



LUND
UNIVERSITY

Faculties of Humanities and Theology

HTXN08, Linguistics and Cognitive Science: ERP Research Methods - Theory and Practice, 7.5 credits

*Språk- och kognitionsvetenskap: ERP-metod - teori och praktik, 7,5
högskolepoäng*

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by the programmes director by delegation from the pro-dean for first- and second-cycle studies on 2013-05-23 to be valid from 2013-05-23, autumn semester 2013.

General Information

Subject: Psychology, Cognitive Science and Language and Linguistics

The course is offered as an elective component of Master's programmes in Psychology, Cognitive Science and Language and Linguistics. It can normally be included in a first- or second-cycle degree.

Language of instruction: English

The course is normally taught in English, but if both the students and the lecturer agree, it may be taught in Swedish. Such an agreement would depend on both the lecturer and the students having a good knowledge of Swedish.

Main field of studies

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Depth of study relative to the degree requirements

A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

On completion of the course the students shall

Knowledge and understanding

- be able to account for the basic principles of electrophysiological research methods and recording of EEG signals

- be able to describe how a simple ERP experiment is to be designed
- be able to understand and report published research papers and relate them to ERP and EEG measurements in their own field of study

Competence and skills

- be able to conduct an EEG recording in a predesigned experiment
- be able to perform a simple analysis of EEG that leads to average ERP waves
- be able to plan an ERP experiment in their own field of study

Judgement and approach

- be able to read, understand and critically evaluate published research papers of relevance to the field of study
- be able to critically assess the pros and cons of ERP methodology
- be able to take a position on and predict difficulties and problems that may arise in research involving ERP methodology.

Course content

The aim of the course is to provide students with a theoretical introduction to ERP methodology (event-related potential) and practical experience of working with the EEG systems for recording and analysis. The course consists of theory lectures and seminars as well as a number of laboratory exercises. The lectures provide an overview of some of the major research areas in which ERP methodology is used and the seminars consist of discussions of published research in which the methodology has been used. During the laboratory exercises, students take part in a demonstration of an EEG recording and a minor analysis and get the opportunity to practise recording and analysis on their own.

Course design

The teaching consists of lectures and seminars, laboratory sessions and independent exercises. Attendance is compulsory at the laboratory exercises and seminars, a total of approximately 10 sessions.

Assessment

The assessment is based on a written exam and an oral review of a research article. In addition, an assignment in data analysis is assessed.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.

Entry requirements

To be admitted to the course, students must have a Bachelor's degree including 60 credits in one of the subjects Psychology, Cognitive Science or Linguistics, or the equivalent.

Further information

1. The course is offered at the Humanities Laboratory, Lund University.
2. The course partly overlaps with course HTXN06.
3. The credits allocated for course content that in whole or in part is commensurate with another course can only be credited once for a degree. For further details see the current registration information and other relevant documentation.

Subcourses in HTXN08, Linguistics and Cognitive Science: ERP Research
Methods - Theory and Practice

Applies from H13

1301 ERP Research Methods: Theory and Practice, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction