

# PUBLIC \* HEALTH

## Seminars & Courses



Scuola di Specializzazione  
IGIENE & MEDICINA PREVENTIVA  
Direttore: Prof.ssa Anna Odone  
UNIVERSITÀ DI PAVIA



PhD  
One Health



### COURSE

## ADVANCED COURSE ON SYSTEMATIC REVIEWS AND META-ANALYSIS: METHODS AND PRACTICE

#### COURSE OBJECTIVE & OVERVIEW:

Aim of the course is to provide the foundational theoretical knowledge and practical methodological skills for **planning and conducting systematic reviews and meta-analyses**. The course is designed to support students in applying the skills and knowledge they will acquire to their research projects and fields of interest. It includes lectures and practical sessions on all phases of a systematic review and meta-analysis: defining the research question, drafting the protocol, systematic searching of sources, applying inclusion and exclusion criteria, extracting data, assessing the quality of primary studies, performing qualitative synthesis and meta-analysis, and reporting. Throughout the course students will **be guided in developing their own research project** - with the aim of directing its publication on a peer-reviewed journal - and will have access to the resources of the University of Pavia, statistical software for meta-analyses and bibliography management.

#### STUDENTS' TARGET:

The course is suitable for all PhD students, medical residents, and research fellows who want to publish a systematic review out of their research work. It might also be suitable for university students preparing their thesis.

#### DATES & FORMAT:

- Face-to-face edition (FF): course starts on 21<sup>st</sup> February 2024 (Aula Didattica, Istituto di Igiene, University of Pavia)
- Distance learning edition (DL): course starts on 8<sup>th</sup> May 2024 (online)

The course is structured in 5 sessions (one per week, see the programme below). Each session is scheduled in the morning (h 9.00-13.00) and includes one lecture and one practical workshop.

#### LANGUAGE:

The course will be taught in English and/or Italian, depending on class composition.

#### PROGRAMME & CONTENT:

- Session 1**  
21<sup>st</sup> February (FF)  
8<sup>th</sup> May (DL)  
h 9.00-13.00  
Lecture: Introduction to systematic reviews and meta-analyses. The PRISMA guidelines  
Workshop: Crafting a research question using the PICO(s) model. Initial steps in developing a systematic review protocol on Prospero
- Session 2**  
28<sup>th</sup> February (FF)  
15<sup>th</sup> May (DL)  
h 9.00-13.00  
Lecture: Study designs and epidemiological measures  
Workshop: Search strategy development for systematic retrieval of sources. Practical application of search strings and introduction to reference management tools (Endnote, Rayyan)
- Session 3**  
6<sup>th</sup> March (FF)  
22<sup>nd</sup> May (DL)  
h 9.00-13.00  
Lecture: Selecting studies and applying inclusion/exclusion criteria. Data extraction and data synthesis techniques: qualitative, meta-analysis and meta-regression  
Workshop: Qualitative and quantitative synthesis: hands-on session with Rayyan, Prometa and RevMan for screening and data management
- Session 4**  
13<sup>th</sup> March (FF)  
29<sup>th</sup> May (DL)  
h 9.00-13.00  
Lecture: In-depth review of PRISMA steps. Quality assessment and tools for quality appraisal  
Workshop: PRISMA checklist compliance and practical exercises on risk of bias assessment
- Session 5**  
19<sup>th</sup> March (FF)  
5<sup>th</sup> June (DL)  
h 9.00-13.00  
Lecture: New frontiers in systematic reviews: umbrella reviews, multiple treatments meta-analysis, network meta-analysis; the role of AI in systematic reviews  
Workshop: Practical session on developing a draft for a systematic review manuscript

#### COURSE DIRECTOR & FACULTY:

Prof Anna Odone, School of Public Health, University of Pavia – Course Director  
Prof Maddalena Gaeta, School of Public Health, University of Pavia  
Dr Paola Bertuccio, School of Public Health, University of Pavia  
Dr Giacomo Pietro Vigezzi, School of Public Health, University of Pavia

#### REGISTRATION:

- Face-to-face edition - Register by 4<sup>th</sup> February 2024 (registration will be limited to 35 participants)
- Distance learning edition - Register by 24<sup>th</sup> April 2024 (registration will be limited to 35 participants)

Registrations will be managed electronically (link will be provided). Please provide full name, PhD course, academic affiliation, research topic, supervisors, edition preference (face-to-face/distance).

#### INFORMATION:

For information, please contact [phd.onehealth@unipv.it](mailto:phd.onehealth@unipv.it).