



**Karolinska
Institutet**

Course syllabus for

Basic biology, 7.5 credits

Grundläggande biologi, 7.5 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

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

[Autumn2007](#) , [Autumn2008](#) , [Autumn2009](#) , [Autumn2010](#) , [Autumn2011](#) , [Autumn2012](#) , [Autumn2013](#) , [Autumn2014](#) , [Autumn2018](#) , [Autumn2019](#) , [Autumn2020](#) , [Autumn2021](#)

Course code	2PS002
Course name	Basic biology
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Participating institutions	<ul style="list-style-type: none">• Department of Neuroscience
Decided by	Programnämnden för Psykologprogrammet
Decision date	2007-06-21
Revised by	Programnämnden för psykologprogrammet
Last revision	2008-06-04
Course syllabus valid from	Autumn 2008

Specific entry requirements

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

Objectives

Part 1 On completion of this part, the student should be able to: 1. at a general level describe how studies of evolution and the behaviour of animals may contribute to the knowledge of human psychology 2. at a general level be able to describe human evolutionary history 3. at a general level describe the mechanisms of the biological evolution (mutation and selection) and their results (adaptation) 4. at a general level describe the concept of behavioural evolution and be able to explain the relationship between heredity, environment and an individual's behaviour 5. at a general level describe the following concepts: cultural evolution, evolutionary psychology, behavioural ecology, and be able to list different opinions about the importance of our evolutionary history Part 2 On completion of this part,

the student should be able to: 1. at a general level describe the structure and function of the nervous system 2. at a general level describe the structure and function of the neuron 3. at a general level describe the structure and function of other organ systems

Content

Part 1 Evolution and ethology, 2.5 credits (Evolution and ethology) The part treats human evolution, ethology and animal psychology and how this may contribute to knowledge about human psychology
Part 2 Neurobiology and physiology, 5.0 credits (Neurobiology and physiology) In learning outcome 1, the structure of the nervous system is included (central and peripheral nervous system) and the functional division (somato-motor and autonomous nervous system) and important neuro-anatomical structures. In learning outcome 2, the specific structure of the neuron, description of the action potential, and neurotransmission are included. In learning outcome 3, heart and circulation, the gastrointestinal canal, liver, kidneys and urinary tract, respiration, endocrinology and the immune system are included.

Evolution and ethology, 2.5 hp

Grading scale: VU

Part 1 includes evolution ethology and animal psychology and how this can contribute to knowledge about human psychology

Neurobiology and physiology, 5.0 hp

Grading scale: VU

In objective 1, the structure of the nervous system (central and peripheral nervous system) and the functional division (the motoric nervous system and the autonomic nervous system) and important neuroanatomical structures are included.

In objective 2, the specific structure of the neuron, description of the action potential and neurotransmission are included.

In objective 3, the heart and circulation, the gastrointestinal tract, the liver, the kidneys and the urinary tract, the respiratory system, endocrinology and the immune system are included.

Teaching methods

Part 1 Teaching consists of whole-group lectures that are followed by discussion seminars where the contents of the lectures are discussed. Part 2 The main part of the teaching takes place in the form of lectures where the students are encouraged to active participation through beehives and other student-activating activities. A seminar with patient cases with discussion is included. Furthermore, a laboratory session about the heart and the circulation apparatus, and a workshop in neuro-anatomy, are included For the lectures, the students will get study questions that they can work independently with. There is also a scheduled time when the students should discuss these questions with one another and with teachers.

Examination

Part 1: 1) Written examination In the examination, one of the grades Pass with distinction (VG), Pass (G), or Fail (U) is used. Part 2: 1) Two oral test are distributed during the course 2) Written examination The tests are graded Passed/Failed, only.. In a written examination, the grades Pass with distinction, Pass or Fail are given. A Pass with distinction in part 2 requires a Pass with distinction in the examination and Pass in the two tests (examination assignment 1. To pass part 2, Pass in the examination and Pass in the two tests are required. For a Pass with distinction for the whole course, Pass with distinction is required for both parts. To pass the whole course, at least a Pass in both parts is required Make-up tests

and re-examinations will be provided in accordance with KI's local guidelines. The student has the right to, at most, six such examination sessions per course in order to achieve approved results.

Transitional provisions

The interim regulations follow KI's local guidelines. For a course that has been closed down or undergone major changes or where the reading list has been changed considerably, two more tests (excluding regular tests) of the previous contents and literature should be given during a period of one year from the date of the change .

Other directives

Course evaluation takes place according to KI's local guidelines. Results and possible actions are communicated to the students on the course web page.

Literature and other teaching aids

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

Cognitive Neuroscience : The Biology of the Mind

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

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

[Library search](#)

Laland, Kevin; Brown, Gillian

Sense and nonsense: evolutionary perspectives on human behaviour

Oxford : Oxford University Press, 2002 - 369 s.

ISBN:0-19-850884-0 LIBRIS-ID:8277878

[Library search](#)

Lännergren, Jan

Fysiologi

4., [uppdaterade] uppl. : : Lund : Studentlitteratur, 2007, - 355 s. : ill.

ISBN:978-91-44-04775-1

[Library search](#)

Guyton, Arthur C.; Hall, John E.

Textbook of medical physiology

11. ed. [rev.] : Philadelphia : Elsevier Saunders, cop. 2006 - xxxv, 1116 s.

ISBN:0-7216-0240-1 LIBRIS-ID:9893191

[Library search](#)

Kandel, E.R.; Schwartz, J.H.; Jessell, T.M.

Principles of Neural Science

New York : Elsevier, 2000

ISBN:0-8385-7701-6

[Library search](#)