



FDD3443 Basal Ganglia-Reading Course on Theories and Models 3.0 credits

Basala ganglierna-läskurs om teorier och modeller

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for FDD3443 valid from Spring 2014

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

PhD student, or studying last year of a Master or Engineering programme.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

During the course, we examine what is known about the basal ganglia function. The aim is to align their function to the level of the neural network and to computing models. Specific focus will be on the understanding of the role of the basal ganglia in reinforcement learning and at behaviour selection. The course is organised in seminars (about 15*1h) where research articles and book chapters are actively discussed and analysed by the participants.

Course contents

The course should give the students a representative overview over the theories of today about the function of the basal ganglia and how these theories are based on knowledge of specific properties of individual neurons and synaptic types, including the plastic properties of the synapses. Current model studies in the area are analysed in a detailed way.

Disposition

The course should give the students a representative overview over the theories of today about the function of the basal ganglia and how these theories are based on knowledge of specific properties of individual neurons and synaptic types, including the plastic properties of the synapses. Current model studies in the area are analysed in a detailed way.

Course literature

Aktuella forsknings- och reviewartiklar.

Examination

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

The student should find and suggest at least one of the articles that are studied during the course and furthermore lead the discussion of that article. Furthermore, the student must participate actively during at least 80% of the seminar sessions.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.