

DEGREE CURRICULUM

PLANIFICACIÓN Y DISEÑO DE ESTUDIOS TRASLACIONALES I

Coordination: ESCOBAR BRAVO, MIGUEL ANGEL

Academic year 2022-23

Subject's general information

| Subject name | PLANIFICACIÓN Y DISEÑO DE ESTUDIOS TRASLACIONALES I | | | | |
|--|--|---|-----------|------------|---------------------|
| Code | 14089 | | | | |
| Semester | 1st Q(SEMESTER) CONTINUED EVALUATION | | | | |
| Typology | Degree Course | | Character | Modality | |
| | Master's Degree in Research, Innovation and Health Transfer | | 1 | COMPULSORY | Blended learning |
| Course number of credits (ECTS) | 6 | | | | |
| Type of activity, credits, and groups | Activity PRAULA type | | TEORIA | | |
| | Number of credits | 3 | | 3 | |
| | Number of groups | 1 | | 1 | |
| Coordination | ESCOBAR BRAVO, MIGUEL ANGEL | | | | |
| Department | NURSING AND PHYSIOTHERAPY | | | | |
| Important information on data processing | Consult this link for more information. | | | | |

| Teaching staff | E-mail addresses | Credits taught by teacher | Office and hour of attention |
|--------------------------------|------------------------|---------------------------------|------------------------------|
| ESCOBAR BRAVO, MIGUEL ANGEL | miguel.escobar@udl.cat | 6 | |

Subject's extra information

Prerequisites:

- -To be able to carry out a bibliographic search and to identify the most relevant articles on the topic of interest.
- -To Be able to identify problems in the health field or the health system that can be investigated

Corequisites:

- Knowledge to read documents in English.
- Computer user level knowledge.

Learning objectives

- To have acquired knowledge in scientific research of the theoretical-practical and methodological aspects context.
- To know how to evaluate and select the appropriate scientific theory and the precise methodology of their fields of study to formulate judgments based on incomplete or limited information.
- To demonstrate proficiency in the use and management of software for studies design and data analysis of a study of its own scientific field.
- To know how to clearly transmit the results from scientific and technological research or the innovation field as well as the most relevant foundations on which they are based.
- Learn about the different development phases of innovative activity and planning of industrial transfer actions.
- Learning the protection of intellectual property and licensing processes.
- To know the spin-off creation program, funding sources, and business plan development.
- To identify the different tools and support programs in the transfer process.
- Acquire skills for the business development plan and market identification (primary and secondary).

Competences

Basic competences:

CB06 To possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context

CB07 To know how to apply the acquired knowledge and to have the ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their study area

CB08 To be able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the

application of their knowledge and judgments.

CB09 Let the students know how to communicate their conclusions - and the knowledge and ultimate reasons that support them - to specialized and non-specialized audiences in a clear and unambiguous way

CB10 To possess the learning skills that allow students to continue studying in a self-directed or autonomous way

General competences:

CG2 Consider the gender and equality perspective in the scientific field in Health

CG3 Select and evaluate the appropriate scientific foundation, based on social responsibility and ethical principles' aspects, to guide the solution in each case, project or program.

CG4 Apply information and computing technologies in the scientific-technical field

Specific competences:

CE1 Formulate the appropriate research question for the investigated problem and later, develop a theoretical framework based on reliable information sources from the health sciences field

CE2 Carry out a critical analysis of literature, methodological approach and the context, taking into account the professional, ethical and legal principles in health sciences

CE3 Demonstrate knowledge and skills for the development of qualitative methodological designs in health sciences

CE4 Use the appropriate techniques to analyze the data and the relationships between variables or categories in qualitative research in health sciences

CE6 Apply the acquired knowledge in a research project that promotes innovation in the health's field

CE7 Apply the bases of scientific evidence in health sciences and recognize the need for innovation and knowledge transfer

Subject contents

- 1. The process of clinical and epidemiological research. The cientific method
- 2.Structure of a research project
- 3. Concept and function of the theoretical framework: theory, reference framework and conceptual framework
- 4. Generation and debugging of questions and hypotheses
- 5. Structure of the different study designs:
- Basic concepts
- Classification of designs: experimental vs observational
- Main biases in scientific research
- · Genetic studies. Biological samples
- Research studies in diverse populations (minors, vulnerable populations ...)
 - 6. Types of variables and measurement scales
 - 7. Types of measures
 - 8. Assessment of the validity of a design

Methodology

The subject will be developed based on practical work done in small groups throughout the term. On the first day of class, groups of 3 or 4 students will be created, each group will design a research project in all its phases from the formulation of a research problem, the construction of a theoretical framework, the establishment of objectives and the development of a adequate methodology.

