

BIO-483

**Neuroscience: behavior and cognition**

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<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
Computational Neurosciences minor	E	Opt.
Life Sciences Engineering	MA2, MA4	Opt.
Neuroprosthetics minor	E	Obl.
Sciences du vivant	MA2, MA4	Opt.

Language of teaching	English
Credits	5
Session	Summer
Semester	Spring
Exam	Written
Workload	150h
Weeks	14
<b>Hours</b>	<b>5 weekly</b>
Courses	3 weekly
Exercises	2 weekly
<b>Number of positions</b>	

**Summary**

The goal is to guide students into the essential topics of Behavioral and Cognitive Neuroscience. The challenge for the student in this course is to integrate the diverse knowledge acquired from those levels of analysis into a more or less coherent understanding of brain structure and function.

**Content**

Pathways into the visual brain  
 Perception and encoding  
 Attention and selective perception  
 Perception and consciousness  
 Understanding statistics  
 Stress and emotion  
 Learning and memory  
 Neurobiological mechanisms of memory  
 Emotional influences on cognitive functions  
 Psychiatric disorders  
 Structural and functional cortical neuroanatomy  
 Somatosensory perception and parietal cortex in human and non-human primates  
 Multisensory perception and parietal and premotor cortex in human and non-human primates  
 Perception and representation of visual space in the right hemisphere  
 Selected neurological disorders and human brain imaging  
 Bodily self-consciousness

**Learning Prerequisites****Required courses**

Neuroscience I and II

**Assessment methods**

Written exam

**Resources****Bibliography**

Purves D et al. Principles of Cognitive Neuroscience. 2008. Sinauer Associates: Sunderland, MA.  
 Gazzaniga MS. Cognitive Neuroscience. 2008 (3rd. Ed.) W. W. Norton & Company.