Introduction to functional magnetic resonance imaging (fMRI) as a tool to investigate the cognitive neuroscience of hearing. 7.5 ECTS credit points

COURSE OBJECTIVES
This course will introduce functional magnetic resonance imaging (fMRI) as a tool to investigate the neural correlates of cognitive and auditory function. After the course is completed the student will:

- be familiar with current ‘best practice’ in the use of fMRI
- know how to design and implement an fMRI study
- understand how fMRI can be applied to investigation of cognitive and auditory function

CONTENTS
Central topics that will be discussed in the course are experimental design, data processing and analysis, as well as statistical inference, functional anatomy and localization. Although the course material will be introduced with a special emphasis on applications in speech and hearing research, the material covered also applies directly to other applications in cognitive neuroscience.

MODES OF TEACHING/WORKING FORMS
The course includes lectures, seminars and practical exercises. Students are expected to participate actively.

EXAMINATION
Examination involves writing a course paper describing an fMRI study that employs current ‘best practice’ in the use of fMRI and addresses a relevant research question in the field of the cognitive neuroscience of hearing. The course paper should cover proposed design, analysis and anatomical predictions.

Reaction ‘thought’ papers will be expected from all students for assigned readings.

Documented active participation throughout the course both in class and in the e-mail or web-based discussion forum.

ADMISSION REQUIREMENTS
Registration as doctoral student or master student

GRADING
The grades are Approved and Not approved.

COURSE READINGS
The teachers decide on course readings. Required and recommended readings will be selected from specialized textbooks and will also include current methodological papers from the primary literature.

COURSE EVALUATION
Course planning and teaching is based on the course description. Obligatory course evaluation will assess to what extent the course corresponds with the description.

Effective from spring 2010

Approved by FUN 2009-12-16

Kursen ingår i utbudet av valbara kurser