University of Eastern Finland

Department of Nursing Science and Institute of Public Health and Clinical Nutrition, School of Medicine

Intensive 5-day course on systematic review and meta-analysis (4 etcs)

For UEF Faculty of Health Sciences PhD students

Time: 7.-11.12.2026 (In person)

Place: University of Eastern Finland, Kuopio

Course leaders:

Tarja Kvist, Professor, PhD, Department of Nursing Science, University of Eastern Finland

Ari Voutilainen, Research Manager, Docent, PhD, Institute of Public Health and Clinical Nutrition, School of Medicine, University of Eastern Finland

Teachers:

Ari Voutilainen, Research Manager, Docent, PhD, Institute of Public Health and Clinical Nutrition, School of Medicine, University of Eastern Finland

Christina Tikka, Researcher, PhD, Institute of Public Health and Clinical Nutrition, School of Medicine, University of Eastern Finland

Jed Montayre, Associate Professor, Associate Head (Strategy) in the School of Nursing at the Hong Kong Polytechnic University, Director of the JBI Hong Kong Centre of Evidence-based Healthcare Excellence, Editor of Journal of Clinical Nursing

Doctoral researcher Petra Kämäräinen, Department of Nursing Science, University of Eastern Finland

Teaching methods: Lectures, group and seminar working and presentation

Learning outcomes:

-After the course, the student will understand the nature and design of systematic review and meta-analysis
-Students will understand how to carry out systematic literature reviews and meta-analysis
-Students know how to present results of a systematic literature review and meta-analysis
-Students will implement a computational meta-analysis
-Students identify the advantages of the statistical program in meta-analysis

Evaluation: Pass - Fail

Registration:

Further information: Ari Voutilainen, Research Manager, Docent, PhD, Institute of Public Health and Clinical Nutrition, School of Medicine, University of Eastern Finland, ari.voutilainen@uef.fi

Tarja Kvist, PhD, Professor, Department of Nursing Science, University of Eastern Finland, tarja.kvist@uef.fi

Day 1 Monday

At 9 am Opening words for the course (Ari Voutilainen, Jed Montayre & Tarja Kvist)
Coffee/Tea
Orientation to group work (Ari)
At 11 am What is systematic review? (Christina Tikka)
Lunch
How to carry out a systematic literature review? (Christina Tikka)
How to present results of a systematic literature review? (Christina Tikka)
At 2:30 pm Groups start working on their systematic literature reviews

Day 2 Tuesday (Computer Class)

At 9 am What is computational meta-analysis? (Ari Voutilainen)
Coffee/Tea
At 11 am Workshop on how to execute a meta-analysis in R? (Ari Voutilainen)
Lunch
The workshop continues.
At 2:30 pm Groups start working on their computational meta-analyses

Day 3 Wednesday

At 9 am Journal editor's views on systematic reviews and meta-analyses (Jed Montayre)
Coffee/Tea
At 11 am AI in systematic review and meta-analysis: threat or opportunity? (Jed Montayre)
At 12 pm Lunch
At 1:00 pm Groups continue working on their systematic literature reviews
At 2:30 pm Updating group work: teachers answer questions aroused (Christina Tikka)

Day 4 Thursday (Computer class)

At 9 am Updating group work: teachers answer questions aroused (Ari Voutilainen)
Coffee/Tea
At 11 am Groups continue working on their computational meta-analyses
Lunch
At 2:30 pm Updating group work: teachers answer questions aroused (Ari Voutilainen)

Day 5 Friday

At 9 am Seminar in which the groups present their works starts with 1 or 2 presentations.
Coffee/Tea

Seminar continues with 2 presentations.
Lunch
Seminar continues with 2 presentations if the number of groups exceeds four (4).
At 2:30 pm Closing words for the course (Ari Voutilainen & Tarja Kvist, All teachers)

The minimum number of groups is three (3) which requires nine (9) students.
The maximum number of groups is six (6) which denotes 30 students at max.

Course materials:

Borenstein M, Hedges LV, Higgins JPT, Rothstein HR. 2021. *Introduction to Meta-Analysis*. 2nd ed. John Wiley & Sons Ltd, Hoboken, NJ.

Cochrane e-learn materials specifically with respect to *Risk of Bias* and *GRADE*: https://www.cochrane.org/learn/courses-and-resources/cochrane-methodology

Covidence e-books: https://support.covidence.org/help/covidence-ebooks

Harrer M, Cuijpers P, Furukawa TA, Ebert DD. 2022. *Doing Meta-Analysis with R. A Hands-On Guide*. CRC Press, Boca Raton, FL. E-version: https://doing-meta.guide/