Information about the subject

Degree: Bachelor of Science Degree in Dentistry

Faculty: Faculty of Medicine and Health Sciences

Code: 481105 **Name:** Epidemiology and Statistics

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

Module: Module 2: Introduction to Dentistry

Subject Matter: STATISTICS **Type:** Basic Formation

Field of knowledge: Health Sciences

Department: Biostatistics, Epidemiology, and Public Health

Type of learning: Classroom-based learning

Languages in which it is taught: English, Spanish

Lecturer/-s:

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Module organization

Module 2: Introduction to Dentistry

Subject Matter	ECTS	Subject	ECTS	Year/semester
PSYCHOLOGY	6,00	Psychology	6,00	2/2
STATISTICS	6,00	Epidemiology and Statistics	6,00	1/2
INTRODUCTION TO DENTISTRY	42,00	Dental Equipment, Materials and Instrumentation	6,00	2/2
		Imaging techniques and dental photography	6,00	3/2
		Oral Radiology	6,00	2/1
		Planning and Management of the dental clinic	6,00	3/2
		Preventive and Community Dentistry	6,00	3/1

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 Knows the basic concepts to design research studies and carries out critical analysis of them.

R2 Knows the scientific principles of sterilisation and disinfection necessary to prevent cross infections in dental practice.

R3 Knows the basic principles of Health Education.

R4 Knows the procedures aimed at making the diagnosis of oral health in the community and to know how to interpret the results.

R5 Knows the basic principles of statistics for application and interpretation in research studies.

R6 Knows the basic concepts to design research studies and carry out critical analysis of them.

R7 Knows the procedures to carry out the diagnosis of oral health in the community and know how to interpret the results.

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
CG13 FRecognition of diversity and multiculturalism				x
CG14 FCritical Reasoning				x
CG5 I eComputer skills related to the field of study				x
CG15 FEthical commitment				x
CG6 I f Information management capacity				x
CG7 I gProblem solving				x
CG8 I hDecision making				x
CG9 P iTeamwork				x

SPECIFIC	Weighting			
	1	2	3	4
CE A 1 Know the essential elements of the dental profession, including ethical principles and legal responsibilities.			x	
CE A 2 Understand the importance of such principles for the benefit of the patient, society and the profession, with special attention to professional secrecy.			x	

CE A 3	Identify the patient's concerns and expectations, as well as to communicate effectively and clearly, both orally and in writing, with patients, relatives, the media and other professionals.		x	
CE A 4	Understand and recognize the social and psychological aspects relevant to the treatment of patients.		x	
CE A 5	Know how to apply the principles of anxiety and stress management to oneself, to patients and to other members of the dental team.		x	
CE A 6	Understand the importance of developing a professional practice with respect to patient autonomy, beliefs and culture.			x
CE A 7	Promote autonomous learning of new knowledge and techniques, as well as motivation for quality.			x
CE A 8	Know how to share information with other health professionals and to work as a team.			x
CE A 9	Understand the importance of maintaining and using records with patient information for subsequent analysis, preserving the confidentiality of the data.			x
CE A 10	Know and identify the psychological and physical problems derived from gender violence in order to train students in the prevention, early detection, assistance, and rehabilitation of the victims of this form of violence.			x
CE B 11	Understand the basic biomedical sciences on which dentistry is based to ensure proper oral care.			x
CE B 12	Understand and recognize the normal structure and function of the stomatognathic system, at the molecular, cellular, tissue and organic level, in the different stages of life.			x
CE B 13	Understand and recognize the science of biomaterials essential for dental practice as well as the immediate management of possible allergies to them.		x	
CE B 14	Know about general disease processes, including infection, inflammation, immune system disorders, degeneration, neoplasm, metabolic disorders and genetic disorders.			x
CE B 15	Be familiar with the general pathological features of diseases and disorders affecting organ systems, specifically those with oral impact.			x

CE B 16	Understand the fundamentals of action, indications and efficacy of drugs and other therapeutic interventions, knowing their contraindications, interactions, systemic effects and interactions on other organs, based on available scientific evidence.				x
CE B 17	Understand and recognize the principles of ergonomics and safety at work (including control of cross-infection, radiation protection and occupational and biological diseases).				x
CE B 18	Know, critically evaluate and know how to use clinical and biomedical information sources to obtain, organize, interpret and communicate scientific and health information.				x
CE B 19	Know the scientific method and have the critical capacity to value the established knowledge and the new information. Be able to formulate hypotheses, collect and critically evaluate information for the resolution of problems, following the scientific method.				x
CE E 29	Recognize the determinants of oral health in the population, both genetic and lifestyle-dependent, demographic, environmental, social, economic, psychological and cultural.				x
CE E 30	Recognise the role of the dentist in actions to prevent and protect against oral diseases, as well as in the maintenance and promotion of health, both at individual and community level.				x
CE E 31	Know the National Health System, as well as the basic aspects of health legislation, clinical management and proper use of health resources, understanding the importance of the role of the dentist in the field of Primary Health Care.				x

TRANSVERSAL		Weighting			
		1	2	3	4
1. a.	Analysis and synthesis skills				x
1. b.	Organizational and planning capacity				x
1. c.	Oral and written communication in the native language.				x
1. d.	Knowledge of a foreign language			x	
1. e.	Computer skills			x	

1. f.	Information management capacity			x
1. g.	Problem solving			x
1. h.	Decision making			x
2. i.	Teamwork			x
2. j.	Multidisciplinary teamwork			x
2. k.	Work in an international context		x	
2. l.	Interpersonal skills		x	
2. m.	Recognition of diversity and multiculturalism			x
2. n.	Critical Reasoning			x
2. o.	Ethical commitment			x
3. p.	Autonomous learning			x
3. q.	Adaptation to new situations			x
3. r.	Creativity			x
3. s.	Leadership			x
3. t.	Knowledge of other cultures and customs		x	
3. u.	Initiative and entrepreneurship			x
3. v.	Motivation for quality			x
3. w.	Sensitivity to environmental and socio-health issues			x

