MEVN20 Biostatistics I

Replaces VMFN02 Biostatistics I, adopted by the Board of Health Sciences Education

7.5 credits Second cycle A1N

General information

Main field
Occupational therapy, nursing, physiotherapy, medicine

Subject
Biostatistics

Type of course
The course is an elective component of the two-year Master of Medical Science programme. The course complies with the regulations of the Higher Education Ordinance (Swedish Code of Statutes 1993:100 with later amendments). It can also be studied as a free-standing course.

Language of instruction
Swedish.

Learning outcomes

Knowledge and understanding
On completion of the course, students shall be able to

- describe and discuss basic statistical concepts
- assess the distribution characteristics of variables
- describe the concepts of statistical description and inference and how they are used

Competence and skills
On completion of the course, students shall be able to

- define a problem that is statistically researchable
- use an established statistics software programme in order to make basic statistical analyses
- carry out random selection and describe the collected material
- formulate and test hypotheses
- carry out correlation and regression analyses
- present the results of their own completed analyses

Judgement and approach
On completion of the course, students shall be able to

- discuss reliability and generalisability
- draw conclusions in relation to a defined problem formulation
• critically assess quantitative scientific papers in relation to the statistical methods used

Course content

The course provides an introduction to the scientific view and fundamental assumptions of statistics. Students are further introduced to principles of implementation and analysis of statistical studies. The following aspects are included:

• basic statistical concepts
• the measurement level and distribution characteristics of variables
• using statistics software
• statistical description
• point and interval estimates
• hypothesis testing (parametric and non-parametric)
• correlation
• simple and linear regression
• reliability and validity

Subjects examined
Presentation of own statistical study, 7.5 credits

Instruction and assessment

Instruction
The work methods are based on flexible learning and can vary between individual work, group work, seminars and lectures.
Seminars take place in Lund, whereas the other components are carried out as independent study with online elements. The studies are characterised by an active search for knowledge, problem solving, reflection and critical analysis.

Assessment
For a grade of Pass students must have participated actively in seminars and online discussions and presentations, and passed all written assignments.

Grades
Grades are set for a completed course. One of the grades Pass or Fail is awarded.

A student who has passed a course will be given a certificate to that effect by the higher education institution, on request.

Admission requirements
To be admitted to the course, students must have a Bachelor’s degree in Nursing, Occupational Therapy or Physiotherapy (180 credits including a degree project worth 15 credits) or an equivalent qualification in medical science.
Further information

Examination opportunities, new examiner etc.

Theoretical courses
One ordinary examination and one opportunity for re-examination are offered in conjunction with the course. A student who has failed to achieve a pass on either of these occasions will be offered a further opportunity for re-examination at a later date. A student is entitled to four opportunities for re-examination in a theoretical course.

New examiner
A student who has taken two examinations in a course or a part of a course without obtaining a pass grade is entitled to have another examiner appointed, unless there are special reasons to the contrary (Swedish Code of Statutes 2006:1053). The request is to be submitted to the programme director.

Literature
See appendix
Appendix: Literature

MEVN20 Biostatistics I
7.5 credits Second cycle A1N

Students are to read selected sections of relevance to the course.


Theses and research articles will be added.