1. OVERVIEW

Subject Area	Research Techniques and Evidence-Based Nutrition
Degree	Bachelor's Degree in Human Nutrition and Dietetics
School/Faculty	School of Biomedical and Health Sciences
Year	Fourth
ECTS	3 ECTS
Type	Optional
Language(s)	Spanish
Delivery Mode	On campus and blended
Semester	Semester 7
Coordinating professor	Dr Helena Marcos Pasero

2. INTRODUCTION

Compulsory subject area within Module 5 'Public Health and Community Nutrition', delivered over one semester in the fourth year. This subject area is worth 3 ECTS credits. Studying this subject area will allow students to understand the scientific method and how it is applied in the field of Human Nutrition and Dietetics. Thus, they will develop an interest in research in health sciences and become familiar with the handling scientific publications.

3. SKILLS AND LEARNING OUTCOMES

Key skills (CB, by the acronym in Spanish):

- CB2: Students can apply their knowledge to their work professionally and possess the necessary skills, usually demonstrated by forming and defending opinions, as well as resolving problems within their study area.
- CB5: Students have developed the learning skills necessary to undertake further study in a much more independent manner.

General skills (CG, by the acronym in Spanish):

- CG6: Be familiar with, critically assess and know how to use sources of information related to nutrition, food, lifestyles and health matters.
- CG29: Acquire basic knowledge for research activity, being able to formulate hypotheses, collect and interpret information to solve problems following the scientific method, and understand the importance and limitations of scientific thought in health and nutrition.

Cross-curricular skills (CT, by the acronym in Spanish):

- CT3: Teamwork: ability to integrate and collaborate actively with other people, areas and/or organisations to reach common goals, evaluate and integrate contributions from the rest of the group members and create a good working environment.
- CT5: Initiative: ability to undertake difficult or risky actions with resolve.
- CT6: Problem solving: ability to solve an unclear or complex issue or situation which has no established solution and requires skill to reach a conclusion.

Specific skills (CE, by the acronym in Spanish):

- CE153: Be familiar with the scientific method and the research process.
- CE154: Know how research projects are managed and the options for public/private funding for R&D projects.

Learning outcomes (RA, by the acronym in Spanish):

- RA1: Understand the scientific method and how it is applied.
- RA2: Know about the research environment, as well as the main tools and resources used.
- RA3: Develop an interest in research in health sciences and create the habit of handling scientific publications, demonstrating the critical judgement required to understand and evaluate published studies.

The following table shows how the skills developed in the subject area match up with the intended learning outcomes:

Skills	Learning outcomes
CG29, CT5, CT6, CE153	RA1: Understand the scientific method and how it is applied.
CB2, CB5, CT6, CE153, CE154	RA2: Know about the research environment, as well as the main tools and resources used.
CB5, CG6, CG29, CT3, CE153, CE154	RA3: Develop an interest in research in health sciences and create the habit of handling scientific publications, demonstrating the critical judgement required to understand and evaluate published studies.

4. CONTENTS

UNIT 1: EVIDENCE-BASED PRACTICE.
TOPIC 1. The concept of scientific method. The structure of a research study.
TOPIC 2: Evidence-based medicine. Evidence-based nutrition.
UNIT 2: RESEARCH TECHNIQUES IN HUMAN NUTRITION.
TOPIC 3: Making hypotheses and research questions. TOPIC 4:
Communicating research results.
UNIT 3: TYPES AND DESIGN OF STUDIES IN HUMAN NUTRITION.
TOPIC 5: Observational studies. Descriptive studies, cohorts and control cases. TOPIC 6:
Experimental studies. Clinical trials.
TOPIC 7: Systematic reviews and meta-analysis.

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

- Lecture
- Problem-solving
- Collaborative learning
- Project-based learning
- Simulated environments
- Workshop-based learning

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On campus

Learning activity	Number of hours
Lecture	25
Independent working	18
Written reports and essays	7
Critical analysis of texts	6
Design of strategies, procedures and intervention plans	2
Tutorials	14
Knowledge test	3
TOTAL	**75h**

Blended learning

Learning activity	Number of hours
Reading of content	5
Online seminars	5
Independent working	33
Written reports and essays	7
Critical analysis of texts	6
Online tutorials	14
Design of strategies, procedures and intervention plans	2
Knowledge test	2
TOTAL	**75h**

7. ASSESSMENT

The assessment methods, together with their respective weighting towards the final grade for the subject, are as follows:

On-campus and blended learning:

Assessment method	Weighting
Learning portfolio	20%
Submission of reports	20%
Performance observation	10%
Knowledge test	50%

On the Virtual Campus, when you open the subject area, you can see all the details of your assessment activities, including the deadlines and assessment procedures for each activity.

8. BIBLIOGRAPHY

The recommended bibliography is indicated below:

- Cuello García, Pérez Gaxiola. Medicina Basada en la Evidencia. Fundamentos y su enseñanza en el contexto clínico. 2º Ed. Editorial Médica Panamericana. México, 2019.
- Hernández LR. Metodología de la investigación en ciencias de la salud. 3º Ed. ECOE Editores.