

68401 - Scientific method

Syllabus Information

Academic year: 2024/25

Subject: 68401 - Scientific method

Faculty / School: 104 - Facultad de Medicina

Degree: 530 - Master's in Introduction to Medical Research

ECTS: 6.0

Year: 1

Semester: First semester

Subject type: Compulsory

Module:

1. General information

The main objective is to introduce Medicine graduates to the field of research, since most of them will carry out biomedical research, which will be compatible with healthcare work. As specific objectives, the following stand out:

1. Learn about biomedical research in Aragon and the opportunities for new researchers.
2. Plan a bibliographic search and learn about the main databases and bibliographic managers.
3. Define the formal and evaluation criteria of the researcher Curriculum Vitae.
4. Understand the requirements to present a competitive project and the ethical aspects.

These goals are aligned with the following Sustainable Development Goals of the United Nations 2030 Agenda: goal 3 (Guarantee a healthy life and promote well-being for all at all ages), training health personnel to advance in the resolution of health problems health; objective 10 (Reduction of inequalities), identifying social, economic and cultural factors that condition the research.

2. Learning results

The student, to pass this subject, must demonstrate the following results:

- Describe the basic principles of the research process and understand the commonly used bibliometric indicators of scientific production and consumption.
- Identify the types of medical publications and the main international bibliographic resources.
- Locate and assess the most related lines of research and prepare the curriculum vitae adapted to the calls for projects or research personnel.
- Show that they know the aspects related to authorship, critical sense, ethics and the profile of the researcher.

3. Syllabus

I. Presentation. Biomedical research lines and projects in Aragon

II. Medical Information and Documentation

III. Scientific research

1. UNIZAR resources for research staff
2. Literature searches
3. Databases and other sources of scientific information
4. Bibliographic managers
5. Open access
6. Creative commons licenses
7. Researcher profiles
8. Research methodology. Process phases
9. Ethical and legal implications of medical research
10. The Curriculum Vitae in research
11. Communication of research results

12. Scientific publication, types of articles, authorship.

13. The peer review process

4. Academic activities

1. Classes: The thematic content and objectives of this course require three types of activities of different duration that are combined according to the program: a) lectures by the teacher and tutorial or guided presentations of bibliographic databases; b) debates, quizzes or problem-solving exercises in pairs or small groups. 2. Supervised work: Each student must carry out and submit a supervised work under the conditions described. 3. Individual tutorials. The responsible teaching staff will attend to a specific group of students, in a personal interview (by appointment in some cases or at a pre-established time), by email.

5. Assessment system

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

1. Evaluation / Objective final test

It will consist of a test-type exercise, on the conceptual, methodological or technical problems of the subject's Program. It will be a questionnaire of 20 questions, with 5 answers of which only one is valid. Qualification system: The qualification will be carried out on a numerical scale from 0 to 10, with expression of a decimal, to which the corresponding qualitative qualification may be added: 0-4.9: Suspense (SS); 5.0-6.9 Pass (AP); 7.0-8.9: Notable (NT). 9.0-10: Outstanding (SB)

2. Participation

The attendance and participation in the discussions and guided debates raised in the expository sessions, as well as the realization of the proposed practical exercises, are evaluated.

3. Directed work

Students must carry out a paper in the form of a communication to a conference (250 words) whose content must be related to a research project, with an oral and public presentation (5 minutes) on the last day of class (optional). The final written report of the work carried out and delivered in paper format, as well as the oral presentation, will be evaluated.

The qualification will be obtained from the result of combining the following parameters: Objective final test (40%); Directed work (30%); Active face-to-face participation (30%).

6. Sustainable Development Goals

3 - Good Health & Well-Being

10 - Reduction of Inequalities