1 Name, Scope and Level of the Course

The course is provided by the University of Skövde and is named Research Techniques in Cognitive Neuroscience G1F. It comprises 7.5 credits and is on basic level. The level of progression of the course is G1F.

2 Objectives

After completed course the student should be able to:

- compare and contrast the physical foundations of the most important research techniques within cognitive neuroscience,
- analyze how those foundations give rise to different strengths and weaknesses for each respective technique,
- infer relevant experimental design constraints from these strengths and weaknesses, and
- compose shorter scientific essays on assigned topics.

3 Course Content

The course consists of a review of some of the most important research techniques within cognitive neuroscience, such as EEG, ERP, MRI, and fMRI. Their various physical foundations are described, as are (some of) their applications in practice. There is a special emphasis on the techniques’ respective strengths and weaknesses, and how these dictate different experimental design considerations. In addition, the students practice scientific writing in relation to the topic.

4 Forms of Teaching

The teaching comprises lectures and seminars.

The teaching is conducted in English.

5 Examination

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

The final course grade is determined by a weighted average of the grades for the examination components submitted assignments and essays.

Registation of examination results:

<table>
<thead>
<tr>
<th>Name of examination</th>
<th>Credits</th>
<th>Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written assignments</td>
<td>4.5</td>
<td>A/B/C/D/E/F</td>
</tr>
<tr>
<td>Essays</td>
<td>3</td>
<td>A/B/C/D/E/F</td>
</tr>
</tbody>
</table>

Students with a permanent disability who have been approved for special educational support may be offered adapted or alternative examinations.

6 Admission Requirements

Admission to the course requires passed courses worth 30 credits in the main field of cognitive neuroscience, including the courses KU136G Basic Neuroscience G1N and [KU104G Scientific Foundations for Applied Positive Psychology G1N or KU108G Basic Research Methods and Philosophy of Science G1N] (or equivalent).
7 Subject, Main Field of Study and Disciplinary Domain
The course forms a part of the academic subject area of Cognitive Neuroscience. The course is a part of the main field of study in Cognitive Neuroscience at the University of Skövde. The disciplinary domain of the course is Natural Sciences.

Every course at the University of Skövde belongs to a subject. The division of subjects is used for follow-up and quality assurance. A main field of study is an area in which a degree can be awarded. Disciplinary domain is a division which is used by the government for the allocation of resources for studies at basic level and advanced level.

8 Approval of Course and Course Syllabus
The course was approved by the Curriculum Committee for Bioscience on 24 October 2019. This course syllabus was approved by the Curriculum Committee for Bioscience on 27 February 2020. It is valid from 1 July 2020 and replaces the course syllabus approved 24 October 2019.

9 Overlapping with Another Course
This course cannot constitute a part of a degree also containing a course the content of which is totally or partly equivalent to the content of this course.

10 Additional Information
Further information will be available on the university’s website before a course is given.

National and local regulations for higher education are available on the university’s website.

Upon completion of the course there will be a follow-up. The main purpose of this follow-up is to contribute to improvements of the course. The students’ experiences and views constitute one of the criteria for the follow-up and are gathered by means of course evaluations. The students will be informed of the results of the follow-up and any decisions regarding actions that are to be taken.

11 Course Literature and Other Educational Materials

Scientific articles and other relevant materials may be added according to the teacher’s instructions.