

Epidemiology (D000649)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size	<i>(nominal values; actual values may depend on programme)</i>		
Credits 3.0	Study time 90 h	Contact hrs	30.0 h

Course offerings in academic year 2020-2021

A (semester 2)	Dutch	Gent
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Lecturers in academic year 2020-2021

De Smedt, Delphine	GE39	lecturer-in-charge
De Bacquer, Dirk	GE39	co-lecturer

Offered in the following programmes in 2020-2021

	crdts	offering
Bachelor of Science in Biomedical Sciences	3	A
Preparatory Course Master of Science in Biomedical Sciences	3	A

Teaching languages

Dutch

Keywords

Epidemiological study methods, frequency and association measures, risk, study design, cost-effectiveness

Position of the course

This course allows the student to use and interpret epidemiology as scientific discipline in order to produce and critically evaluate publications and reports with respect to design, analysis and conclusions.

Contents

- Introductory concepts.
- Frequency measures of disease and their relation.
- Standardisation (direct and indirect), SMR
- Risk measures (causality, risk difference, relative risk, odds ratio, attributable risk).
- Diagnostic value of a test, likelihood ratios and ROC curves.
- Precision and validity (bias, confounding, elimination of confounding, matching, confidence intervals for epidemiological measures).
- Epidemiological study design (cross-sectional study, case-control study, cohort study, ecological study, clinical trial, community trial), meta-analysis
- Sampling.
- Cost-effectiveness.

Initial competences

Data Analysis II or having obtained these final competences in another way

Final competences

- 1 Having practical knowledge of epidemiological study design
- 2 Understand disease frequency measures at the population level
- 3 Understand the study of risk factors at the population level
- 4 Interpret epidemiological study results correctly
- 5 Apply epidemiologic techniques

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Guided self-study, lecture, seminar: coached exercises

Learning materials and price

Syllabus, exercises handout (available on Minerva)

References

- Grondslagen der epidemiologie. JP Vandenbroucke & A. Hofman. Elsevier Gezondheidszorg, 1999.
- Bhopal R. Concepts of epidemiology. Oxford University Press 2016.
- Bonita R, Beaglehole R, Kjellstrom T. Basic epidemiology, World Health Organization 2006.
- Rothman KJ. Epidemiology. Oxford University Press 2012.

Course content-related study coaching

Individual consultation after an appointment by e-mail.

Evaluation methods

end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period

Written examination

Examination methods in case of periodic evaluation during the second examination period

Written examination

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Calculation of the examination mark

The final score consists of the unweighted sum of subscores for individual questions.