



Information about the subject

Degree: Bachelor of Science Degree in Dentistry

Faculty: Faculty of Medicine and Health Sciences

Code: 481107 **Name:** Microbiology

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

Module: Module 1: Relevant Basic Biomedical Sciences in Dentistry

Subject Matter: Biology **Type:** Compulsory

Field of knowledge: Health sciences

Department: -

Type of learning: Classroom-based learning

Languages in which it is taught: English, Spanish

Lecturer/-s:

481A	<u>Sofia Ingesa Capaccioni</u> (Responsible Lecturer)	sofia.ingresa@ucv.es
	<u>Maria Jesus Vega Bello</u>	mj.vega@ucv.es
481GIQ	<u>Sofia Ingesa Capaccioni</u> (English Responsible Lecturer)	sofia.ingresa@ucv.es
	<u>Maria Amparo Vila Caballer</u>	ma.vila@ucv.es



Module organization

Module 1: Relevant Basic Biomedical Sciences in Dentistry

Subject Matter	ECTS	Subject	ECTS	Year/semester
HUMAN ANATOMY	12,00	Embryology and General Anatomy I	6,00	1/1
		General Anatomy II and Oral Anatomy	6,00	1/2
Biology	18,00	Biology	6,00	1/1
		Histology	6,00	1/2
		Microbiology	6,00	1/2
Physiology	6,00	Human and Oral Physiology	6,00	1/2
Biochemistry	6,00	Biochemistry	6,00	1/1
MODERN LANGUAGE	12,00	Modern Language: English	6,00	2/2
		Modern language: Spanish	6,00	2/2



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 Distinguishes the different levels of organization of living beings.
- R2 Knows how to use different work techniques in the laboratory.
- R3 Interprets results obtained in the practices.
- R4 Looks for information in bibliographic sources, and knows how to analyze them.
- R5 Knows the basics of Microbiology and the main microorganisms related to the infectious processes that affect man.
- R6 Knows the basic principles of obtaining and transporting samples to the laboratory, as well as their processing.
- R7 Knows the main techniques of microbiological diagnosis and the proper interpretation of all of them being able to issue a diagnosis in relation to oral pathology.
- R8 The student knows the mechanism of action of antibiotics and the main indications of their therapeutic use.
- R9 Knows the main methods of sterilization and disinfection, in order to apply them properly.
- R10 Knows the most relevant clinical pictures of infectious etiology in the clinic and especially in dentistry.
- R11 The student is able to adequately record the information obtained and prepare reports for multidisciplinary teamwork.
- R12 Searches for bibliographic information from different sources (including English) and know how to analyze it with a critical and constructive spirit.



Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

GENERAL	Weighting			
	1	2	3	4
CG1 I aCapacity for analysis and synthesis			x	
CG2 I bOrganizational and planning skills		x		
CG12 FInterpersonal skills		x		
CG3 I cOral and written communication in the native language		x		
CG4 I dKnowledge of a foreign language		x		
CG14 FCritical Reasoning		x		
CG6 I fInformation management capacity			x	
CG16 SAutonomous learning			x	
CG7 I gProblem solving			x	
CG17 SAdaptation to new situations		x		
CG8 I hDecision making			x	
CG9 P iTeamwork			x	
CG19 SLeadership			x	
SPECIFIC	Weighting			
	1	2	3	4



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tals of action, indications and efficacy of ic interventions, knowing their ons, systemic effects and interactions on available scientific evidence.			X	
e the principles of ergonomics and safety of cross-infection, radiation protection and al diseases).				X
nd know how to use clinical and sources to obtain, organize, interpret and d health information.			X	
d and have the critical capacity to value the d the new information. Be able to ect and critically evaluate information for , following the scientific method.			X	
Weighting				
	1	2	3	4
ills			X	
ng capacity		X		

tals of action, indications and efficacy of ic interventions, knowing their ons, systemic effects and interactions on ailable scientific evidence.			X	
e the principles of ergonomics and safety of cross-infection, radiation protection and al diseases).				X
nd know how to use clinical and ources to obtain, organize, interpret and d health information.			X	
d and have the critical capacity to value the d the new information. Be able to ect and critically evaluate information for , following the scientific method.			X	
Weighting				
	1	2	3	4
ills			X	
ng capacity		X		



1. c.	Oral and written communication in the native language.			X
1. d.	Knowledge of a foreign language	X		
1. f.	Information management capacity	X		
1. g.	Problem solving	X		
2. i.	Teamwork	X		
2. l.	Interpersonal skills	X		
2. o.	Ethical commitment	X		
3. u.	Initiative and entrepreneurship	X		
3. v.	Motivation for quality		X	



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R5, R8, R9, R10	60,00%	MULTIPLE CHOICE TEST: Multiple choice test with one correct answer. This shows to greater extent the contents acquired by the student.
R4, R8, R11, R12	10,00%	PRESENTATION: The student develops by means of an oral presentation, supported with audio-visual materials, a theme or topic given by the teacher. At the end of the presentation, the teacher or audience may ask questions.
R2, R3, R6, R7	10,00%	PRACTICAL: Written test in which the student is asked to solve practical exercises, clinical cases or problems about the contents of different subjects.
R2, R3, R6, R7, R9	20,00%	PRACTICAL EXAM: The student carries out a test in which he/she must show by means of practical application the acquisition of certain knowledge. For example, histological or anatomopathological diagnoses, interpretation of images or diagnostic tests.

