

**COURSE DATA****DATA SUBJECT**

Code: 41091
Name: Basic odontological research
Cycle: Master's Degree / Doctorate
ECTS Credits: 15
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
2006 - Master's Degree in Dental Sciences	Facultat de Medicina i Odontologia	1	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2006 - Master's Degree in Dental Sciences	Basic research in dentistry	COMPULSORY

COORDINATION

MONTIEL COMPANY JOSE MARIA

SUMMARY

The training activities will be aimed at the student's knowledge and training of those tools that the scientific method requires. Thus, the student will be instructed and trained in bibliographic citation search systems and analysis of veracity in the publications found (5 credits); general rules of common scope in the production of scientific publications and how to make a scientific presentation, as well as the knowledge and management of the most common tools for audiovisual presentation (5 credits); ethics in publications and analysis with three-dimensional methodology in Dentistry (5 credits).

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

The profile of recommended revenue is Licentiate or grade in Dentistry, Licentiate or grade in medicine and Medical specialists in Stomatology
Previous competences recommended for a better utilization of the master:



Knowledge of English language (level of reading and comprehension of scientific texts in the area of the Sciences of the Health).

Knowledge of computer science to level of advanced user of programs Word, Excel, Acces, Powertpoint.

COMPETENCES / LEARNING OUTCOMES

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Be able to integrate knowledge and handle the complexity of formulating judgments based on information that, while being incomplete or limited, includes reflection on social and ethical responsibilities linked to the application of knowledge and judgments.

Poseer las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo

Saber aplicar los conocimientos adquiridos y ser capaces de resolver problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio.

Saber comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades.

Ser capaces de trabajar en un grupo de investigación consolidado.

Ser competente en identificar el nivel de evidencia científica atribuible a las publicaciones revisadas sobre el tema de investigación a desarrollar.

Ser competentes en el desarrollo de las técnicas de investigación propias del ámbito de la Estomatología y la Odontología, así como en la evaluación e interpretación de los resultados obtenidos mediante las mismas.

Ser competentes en la realización de una búsqueda bibliográfica, estructurar un trabajo científico metodológicamente correcto, así como de realizar la publicación correspondiente y/o la presentación científica de su trabajo.

To have the ability to choose the more suitable laboratory technique or techniques to deal with the research problem set out.

DESCRIPTION OF CONTENTS

1. UTILIZATION AND OPTIMIZATION OF THE BIBLIOGRAPHICAL RESOURCES

bibliographical searches.

Databases bibliographical.

Record of the bibliography.

Types of cards.

Consultations and IT means of the Universitat of Valencia.



2. EVIDENCE BASED DENTISTRY

Evidence-based Dentistry Concept.
 Critical thinking of cross-sectional studies.
 Critical thinking of case and control studies.
 Critical thinking of cohort studies.
 Critical thinking of experimental studies.
 Critical thinking of diagnostic studies.
 Systematic review and meta-analysis.
 Critical thinking of a systematic review and meta-analysis
 Practice: Critical thinking of different studies.

3. SCIENTIFIC COMMUNICATION IN DENTISTRY.

Structure of scientific work. Characteristics of its elements.
 Title, summary and introduction.
 Material and methods. Results
 Discussion and bibliography.
 Types of publications: Poster, communications and conferences.
 Types of publications: Review articles.
 Types of publications: Articles of clinical cases.
 Norms for the publication of scientific articles in biomedical journals.
 Types of publications: Research articles, visual expression of results, tables and graphs; rules.
 Doctoral thesis.
 Types of publications: Master's final project.

4. THREE-DIMENSIONAL METHODOLOGY IN DENTISTRY RESEARCH

Evolution from Traditional 2D Methods to 3D Digital Methods in dentistry and research.
 Applications of CBCT in dentistry and research.
 Treatment of CBCT images and files with different computer programs.
 3D craniofacial analysis using CBCT technology.
 Dosimetry considerations in CBCT.
 3D craniofacial analysis using three-dimensional facial cameras.
 Three-dimensional dental analysis using the intraoral laser scanner.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	43,00
Computer classroom practice	32,00
Total hours	75,00

**NON PRESENCIAL ACTIVITIES**

Activity	Hours
Attendance at other activities	0,00
Individual or group project	80,00
Independent study and work	170,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	40,00
Total hours	290,00

TEACHING METHODOLOGY

The methodology used will consist of: master classes supported by projectors with PowerPoint presentations, practical classes with computers and various devices, laboratory classes, as well as individual and group work.

The gender perspective, respect for diversity and the sustainable development goals (SDGs) will be incorporated into teaching, whenever possible.

EVALUATION

The final grade for the course will be obtained with the weighted average, according to its theoretical-practical load, of each of the four modules that make up the course. In order to access the weighted average grade, the passing grade must be obtained (minimum 5 points out of 10) in each of the modules, independently.

A) Module for the Use and Optimization of Bibliographic Resources (for an assessment of 10 points), weighting 20%: assessment of attendance at theoretical classes as well as the participatory attitude, together with the assessment of the proposed works, together with a written exam on the contents of the module.

B) Evidence-Based Dentistry Module (for an assessment of 10 points), 35% weighting: assessment of the attendance to theoretical classes as well as the participatory attitude, together with the assessment of the proposed works, together with a written exam on the contents of the module.

C) Module of Scientific Communication in Dentistry (for an assessment of 10 points), 30% weighting: assessment of the attendance to theoretical classes as well as the participatory attitude, together with the assessment of the proposed works, together with a written exam on the module contents.

D) Three-Dimensional Methodology Module in Dentistry Research (for evaluation of 10 points), weighting 15%: evaluation of attendance at theoretical classes as well as participatory attitude, together with the evaluation of the proposed works, together with a written exam on the contents of the module.



REFERENCES

- Critical Thinking. Understanding and evaluating dental research. Donald Maxwell Brunette. Ed. Quintessence Books (2007)
- Evidence-Based Dentistry. An introduction. Allan Hackshaw, Elisabeth Paul, Elisabeth Davenport. Ed. Blackwell Munksgaard (2006)
- Publicación científica biomédica. Cómo escribir y publicar un artículo de investigación. Jimenez Villa j. et al. Ed. Elsevier (2010).
- Trisha Greenhalgh. Cómo leer un artículo científico: Las bases de la medicina basada en la evidencia. 5ed. ELSEVIER (2015).
- María Isabel Orts Cortés. Práctica basada en la evidencia. Colección cuidados de salud avanzados. Elsevier (2015).
- Loreto Maciá Soler. Práctica basada en la evidencia. Colección de cuidados de salud avanzados. Elsevier (2014).
- Francisco Faus y Elena Santainés. Búsquedas bibliográficas en bases de datos. Primeros pasos en investigación en ciencias de la salud. Elsevier (2013).
- RECURSOS e-Salut: ClinicalKey Student Medicina, Odontología y Enfermería. [<https://uv-es.libguides.com/RecursosSalut>] Acces Medicina. [https://uv-es.libguides.com/Access_Medicina] Médica Panamericana. [https://uv-es.libguides.com/Medica_Panamericana]