

## RICERCA ED EVIDENZE SCIENTIFICHE (T000002)

### 1. language

Italian.

### 2. course contents

Coordinator: Prof. GIUSEPPINA SEPPINI

Year Course: 1st

Semester: 1st

UFC: 10

Modules and professors:

- EPIDEMIOLOGIA (A000715) - 2 CFU - SSD MED/42 - Prof. Alberto Borraccino
- LA RICERCA NELLE SCIENZE INFERMIERISTICHE (A000710) - 2 CFU - SSD MED/45 - Prof. Giuseppina Seppini
- LINEE DI INDIRIZZO DELLA RICERCA NELLA MIDWIFERY (A000711) - 1 CFU - SSD MED/47 - Prof. Elena Maria Mollo
- METODI E TECNOLOGIE PER LA ELABORAZIONE DELLE INFORMAZIONI (A000718) - 2 CFU - SSD SECS-S/02 - Prof. Elisa Ervas
- RICERCA E PRATICA BASATA SULLE PROVE DI EFFICACIA PER LE PROFESSIONI SANITARIE 1 (A000720) - 1 CFU - SSD MED/45 - Prof. Antonello Cocchieri
- STATISTICA MEDICA 1 (A000713) - 1 CFU - SSD MED/01 - Prof. Michela Bersia
- STATISTICA MEDICA 2 (A000747) - 1 CFU - SSD MED/01 - Prof. Michela Bersia

### 3. BIBLIOGRAPHY

Books and articles given are for guidance and not mandatory. Articles to support preparation may be suggested during the course.

#### **Epidemiologia/Epidemiology**

R. Beaglehole. **Epidemiologia di base**. Pubblicato dall'OMS con il titolo "Basic epidemiology" World Health Organization (1993).

[http://apps.who.int/iris/bitstream/handle/10665/43541/9241547073\\_eng.pdf;sequence=1](http://apps.who.int/iris/bitstream/handle/10665/43541/9241547073_eng.pdf;sequence=1)

or

A cura di F Rosmini, S Andreozzi, L Ferrigno a cura di. (2006). **Schemi di Epidemiologia di base**. Istituto Superiore di Sanità (ISS).

[https://www.iss.it/documents/20126/45616/0394\\_9303\\_2006\\_I\\_06-S2.1145354129.pdf](https://www.iss.it/documents/20126/45616/0394_9303_2006_I_06-S2.1145354129.pdf)

or

Faggiano F, Donato F, Barbone F. **Manuale di epidemiologia per la Sanità Pubblica**. Centro Scientifico Editore, Torino, 2005

#### **La ricerca nelle scienze infermieristiche/Nursing Research**

Polit Denise F, Tatano Beck Cheryl, Fondamenti i Ricerca Infermieristica. Seconda Edizione. Edizione italiana a cura di Alvisa Palese. McGraw-Hill, 2018.

Ficorilli A, (2021), Nuovi territori per l'etica nella ricerca scientifica. MIMESIS Edizioni.  
Mortari L., Zannini L., (2017). La ricerca qualitativa in ambito sanitario. Carocci Editore, Studi Superiori.

Any other study resources and tools provided by professor.

#### **Linee di indirizzo nella ricerca della midwifery/Guidelines in midwifery research**

Doughty R, Ménage D. Introduction to Research for Midwives 4th Edition. Elsevier, 2022

Materials provided by professor.

#### **Metodi e tecnologie per la elaborazione delle informazioni/Information processing methods and technologies**

Harvey Motulsky Biostatistica essenziale – Una guida non matematica Piccin Editore ISBN 88829931624.

#### **Ricerca e pratica basata sulle prove di efficacia per le professioni sanitarie 1/Research and evidence-based practice for healthcare professions 1**

Stillwell, S. B., Fineout-Overholt, E., Melnyk, B. M., & Williamson, K. M. (2010). Evidence-based practice, step by step: asking the clinical question: a key step in evidence-based practice. *The American journal of nursing*, 110(3), 58–61. <https://doi.org/10.1097/01.NAJ.0000368959.11129.79>

Biccard, B. M., & Rodseth, R. N. (2014). Taking an idea to a research protocol. *Southern African Journal of Anaesthesia and Analgesia*, 20(1), 14-18.

#### **Statistica Medica 1 e 2/Medical Statistics 1 and 2**

Statistica medica per le professioni sanitarie. 2005

Dancey, Reidy, Rowe: Statistica per le scienze mediche – Un approccio non matematico, Piccin Editore, 2016

### **4. LEARNING OBJECTIVES**

Teaching aims to have students develop methodological skills and abilities to use the scientific inquiry process and transform a clinical care problem into one or more questions to be searched in the literature in order to build the foundation for evidence-based advanced nursing/obstetric practice; develop scientific research in nursing, pediatric nursing, and midwifery; initiate innovation and improvement processes for education, clinical practice, and organization; and enhance decision-making skills to choose interventions based on recommendations in guidelines integrated with patient preferences and clinical status and characteristics of organizational settings.

At the end of the course the student will be able to:

#### **1st Dublin descriptor - knowledge and understanding skills**

To argue the meaning of the contents of the modules with particular reference to and elaborate original ideas relating:

- to issues that can be researched and use the process of scientific inquiry to validate and refine knowledge relevant to nursing and midwifery sciences
- to the interpretation of research products for the purpose of understanding a phenomenon and related variables and to build the foundation for evidence-based nursing/midwifery practice
- to the main study models in use in epidemiology, frequency measures and analysis methodologies for competent use of data

- to the methodological process to develop a study protocol.