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
	20,00%	OPEN QUESTIONS: Written exam in which basic theory knowledge and the ability to relate, integrate and coherently express it in writing is assessed.
	50,00%	MULTIPLE CHOICE TEST: Multiple choice test with one correct answer. This shows to greater extent the contents acquired by the student.
	5,00%	ORAL TEST: Oral exam in which the student answers the questions the teacher asks, verbally explaining the contents acquired, allowing for interaction with the teacher.
	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.
	10,00%	ASSIGNMENTS: The student, ether individually or in a group, develops a theme which reviews or researches, and he/she presents it, in writing, for assessment by the teacher.
	5,00%	CLASS PARTICIPATION: The teacher assesses the participation, involvement and progress the student makes in acquiring knowledge and skills in theory and practical classes and seminars. This is never more than 5% of the final grade.

Observations

The course consists of 2 parts: Epidemiology and Statistics. The value of each part is 50% of thetotal of the subject. To pass the subject it is necessary to obtain an average of 5 between the twoexams of the two parts (Epidemiology and Statistics), as well as to complete and pass (with atleast a 5 mark), the final work and its oral presentation, in the case of Epidemiology.It is necessary to obtain a minimum of 4.5 in each part (Epidemiology and Statistics) in the writtenexam to be able to average, as well as to add the notes of the works, attendance and class

participation. Students who obtain a grade equal to or greater than 7 in either exam (only in theexam) will be able to take only the other exam that they did not pass, in the second call.The assignments, as well as the oral presentation of the final work in the case of Epidemiology,must be submitted within the established deadlines (which will be specified on the platform at thebeginning of the course). They will not be accepted in the 2nd call. Therefore, failure to do so withinthe indicated time will mean taking the subject in the following year.Students who repeat the course must carry out the activities and work again, in the same terms asthe other students.There will be 2 exams (1 on epidemiology and 1 on statistics, each one with a value of 35% of thetotal of each part of the subject), they will consist of two parts: a test part (value 25%) with 25questions with 5 answers possible, where only one is correct and 1 wrong answer subtract 0,25%of the total mark of the test; and a part with 5 short answer questions (value 10%), if it is notanswered, it does not subtract.The student assessment, therefore, will not be unique, as both the exam and the student's progressin the practical part will be evaluated.Regarding the use of artificial intelligence, it will be carried out if deemed appropriate and withinthe corresponding ethical limits.MENTION OF DISTINCTION:In accordance with the regulations governing the assessment and grading of subjects in force atUCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to studentswho have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours withDistinction) may not exceed five percent of the students enrolled in the group for the correspondingacademic 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 distinctionsmay be assigned globally across different groups of the same subject . Nevertheless, the total numberof distinctions awarded will be the same as if they were assigned by group, but they may bedistributed among all students based on a common criterion, regardless of the group to which theybelong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determinedaccording 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.

MENTION OF DISTINCTION:

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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.

M5 Problem and case solving. Written tasks.
Online activity on the e-learning platform.
Personal study.
Compiling information and documentation.

M6 Discussion and problem solving.

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, M5, M6, M13	R1, R3, R4, R6, R7	56,00	2,24
TUTORING M1, M5, M6, M15	R1, R3, R4, R6, R7	2,00	0,08
EVALUATION M1, M5, M6, M13	R1, R3, R4, R6, R7	2,00	0,08
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
INDIVIDUAL WORK M1, M5, M6, M13, M15	R1, R3, R4, R6, R7	70,00	2,80
GROUP WORK M1, M5, M6, M13	R1, R3, R6, R7	20,00	0,80
TOTAL		**90,00**	**3,60**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
BLOCK I: METHODOLOGY OF EPIDEMIOLOGICAL STUDIES.	1. Types of epidemiological studies.2. Main characteristics of the epidemiological studies.
BLOCK II: PUBLIC HEALTH. EPIDEMIOLOGY.	1. Concept of Public Health.2. Concept of Epidemiology.3. Personal, general and environmental hygiene
BLOCK III: STATISTICS IN ODONTOLOGY	1. Applications of the statistical method in Dentistry.
BLOCK IV: ORAL HEALTH.	1. Oral Health programs.

Temporary organization of learning:

Block of content	Number of sessions	Hours
BLOCK I: METHODOLOGY OF EPIDEMIOLOGICAL STUDIES.	8,00	16,00
BLOCK II: PUBLIC HEALTH. EPIDEMIOLOGY.	5,00	10,00
BLOCK III: STATISTICS IN ODONTOLOGY	15,00	30,00
BLOCK IV: ORAL HEALTH.	2,00	4,00

References

1. Gálvez R, Piedrola G. Medicina Preventiva y Salud Pública. 12 ed. Barcelona: Masson; 2015.2. Cuenca E, Baca P. Odontología Preventiva y Comunitaria: Principios, métodos y aplicaciones.4 ed. Barcelona: Masson; 2021.3. Calatayud J. Bioestadística en investigación odontológica: Manual de bioestadística aplicadaa la investigación odontológica. Madrid:Pues DL; 2003.4. Oral Health Surveys. Basic Methods. 5th ed. WHO. Geneva; 2013.Articles: Mutiawati E, Fahriani M, Mamada SS et al. Anosmia and dysgeusia in SARS-CoV-2infection: incidence and effects on COVID-19 severity and mortality, and the possiblepathobiology mechanisms - a systematic review and meta-analysis.2021.12

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