The theoretical bases adapted to the proposed projects will be presented in the classroom, further reading will be suggested and the projects will be guided and discussed in depth.

The subject will end with the oral presentation of each project prepared by each working group

| Teaching methodology | | |
|----------------------|---------------------|--|
| 1 | Flipped learning | |
| 2 | Master class | |
| 3 | Seminars | |
| 4 | Team work | |
| 5 | Individual work | |
| 6 | Tutorials | |
| 7 | Project elaboration | |
| 8 | Problem resolution | |

Development plan

| Sesion | Tipology | Content |
|--------|--------------|--|
| 1 | Master class | The clinical and epidemiological research process. The cientific method. |
| | Activity | Solving exercises and problems. |
| 2 | Master class | Theoretical framework. Questions, objectives and hypotheses |
| | Activity | Solving exercises and problems. |
| 3 | Master class | Structure of the different designs |
| | Activity | Solving exercises and problems. |
| 4 | Master class | Theoretical foundation of the hypotheses and objective |
| | Activity | Discussion forum |
| 5 | Master class | Analysis of the conceptual phase |
| | Activity | Individual work |
| 6 | Master class | Methodology, designs |
| | Activity | Team work |
| 7 | Master class | Methodological and empirical phases |
| | Activity | Discussion forum |
| 8 | Master class | Types of variables, measures and instruments. Validity and reliability assessment. |
| | Activity | Solving exercises and problems |
| | | |

| 9 | Master class | Scientific rigor and validity of a design |
|----|--------------|---|
| | Activity | Individual work |
| 10 | Master class | Genetic studies. Biological samples |
| 10 | Activity | Individual work |
| 11 | Master class | Research studies in diverse populations |
| | Activity | Individual work |
| 12 | Master class | Synthesis of the subject |
| | Activity | Oral defense group work |

Evaluation

| Evaluation | |
|---|--------------|
| Activity | % Evaluation |
| Participation in discussion forums, seminars, tutorials | 10 |
| Individual activities of continuous evaluation | 30 |
| Group work and oral presentation | 30 |
| Solving exercises and problems. Multiple choice tests | 30 |

Bibliography

- Argimon Pallars JM, Jiménez Villa J. Métodos de investigación clínica y epidemiológica. Cuarta edición. Elsevier Espanya S.A. Madrid 2013.
- Bowling, A. Research methods in health. Investigating health and health services. Open University Press. McGraw-Hill Education. Third Edition. New York 2009.
- Burns, N; Grove, SK. Investigación en enfermería. 5ª ed. Madrid. Elseiver España, 2012
- Contandriopoulos A P, et al. Preparar un proyecto de investigación. SG Editores S.A: Barcelona 1991.
- Gordis, L. Epidemiología. 5ª Edición. Elsevier Espanya S.A. Madrid 2013.
- Mateo, M; Kirchhoff, K. Research of Advanced practice nurses. Springer Publishing company. New York. 2009
- Porta, M. Dictionary of Epidemiology. Oxford University Press. New York. Sixth Edition. 2014.
- Polit, D.F. Investigación científica en ciencias de la salud. Principios ymétodos. 6ª ed. México. McGraw-Hill Intermaericana, 2000
- Silva Ayçaguer L C. Muestreo para la investigación en ciencias de la salud. Ediciones Díaz de Santos S.A: Madrid 1993.
- Silva Ayçaguer L C. Diseño razonado de muestras y captación de datos para la investigación sanitaria. Ediciones Díaz de Santos S.A: Madrid 2000.
- Silva Ayçaguer L C. Cultura estadística e investigación científica en el campo de la salud: una mirada crítica. Ediciones Díaz de Santos S.A: Madrid 1997.
- Kahlert J; Gribsholt SB; Gammeleager H; Dekkers OM; Luta G. Control of confunding in the analysis phase- an overview for clinicians. Clinical epidemiology. 2017. 9:195-204

- Althubaiti A. Information bias in health research: definition, pitfalls, and adjustment moethods. Journal of Multidisciplinary Healthcare. 2016. 9: 211-217
- Normas Strobe: http://www.strobe-statement.org/fileadmin/Strobe/uploads/translations/STROBE_short_Spanish.pdf
- Normas Consort: http://www.consort-statement.org/Media/Default/Downloads/Translations/Spanish_es/Spanish%20CONSORT%20Statement.pdf