



LUNDS
UNIVERSITET

Courses for doctoral students in epidemiology
and register-based research

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LUND 9 SEPTEMBER 2022



1



IMM | Karolinska
Institutet



SINGS
Swedish INterdisciplinary Graduate School


**New call spring 2023
with start fall 2023**

Swedish INterdisciplinary Graduate School in register-based
research (SINGS), website: <https://ki.se/en/imm/sings>

**Anita Berglund, Project leader, Director and Chair
Steering Group SINGS**
Ph.D., Ass. Professor of Epidemiology
Karolinska Institutet
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2


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SINGS National Steering group

- Overall responsibility for the curriculum and quality assurance
- Overall responsibility for admission procedure and decides on budgetary matters
- **Members representing different research disciplines**
 - Considerable experience of conducting research utilising data from registers
 - Extensive teaching experience
 - Contribute with different subject-matter knowledge, competences regarding ethical and legal aspects, data infrastructure responsibilities
- Two **student representatives** from each cohort
 - Formal structure for student influence on the educational activities

- **Anita Berglund**, Ass. Professor of Epidemiology, Karolinska Institutet (Director and Chair Steering Group, member SWE-REG coordination group)
- **Gunnar Andersson**, Professor of Demography, Stockholm University (Deputy SWE-REG coordination group)
- **Jonas Björk**, Professor Epidemiology, Lund University
- **Xavier de Luna**, Professor Statistics, Umeå University
- **Max Petzold**, Professor Biostatistics, University of Gothenburg, Director of the Swedish National Data Service (SND)
- **Magnus Stenbeck**, Ass. Professor, Karolinska Institutet, Secretary in the Research Data Inquiry
- **Maria Brandén**, Senior Lecturer, Linköping University
- **John Östh**, Ass. Professor, Senior Lecturer Geography with GIS, Uppsala University
- **Karin Modig**, Ass. Professor Epidemiology, Karolinska Institutet (assistant director)

3

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SINGS

- Focus **on methodological, practical, ethical and legal aspects** of utilising register data for research purposes
- **Core curriculum attended by all students**, strive to build a common knowledge base for a range of disciplines involved in register-based research
- **Elective courses** on different topics and at different levels in order to **enable the tailoring of individualised study plans**
- **Of relevance for many quantitative research disciplines**, such as epidemiology, public health, sociology, demography, psychology, statistics, health economics, and other medical and social sciences
- **Target group** doctoral students involved in register-based research
- **Runs in 2-year cycles**, students admitted biannually (around 25-30 per cohort is foreseen)
- **A minimum of 12 credits**; all core courses and a minimum of one elective course

4

Core courses

- Key concepts and principles for design and critical interpretation of register-based studies (incl. ethical and legal aspects on using personal information in register-based research) (4.5 credits)
- An introduction to data science for register-based research (1.5 credits)
- Causal inference from observational data (1.5 credits)
- Writing and presenting successful grant applications (1.5 credits)
- Longitudinal methods in register-based research (1.5 credits)

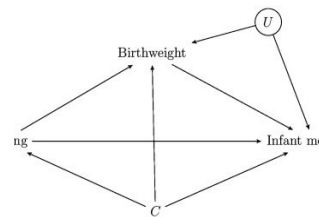
Followed in a logical order, implying progression.



5

Elective courses, ex. (one-week courses, 1.5 credits each)

- Statistical analysis of twin and family-based studies
- Introduction to R
- Advanced course in SAS programming
- Introduction to spatial methods
- Methods for life course epidemiology
- Causal inference from observational data: emulating a target trial
- Fundamentals of statistical modeling
- Introduction to machine learning methods for analysis of large-scale register datasets



6

EpiDem

A network for strengthening Swedish register-based research

The EpiDem Network has been funded by FORTE (Swedish Research Council for Health, Working Life and Welfare) 2015, 2016 - 2018, and 2019-2021. The aim of this national network is to strengthen the position of Swedish register-based research, partly through increased knowledge and shared experiences regarding adequate scientific approaches and partly by forming new long-term partnerships between significant research groups in Epidemiology and Demography, both at junior and senior levels. The FORTE EpiDem Network arranges two different national meetings each year: 1) Network conferences on methodological issues, 2) Conferences for doctoral students.

For further information, contact [Jonas Björk](#), director of the FORTE EpiDem.



<https://www.lupop.lu.se/epidem>

Next meeting in
spring 2023

Meetings

Digital meetings

March 2021 ([program](#))

September 2021 ([program](#))

Network meetings

Örenäs slott 2015 ([program](#))

Ystad saltsjöbad 2016 ([program](#))

Ystad saltsjöbad 2017 ([program](#))

Ystad saltsjöbad 2018 ([program](#))

Ystad saltsjöbad 2019 ([program](#))

Ystad saltsjöbad 2022 ([invitation](#))

Junior conferences

Falsterbo kursgård 2017 ([program](#))

Falsterbo kursgård 2018 ([program](#))

Falsterbo kursgård 2019 ([program](#))

Torekov hotel 2022 ([program](#))

7

More advanced PhD-courses at LU-MedFak

https://www.med.lu.se/english/intramed/teaching_research/phd_students_supervisors/for_phd_students/courses_and_seminars/elective_courses

- Causal inference with non-randomized data
- Approaches to handling of missing data
- Systematic review and meta-analysis (Cochrane)
- Survival analysis
- Analysis of repeated measurements
- Introduction to programming
- Introduction to bioinformatics
- Health and environment - climate change and sustainability
- Time-series analysis in clinical and environmental epidemiology



8