Observations

To pass the subject, you must achieve a grade equal to or higher than 5 in both the theoretical and practical parts of the subject. In the event of passing one part of the subject (theory or practical) and failing the other in the first attempt, the grade for the passed part will be retained for the second attempt. If, after the second attempt, only one part of the subject has been passed, the grade will not be carried over to the next course.

Attendance in practical sessions is mandatory, and any absences must always be justified.

- In case of one justified absence, the student may take the exams in the first and second attempts as usual.
- In case of two or more justified absences, the student may not take the exam in the first attempt but may do so in the second attempt.
- In case of one unjustified absence, the student may not take the exam in the first attempt but may do so in the second.
- In case of more than one unjustified absence, the student may not take the exam in either the first or second attempt and will have to retake the subject in the following course.



Awarding of Honors: Honors may be granted to the top-performing students, provided they achieve an overall grade equal to or higher than 9.

The maximum number of Honors granted will follow the following rule:

- 1 Honor for 1 to 39 enrolled students.- 2 Honors for 40 to 59 enrolled students.- 3 Honors for 60 to 79 enrolled students.

CRITERIA FOR AWARDING HONORS: According to Article 22 of the Regulations Governing the Evaluation and Grading of Subjects at UCV, the "Honors" designation may be awarded by the course instructor to students who have achieved a grade of "Outstanding." The number of "Honors" designations that can be awarded may not exceed five percent of the students included in the same official record, unless this number is less than 20, in which case only one "Honor" may be granted.

MENTION OF DISTINCTION:

According to Article 22 of the Regulations governing the Evaluation and Qualification of UCV Courses, the mention of "Distinction of Honor" may be awarded by the professor responsible for the course to students who have obtained, at least, the qualification of 9 over 10 ("Sobresaliente"). The number of "Distinction of Honor" mentions that may be awarded may not exceed five percent of the number of students included in the same official record, unless this number is lower than 20, in which case only one "Distinction of Honor" may be awarded.

Learning activities

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

- | | |
|-----|---|
| M1 | Lecture.
Problem Solving.
Explanation of contents by the teacher.
Explanation of knowledge and skills. |
| M2 | Practical basic sciences laboratory sessions, practical simulation laboratory sessions, virtual hospital and dissecting room. |
| M10 | Carrying out bibliographic reviews and practical work experience dissertations. |
| M13 | Personal preparation of written texts, essays, problem solving, seminars. |
| M15 | Personalised Attention. Period of instruction and/or guidance carried out by a tutor with the aim of analysing with the student his/her work, activities and evolution in learning of subjects. |



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
THEORY CLASS M1	R4, R5, R7, R8, R10, R11, R12	46,00	1,84
SEMINAR M13	R5, R7, R12	2,00	0,08
TUTORING M15	R5, R11, R12	2,00	0,08
EVALUATION M1, M2, M10	R5, R6, R7, R8, R9, R10, R11	2,00	0,08
PRACTICAL CLASS M2	R6, R7	8,00	0,32
TOTAL		60,00	2,40

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
INDIVIDUAL WORK M13	R12	30,00	1,20
GROUP WORK M10, M13	R11, R12	60,00	2,40
TOTAL		90,00	3,60



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
I. GENERAL MICROBIOLOGY	·Chapter 1. Introduction ·Chapter 2. Bacteria ·Chapter 3. Viruses ·Chapter 4. Fungi
II. IMMUNOLOGY	·Chapter 5. Defenses against microorganisms
III. CLINICAL MICROBIOLOGY	·Chapter 6. Infections of the skin and soft tissues ·Chapter.7. Infective endocarditis and sepsis syndrome ·Chapter.8. Respiratory tract infections ·Chapter 9. Genitourinary tract infections ·Chapter.10. CNS infection
IV. ORAL MICROBIOLOGY	·Chapter 11. The oral microflora and dental plaque ·Chapter 12. Dental caries ·Chapter 13. Periodontal diseases ·Chapter 14. Infections of the pulp, periapical tissues and bone of the jaw ·Chapter 15. Salivary gland infections ·Chapter 16. Antimicrobial agents



Temporary organization of learning:

Block of content	Number of sessions	Hours
I. GENERAL MICROBIOLOGY	10,00	20,00
II. IMMUNOLOGY	2,00	4,00
III. CLINICAL MICROBIOLOGY	8,00	16,00
IV. ORAL MICROBIOLOGY	10,00	20,00

References

1. Essential Microbiology for Dentistry - Samaranayake, L. 5th Edition. Churchill Livingstone. 2012.



Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

☐

Microsoft Teams

☐

Kaltura



Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

☐

Microsoft Teams

☐

Kaltura

Explanation about the practical sessions:



2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

☒ The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

☐ The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: