ipb
INSTITUTO POLITÉCNICO
DE BRAGANÇA

Course Unit	Methods and Techniques of Research in Nursing		Field of study	Nursing	
Bachelor in	Nursing		School	School of Health	
Academic Year	2021/2022	Year of study	3	Level	1-3	ECTS credits	8.0
Type	Semestral	Semester	1	Code	9501-699-3105-00-21

| Workload (hours) | 216 | Contact hours | T | - | TP | 67,5 | PL | 22,5 | TC | - | S | - | E | - | OT | - | O | - |

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

| Name(s) of lecturer(s) | Manuel Alberto Morais Brás, Maria Cristina Martins Teixeira |

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To describe a set of concepts and arguments underlying the scientific research
2. To understand the relevance of the research in developing nursing practice.
3. To understand the ground of evidence-based nursing practice.
4. To know epistemiological issues related with limitations and constraints in applying research methods in healthcare, namely in nursing practice.
5. To understand guidelines in research methods and reasons underlying their need in the current research scenario.
6. To understand main issues in planning and conducting research.
7. To know basic statistical methods applied to univariate or bivariate data analysis
8. To manage statistical software for data analysis

Prerequisites

Before the course unit the learner is expected to be able to:
Doesn't have

Course contents

1 The importance of research for a scientific area and for the professional practice. The evidence-based practice. 2 Scientific research: General issues. 3 Quantitative research. Study design and research methods 4 Qualitative research. Study design and research methods 5 Quantitative and qualitative Research Steps. Sampling. Ethical issues. Research report. 6 Basic statistics. Descriptive and inferential statistics. 7 Tools for data analysis

Course contents (extended version)

1. The importance of scientific research to a scientific profession.
   - Overview of scientific research in nursing
   - Evidence based practice in nursing.
2. Scientific Research: General issues and methods
   - Differences between the scientific method and the common sense
   - History of scientific thought.
3. Quantitative research: study design and methods
   - Experimental, quasi-experimental and non-experimental study design.
   - Descriptive and correlational study
   - Problematizing under deductive reasoning
   - Tools for data collection and and data analysis
   - Validity of study design
4. Qualitative research: study design and methods
   - Problematizing under an inductive reasoning
   - Tools for data collection
   - Content analysis of textual data
   - Criteria to evaluate the quality of qualitative research
5. Scientific Research process
   - Conceptual step: choosing and defining a research problem. Literature review
   - Writing theoretical framework;
   - Definition of objectives, research questions and/or research hypotheses
   - Design and planning phase: decisions about study design
   - Definition, classification, operationalization and control of variables
   - Universe, population, sample and sampling
   - Ethical and legal procedures
   - Methods and techniques of data collection
   - Data analysis and interpretation of results
   - How to write a report; communication of results
6. Basic Statistics. Descriptive and inferential statistics
   - Descriptive Statistics applied to categorical variables:
   - Descriptive Statistics for quantitative variables: measures of central tendency and dispersion
   - Tables and graphics to present results. Boxplot and histogram.
   - Statistical inference: Confidence intervals for mean and for proportion.
   - Significance tests: Qui square, Student's t, Mann-Whitney , ANOVA and Kruskal-Wallis.
   - Analysis of normal distribution
7. Tools for data analysis
   - Database by using EXCEL
   - Software for data analysis: EXCEL and WinPepi

Recommended reading

1. Bogdan, R. , Biklen, S. (1997). Investigação Qualitativa em Educação. Porto: Porto Editora
2. Polit, D. F. , Beck C. T. (2011). Fundamentos de Pesquisa em Enfermagem: avaliação de evidências para a prática da enfermagem. (7ª-ed.). Porto Alegre: Artmed
3. Tuckman, B. W. (2012). Manual de investigação em educação: metodologia para conceber e realizar o processo de investigação cientifica. (4ªed.), Lisboa: Fundação Calouste Gulbenkian.
4. Cunha, G. , Eiras, M. , Teixeira, N. (2011) Bioestatística e Qualidade na Saúde. Lisboa. LIDEL

Teaching and learning methods

Theoretical-practice classes are based in expositive methodology for explaining basic concepts and in interactive methodology in order to apply and to discuss such

Teaching and learning methods

concepts. During practice classes learners will analyse scientific papers and will use tools for data analysis. During tutorial classes , learners will develop a research project.

Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
    - Intermediate Written Test - 30% (Individual written test. for itens 1-5.)
    - Projects - 20% (Development of written work with discussion)
    - Practical Work - 50% (Practice evaluation by using computer for items 6 and 7 (statistics). Minimum mark: 8. 0)
2. Alternative evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
    - Final Written Exam - 50% (Written test.)
    - Practical Work - 50% (Practice evaluation by using computer (statistics). Minimum mark: 8. 5)

Language of instruction

Portuguese

Electronic validation

Manuel Alberto Morais Brás	Ana Fernanda Ribeiro Azevedo	Maria Eugénia Rodrigues Mendes	Adília Maria Pires da Silva Fernandes
25-05-2022	22-06-2022	22-06-2022	24-06-2022