



**Karolinska  
Institutet**

Course syllabus for

## **Experimental psychology, 15 credits**

Experimentell psykologi, 15 hp

This course syllabus is valid from autumn 2013.

Please note that the course syllabus is available in the following versions:

[Autumn2007](#) , [Autumn2008](#) , [Autumn2009](#) , [Autumn2010](#) , [Autumn2011](#) , [Autumn2012](#) , Autumn2013 ,  
[Autumn2014](#) , [Autumn2015](#) , [Autumn2017](#) , [Autumn2020](#) , [Autumn2021](#) , [Autumn2022](#) , [Autumn2023](#) ,  
[Autumn2024](#)

Course code	2PS001
Course name	Experimental psychology
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Psychology
Level	G1 - First cycle 1
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Decided by	Programnämnden för Psykologprogrammet
Decision date	2007-06-21
Revised by	Programnämnd 8
Last revision	2013-05-07
Course syllabus valid from	Autumn 2013

## **Specific entry requirements**

Ma B, Sh A with at least the Pass grade/3.

## **Objectives**

### Part 1

On completion of the course, the student should be able to

account for how our sensory organs and our brain interpret the environment in psychological meaningful units and various theories about this

account for the principles of how we pay attention to certain information but not other

give examples of working tasks for clinical psychologists and discuss different aspects of this profession

### Part 2

On completion of the course, the student should be able to

account for basic driving forces such as for instance hunger, thirst and sexuality based on a psychological, evolutionary and neuro-scientific perspective  
 account for basic emotions and reflect on in what way, feelings (or emotions) such as joy, anger or shame play a central role in the life of people  
 account for the stress concept from a biopsychosocial perspective

### Part 3

On completion of the course, the student should be able to

define and understand the meaning of descriptive statistical concepts (e.g. population, random samples, measures of central tendency, variance) and statistical inferences (e.g. significance, significance level, intra-person and inter-person comparisons, t-tests), and be able to discuss and carry out statistical analyses of simple experimental data

account for the principles of experiment planning and analyse strengths and weaknesses of experimental methodology in different research contexts

plan and carry out a laboratory session in the form of a small experiment and in writing be able to analyse, report and discuss the results of this

discuss his own as well as another student's report of an implemented experiment in a seminar

## Content

**Perception and Attention, 5 hp** This part treats sensory functions, perception, i.e. how our senses get information about the world around us, and about events in the own body, and psychological research on how this information is interpreted and used. The neurophysiological background to these functions is treated comprehensively. The perception machinery can not treat all available information but attention processes select the information to be prioritised, and will govern actions. Theories around and the neurological basis of attention are treated. Based on the experience from a work place visit in the field of clinical psychology place, we discuss the profession and relate theory of psychology to future practice.

**Emotion and Motivation, 5 hp** This part deals with driving forces and emotional dynamics behind human action. Specifically original, biologically based driving forces such as hunger, thirst, sexuality and emotional attachment to other people, and social motives such as dominance and neurophysiological control of these. Feelings are treated within the concept of emotion, where basic emotional conditions such as joy, grief, fear, anger and disgust are treated from evolutionary biological, psychological and neuro-scientific perspectives. Further, emotional communication is treated, and the interplay between emotion and other psychological processes.

**Experimental methodology, 5 hp** This part gives an introduction to statistics dealing partly with descriptive statistical concepts such as population and interaction, distribution, measures of central tendency (e.g.average), variation (eg. standard deviation) and statistical estimations, partly introducing inference statistics with significance testing of differences between two groups.

Further, an introduction is given to experimental research methodology with an overview of basic concepts such as experimental variables (independent, dependent and irrelevant variables), experimental control, and causal inferences. Further, the planning of experiments, and the usability of the experimental methodology are discussed for various types of questions.

## Teaching methods

The main part of the teaching takes place in the form of lectures/seminars where the students are encouraged to active participation. Further, demonstrations and statistical calculation exercises, and an implementation of a laboratory work, are included. This implies that the students in groups formulate a question for an experiment, and plan, implement, analyse, report and discuss this.

## Examination

The course is examined separately for each part. The grades Fail (U), Pass (G) and Pass with distinction (VG) are applied:

Part 1 and 2:

1) These two parts are examined separately in a common written examination at the end of the course. The two part examinations are graded separately with Fail/Pass/Pass with distinction.

1)

Part 3:

1) This part is examined through a) two written examinations (grades Fail/Pass/Pass with distinction), and b) a written report of an implemented group laboratory session, and oral public review of this in a seminar. It is also required that the group acts as a critic of another group's report (grades Fail/Pass). For a Pass grade in this part, a Pass grade is required both in a) and b). A Pass with distinction requires a Pass with distinction in one of the written exams and a Pass in the group laboratory session.

2)

Participation in laboratory sessions and calculation exercises, and certain seminars are compulsory for a Pass grade. For a Pass grade in the whole course, at least a Pass in all the parts of the course is required. For Pass with distinction in whole course, Passed with distinction is required in at least two of the three parts of the course.

Make-up opportunities for examinations are provided according to KI's guidelines.

## Transitional provisions

The interim regulations follow KI's local guidelines.

## Other directives

Course evaluation, based on the expected learning outcomes of the syllabus, takes place according to KI's local guidelines. Results and possible actions are communicated to the students in the course web page.

## Literature and other teaching aids

*Borg, Elisabet; Westerlund, Joakim*

### **Statistik för beteendevetare**

2., uppdaterade uppl. : Stockholm : Liber, 2007 - 456 s.

ISBN:978-91-47-01510-8 LIBRIS-ID:10621074

[Library search](#)

*Gazzaniga, Michael S.; Ivry, Richard B.; Mangun, George R.*

### **Cognitive Neuroscience : The Biology of the Mind**

3 ed. : Londonb W W Norton & Co Ltdc 2008 : W W Norton & Co Ltdc 2008, 2008

ISBN:0-393-11136-1 LIBRIS-ID:10925409

[Library search](#)

*Myers, David G.*

### **Psychology**

10th ed. : New York, NY : Worth Publishers, 2011. - p. cm.

ISBN:1-4292-6178-1 (hardcover : alk. paper) LIBRIS-ID:12746942

[Library search](#)

*Fox, Elaine.*

**Emotion science : cognitive and neuroscientific approaches to understanding human emotions**

Basingstoke : Palgrave Macmillan, 2008. - xx, 456 p.

ISBN:9780230005174 (hardback : alk. paper) LIBRIS-ID:14075424

[Library search](#)

*Svartdal, Frode*

**Psykologins forskningsmetoder : en introduktion**

1. uppl. : Stockholm : Liber, 2001 - viii, 295 s.

ISBN:91-47-05056-X LIBRIS-ID:8354383

[Library search](#)

*Brace, Nicola; Kemp, Richard; Snelgar, Rosemary*

**SPSS for psychologists : a guide to data analysis using SPSS for Windows (versions 12 and 13)**

3. ed. : Basingstoke : Palgrave Macmillan, 2006 - xviii, 450 s.

ISBN:1-4039-8787-4 (hft.) LIBRIS-ID:9971180

[Library search](#)