### **2nd Dublin descriptor applied knowledge and understanding skills**

to apply their knowledge and skills to identify solutions to new or unfamiliar problems and to:

research scientific sources, interpret and understand research findings by applying them to decision making process

recognize the responsibility of the health professional in the critical evaluation and implementation of research findings

recognize and apply EBP, its steps and guidelines

analyse health data to make decisions guided by scientific research findings and address multidimensional problems within different care settings

implement of research studies with the collection, management and processing of data and the use of appropriate IT tools

Identify from professional and/or organizational contexts research problems/areas relevant to the healthcare professions.

### **3rd Dublin Descriptor - Autonomy of Judgment**

Integrate knowledge and gather additional information to formulate one's own assessment and make initiatives and decisions, reflect on social and ethical responsibilities related to the application of knowledge and judgments, within the framework of research methodology and scientific evidence.

### **4th Dublin descriptor - Communication skills**

Discuss peculiar aspects of the disciplines that make up the teaching, represent possible critical issues and solutions, communicate their conclusions and the knowledge and rationale behind them, appropriately choosing the medium of communication and form, using language appropriate to different interlocutors and contexts.

### **5th Dublin descriptor - Ability to learn**

Identify independently their own learning needs related to the disciplines that make up teaching and also meet them independently by developing self-learning through interdisciplinary connections.

## **5. prerequisites**

Knowledge of basic statistics, the concept of probability and some knowledge of set theory is required.

## **6. TEACHING METHODS**

Blended teaching through the integrated use of institutional platforms. The teaching activity of the teaching is organized as follows:

Lectures to achieve the results of descriptor 1; group work, exercises, analysis of cases and scientific articles to achieve results of descriptor 2 and 3, written reports and oral expositions of the exercises and group work conducted and highlighting of the further needs for in-depth study to achieve results described 4 and 5.

## **7. OTHER INFORMATION**

To enhance teaching, "literature review" and "Qualitative Research" workshops are provided.

## **8. METHODS FOR VERIFYING LEARNING AND FOR EVALUATION**

Teaching assessment activities include the following methods and tools:

- written test: closed-ended tests to check expected outcomes descriptor 1 and 2, with short-ended questions to check expected outcomes descriptors 3, 4 5. A possible production of papers as in-progress tests, with particular reference to the modules of Medical Statistics, and Methods and Technologies for Information Processing. The written test is considered passed with the achievement of sufficiency in each module and an overall grade of minimum 18 out of 30 points.
- Oral test conducted to supplement or compensate for the score obtained in the written test: the test will consist of an analysis with commentary and integration of the written test. The final teaching evaluation will be expressed in thirtieths, and the grade will be that which results from the weighted average of the marks obtained in each test and the comparison and discussion of the Examination Committee. Honors may be awarded, upon unanimous opinion of the Examination Committee, to those who have achieved a final grade of 30/30.

## **9. programma esteso/program**

### **Epidemiology**

Main measures in use in epidemiology: frequency, descriptive, associative, and follow-up measures.

Study approaches and models in epidemiology: taxonomy and typology; appropriateness in relation to cognitive need; advantages, disadvantages

The concept of causation and its applications in planning preventive interventions in population health.

Confounding and bias in scientific research and control methods.

Interpreting epidemiological measures.

Reading scientific research and retrieving useful information from published materials.

### **Nursing Research.**

Research in health care: EBP and its phases. Primary and secondary sources (and their search from a clinical question). Major study designs. Guidelines and RCTs: definition and critical appraisal. Ethical and bioethical aspects in scientific research; responsibilities of the healthcare professional in the critical evaluation and implementation of scientific research findings.

### **Guidelines in midwifery research**

Midwifery research in obstetrics, neonatal, gynecology, and gynecology-oncology. Research in midwifery practice: the basis for designing and evaluating evidence-based care models in midwifery beginning with the reorganization of the Birth Pathway in the Piedmont Region.

### **Information processing methods and technologies:**

Brief history of information systems for data collection in health care: data sources already available and what they contain.

Registries, catalogues, and coded data sources useful for research.

Statistics as a science for describing or explaining a phenomenon; Descriptive statistics (construction of frequency tables and indices and univariate and bivariate); Hints of probability: the Normal distribution and the concept of error.

How to prepare a dataset for proper data processing. Creation of minimal questionnaires for collecting the data missing from a study: definition of the dimensions needed in relation to the objectives to be achieved. Interpretation and graphical representations of the results. All topics include a theoretical and an applied part (exercises).

### **Research and evidence-based practice for healthcare professions 1**

Methodological approaches to conducting a research study: significant elements.

From everyday practice to the construction of the research question: defining the objective of the research study.

### **Medical Statistics 1 and 2**

Methods of data collection and presentation, types of variables, and study designs. Measures of occurrence and association. Confidence intervals of epidemiological indicators. Notes on statistical tests and their interpretation. Type I and II errors. Concepts of statistical power and confidence level. Applying inferential methods to evaluative and decision-making processes. Exercises in the use of Jamovi's basic functions for describing data and hints on the application of the main statistical tests and their interpretation.