# NEUROSCIENCE

A First-of-its kind Undergraduate Major/Minor in Hong Kong

**NEUROSCIENCE** is the interdisciplinary study of the brain. In particular, this programme focuses on the neural mechanisms underlying behavior cognition and perception in humans, both in health and disease (although students will be exposed to findings from animal studies as well). Students will be given rigorous academic training, from a variety of disciplines, to prepare them for further studies and research, as well as to be able to eventually translate the relevant knowledge into practical applications. Apart from the traditional research and medical careers such as neurobiology, neurology, cognitive neuroscience etc., there are other areas such as computer science, education, machine learning, artificial intelligence, public policy, medicine and pharmacology etc. which also benefit from a background in neuroscience.



Department of Psychology The University of Hong Kong 滚大晕心理婴

Address : RM627, JC Tower, Department of Psychology, HKU E-mail : ugpsyc@hku.hk : (852) 3917 5867 Phone

Website : https://www.psychology.hku.hk



## **PROGRAMME OVERVIEW**

Students who wish to declare a Major/Minor in Neuroscience must complete at least 72 credits for the Major or 36 credits for the Minor.

#### WHY?

The objectives of the programme are to:

- provide students with exposure to and a fundamental understanding of neuroscience and its related fields in a multi-disciplinary approach
- develop students' ability to critically analyze scientific research
- equip students with basic theoretical and methodological training that enable their successful pursuit of further study at the postgraduate level in neuroscience or related disciplines
- enhance students' awareness of social issues as the neuroscience training will equip them with the background to understand controversies in neuroscience or related disciplines.

## WHO TO APPLY?

The major# option/minor option is open to all HKU undergraduates. Students are required to have Level 3/ above in HKDSE Biology, Chemistry or Combined Science OR equivalent courses (subject to the approval from the Department of Psychology), before enrolling in the neuroscience core courses.

(#Neuroscience programme could only be taken as a multidisciplinary / second major)

## WHAT IS REQUIRED?

	No. of Credits	
Components	Major	Minor
a) Introductory courses		
i) disciplinary	6	6
ii) pre-requisites	12	-
b) Advanced courses		
iii) core courses	18	18
iv) disciplinary electives	30	12
v) capstone experience	6	-
Total	72	36

\* Candidates who opt to declare two major programmes offered by the Faculty of Social Sciences should avoid selecting overlapping pre-requisites.

## WHAT COURSES YOU CAN CHOOSE TO TAKE? (EXAMPLES OF ADVANCED COURSES)

PSYC2101	Foundations of neuroscience.	(6 credits)
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PSYC2102.	Seminar in neuroscience	
PSYC3054.	Human neuropsychology	(6 credits)
PSYC2110.	Developmental neuroscience.	(6 credits)
PSYC2111.	Neurobiological basis of psychological issues	
PSYC2112.	Research internship in neuroscience	(6 credits)
PSYC2113.	Introduction to brain imaging	(6 credits)
PSYC4101.	Thesis in neuroscience	(12 credits)
BBMS3011.	Molecular neuroscience	(6 credits)
BIOL3105.	Animal physiology & environmental adaptation	(6 credits)
BBMS2003.	Human genetics	(6 credits)
BMED3501.	Medical imaging	(6 credits)
PSYC2007.	Cognitive psychology	
PSYC2051.	Perception	
PSYC3061.	Advanced issues in perception	
PSYC3068.	Advanced cognitive psychology	(6 credits)
PSYC4102.	Capstone project in neuroscience	

(\*For courses offered in 2019/20, please visit our website: <u>https://www.psychology.hku.hk/?page\_id=1619</u>)