Universidad Zaragoza

Academic Year/course: 2024/25

26706 - Research and new technology

Syllabus Information

Academic year: 2024/25
Subject: 26706 - Research and new technology
Faculty / School: 104 - Facultad de Medicina
229 - Facultad de Ciencias de la Salud y del Deporte
Degree: 304 - Degree in Medicine
305 - Degree in Medicine
ECTS: 6.0
Year: 1
Semester: First semester
Subject type: Basic Education
Module:

1. General information

The purpose of this subject is to provide the future physician with intellectual resources from the human and social sciences applied to medical practice, as well as technical resources from the documentary sciences (ICT), which are essential in research and clinical practice

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 () (https://www.un.org/sustainabledevelopment/es/), so that the acquisition of the learning results of the subject provides training and competence to contribute to their achievement, specifically Goal 3 (Health and Wellness) , facilitating well-informed decision making on health; Goal 10 (Reducing inequalities), identifying social, economic and cultural factors that condition professionals' access to health resources; and Goal 16 (Peace, justice and strong institutions), highlighting the importance of health systems for the sustainable development of societies at the global level.

2. Learning results

- Understand medicine in terms of a sociocultural subsystem and know how to identify and value its constituent elements in any conventional discourse or source of information (books and articles of scientific publications, teaching programs and projects, reports, databases, etc.)
- Associate the main models of health care and medical professional practice to their specific historical context, scientific paradigms, research methods and alternative medicines.
- Know how to differentiate the phases of the natural history of the disease and the different levels of intervention of individual and collective medicine
- Know the principles of scientific research in terms of social function and institutional structure, language, methodology and publication standards, as well as the quality criteria and sources of scientific and clinical information most currently used.
- Know and be able to apply methods and techniques for information retrieval and localization.
- Know how to read an original article as the public report of a research, assessing other types of articles in a medical journal, choosing the most appropriate online bibliographic database for a given medical topic and evaluate the quality of web information provided by popular search engines such as Google.
- Know how to pose and solve a simple research problem of the "cross-sectional observation study" type in the context of a tutored group work, as well as to prepare a structured written report.

3. Syllabus

Program of theoretical and practical classes:

- Block I. Scientific method.
- Block II. Documentation and scientific publication.
- Block III. History and theory of medicine.
- Block IV. Health system, determinants of health and disease.

Computer-based training program:

- Introduction to SPSS.
- Medical humanities digital resources.
- Vancouver Standards. Bibliographic reference management with Mendeley.
- Basic search in PubMed. MeSH.
- Advanced search in Pubmed.

- Search in Web of Science (WoS). Journal Citation Reports (JCR).
- Search in Scopus. CiteScore and Scimago Journal Rank. Search in Google Scholar and Cochrane Library Plus.
- Types of study design. Information resources on Evidence-Based Medicine (EBM) and hierarchy of evidence.

4. Academic activities

1. **Theoretical classes:** 30 hours.

They will be developed through an expository methodology with presentations by the teacher, explaining the contents of the different didactic units contained in the blocks of the program

2. **Practical classes:** 30 hours.

The teaching methodology will consist of: a) exposition and resolution of problems; b) exposition and presentation of practical cases solved with programs and databases related to the practices, and c) approach of collaborative research projects to be carried out through the application of qualitative methodologies

3. **Assessment tests.** 5 hours.

4. **Independent study or work by the student:** 80 hours.

5. Assessment system

The types of tests, their value on the final grade and the evaluation criteria for each of them will be as follows:

1. **Final written exam *(based on multiple-choice questions)*** on the theoretical and practical contents of the program. It consists of 80 questions. The grade will range from 0 to 10 and its value is 100% of the final grade of the subject.

6. Sustainable Development Goals

3 - Good Health & Well-Being
10 - Reduction of Inequalities
16 - Peace, Justice and Strong Institutions