

## COURSE DETAIL

### MOLECULAR NEUROSCIENCE

**Country**

Hong Kong

**Host Institution**

University of Hong Kong

**Program(s)**

University of Hong Kong

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Biological Sciences

**UCEAP Course Number**

111

**UCEAP Course Suffix****UCEAP Official Title**

MOLECULAR NEUROSCIENCE

**UCEAP Transcript Title**

MOLECULAR NEUROSCI

**UCEAP Quarter Units**

5.00

**UCEAP Semester Units**

3.30

## Course Description

This is an advanced course exploring the latest frontier on molecular and cellular mechanisms that underlie the structure and function of the central nervous system. The course covers fundamental concepts on the molecular basis of brain functions during development and aging, and discusses how dysregulation of these processes might lead to various brain disorders. Topics include axon guidance, synaptic transmission, formation and plasticity of synapses, learning and memory, and diseases of the nervous systems such as cognitive and emotional disturbance. Latest techniques in neuroscience research, such as the use of viral-mediated expression of transgenes, optogenetics, chemogenetics, and induced pluripotent stem cells, are introduced. Lectures tutorials, presentation of research papers and research-oriented practical training are emphasized so as to expose students to different areas in molecular neuroscience through multiple learning activities.

## Language(s) of Instruction

English

## Host Institution Course Number

BBMS3011

## Host Institution Course Title

MOLECULAR NEUROSCIENCE

## Host Institution Campus

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Biomedical Sciences

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