medicine and Health Sciences

Code: 1310102 **Name:** Microbiology and Parasitology

Credits: 6,00 **ECTS Year:** 1 **Semester:** 2

Module: Basic Sciences Module

Subject Matter: Microbiología **Type:** Basic Formation

Department: Biomedical Sciences

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

131A [Maria Jesus Vega Bello](#) (**Responsible Lecturer**)

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Module organization

Basic Sciences Module

Subject Matter	ECTS	Subject	ECTS	Year/semester
Biología	6,00	Biology and Genetics	6,00	1/1
Bioquímica	6,00	Biochemistry	6,00	1/2
Química	12,00	Basic Fundamentals of Chemistry	6,00	1/1
		Organic Chemistry	6,00	1/2
Fisiología	12,00	Physiology	6,00	1/2
Estadística	6,00	Biostatistics	6,00	1/1
Anatomía Humana	6,00	Human Anatomy	6,00	1/1
Antropología	12,00	Anthropology	6,00	1/1
Microbiología	6,00	Microbiology and Parasitology	6,00	1/2
Inglés	6,00	English	6,00	1/2

Recommended knowledge

Not established



Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 Compt25 - - Design, intervene and execute dietary-nutritional education programs and training in nutrition and dietetics.
- R2 Compt27 - - Acquire the ability to intervene in promotion, prevention and protection projects with a community and public health approach.
- R3 Con1 - - To have acquired advanced knowledge and demonstrated an understanding of the theoretical and practical aspects and the working methodology in their field of study with a depth that reaches the forefront of knowledge.
- R4 Con12 - - To know the microbiology, parasitology and toxicology of food.



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
	15,00%	Assessment of individual or group activities or practical exercises, which require students to research and organize information related to each subject, and solve cases or problems. This is done through a continuous assessment system throughout the course, which involves the submission and/or presentation of assignments, the objectives and content of which will be set by the instructor.
	15,00%	Evaluation of practical work in the laboratory, or culinary techniques workshop laboratory, through which the acquired skills must be demonstrated and that one is able to use them to solve the different situations and problems that arise in a laboratory; this evaluation may be carried out through one of the following methods, or a combination of several of them: an individual written test, the individual or group performance of a laboratory experiment, the submission of an individual or group report on the work carried out in the laboratory.
	65,00%	Written assessment of the knowledge and skills acquired. This test may consist of a series of open-ended or multiple-choice questions on the theoretical content of the subject and/or practical exercises (problem-solving).
	5,00%	Evaluation of the effectiveness of practical classroom classes, problem-solving or computer science sessions, seminars and tutorials. Through attendance and participation in the various activities planned.

Observations

In the final individual written test, a minimum mark of 4.5 out of 10 is required to calculate the average with the rest of the assessment items.



In the final practical exam, a minimum grade of 4.5 out of 10 is required to calculate the average, provided that the average grade for the practical tests is 5 or higher. If the average is less than 5, a minimum grade of 5 is required to pass the practical exam.

Attendance at practical sessions is compulsory.

The course cannot be passed without passing the practical sessions.

The course is considered passed when a grade of 5 or higher is achieved.

This course does not allow for a single assessment, as it requires compulsory practical activities with active student participation.

The grading criteria applied to students in their second and subsequent enrolments will be 70% for the theoretical content exam and 30% for the practical content exam. The course is considered passed when a grade of 5 or higher is achieved.

A maximum of one Honors will be awarded for every 20 students enrolled. To be eligible for Honors, an overall grade of at least 9.5 out of 10 is required.

Use of AI

Students may use AI for personal study of the subject. Students may NOT use AI to complete assessable tasks, unless required for a specific activity and indicated by the teacher. If AI is used in any of the activities, students must cite in which part of the activity it was used, which AI tool was used, and the prompt used.

MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M1 Group preparation of readings, essays, problem-solving, seminars, papers, reports, etc... for discussion or submission



- M2 Group preparation of readings, essays, problem-solving, seminars, papers, reports, etc... for discussion or submission
- M3 Personalized attention in small groups. A period of instruction and/or guidance provided by a tutor to review and discuss the materials and topics presented in classes, seminars, readings, assignments, etc. Student attendance and their gradual progress in understanding the subjects will be evaluated.
- M5 Student study: individual preparation of readings, essays, problem solving, seminars, papers, memoirs, etc. for discussion or submission in electronic format.
- M7 Individual or group work sessions in groups supervised by the teacher, which take place in spaces with specialized equipment.
- M9 The teacher will present the content, analyze competencies, and explain and demonstrate skills, abilities, and knowledge in the classroom.
The whiteboard, computer, and projector will be used to display texts, graphics, etc.



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ASSESSMENT M2	R3, R4	2,00	0,08
TUTORING M3, M7	R3, R4	2,00	0,08
SEMINAR M1, M5	R3, R4	2,00	0,08
LABORATORY M3, M7	R3, R4	15,00	0,60
THEORETICAL CLASSES M3, M9	R2, R3, R4	39,00	1,56
TOTAL		60,00	2,40

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
INDEPENDENT GROUP WORK M2, M5	R2, R3, R4	10,00	0,40
INDIVIDUAL SELF-EMPLOYMENT M5, M7, M9	R1, R2, R3, R4	80,00	3,20
TOTAL		90,00	3,60



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
UNIT I: GENERAL MICROBIOLOGY	Topic 1. Introduction to Microbiology Topic 2. Areas of study in Microbiology Topic 3. Taxonomy: Nomenclature and Classification of Microorganisms. Topic 4. Methods of study and Identification of Microorganisms
UNIT II: BACTERIA	Topic 5. Structure and function of the prokaryotic cell. Topic 6. Microbial nutrition, metabolism and development. Topic 7. Bacterial growth. Topic 8. Microbial genetics. Topic 9. Sterilisation and disinfection. Topic 10. Antimicrobials. Topic 11. Mechanisms of microbial infectivity. Topic 12. Bacteria of health interest not related to food. Topic 13. Gram-positive bacteria transmitted by food. Topic 14. Gram-negative bacteria transmitted by food.
UNIT III: VIRUSES	Topic 15. Classification, structure and replication of viruses. Topic 16. Foodborne viruses.
UNIT IV: FUNGI	Topic 17: Classification, structure and replication of fungi.
UNIT V: PARASITES	Topic 18. Classification, structure and replication of parasites. Topic 19. Foodborne human parasites of public health interest. Topic 20. Non-foodborne human parasites of public health interest.



Temporary organization of learning:

Block of content	Number of sessions	Hours
UNIT I: GENERAL MICROBIOLOGY	6,00	12,00
UNIT II: BACTERIA	16,00	32,00
UNIT III: VIRUSES	3,00	6,00
UNIT IV: FUNGI	2,00	4,00
UNIT V: PARASITES	3,00	6,00

References

BASIC:

- Introduction to Microbiology Gerard J. Tortora, Berdell R. Funke, Christine L. Case Gerard J. Tortora, Berdell R. Funke, Christine L. Case 12th edition (2017). Panamericana.
- Microbiology in Health Sciences. Karin C VanMeter and Robert J Hubert 3rd edition (2023) Elsevier
- Basic Medical Microbiology Patrik R.Murray . 2nd edition (2024). Elsevier.

SUPPLEMENTARY:

- SEIMC scientific documents <https://www.seimc.org/documentos/protocolos/microbiologia>