

# COURSE DETAIL

## PHYSIOLOGICAL PSYCHOLOGY 3H

**Country**

United Kingdom - Scotland

**Host Institution**

University of Glasgow

**Program(s)**

University of Glasgow

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Psychology

**UCEAP Course Number**

140

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

PHYSIOLOGICAL PSYCHOLOGY 3H

**UCEAP Transcript Title**

PHYSIOLOGICAL PSY 3

**UCEAP Quarter Units**

4.00

**UCEAP Semester Units**

2.70

## **Course Description**

This course promotes an understanding of the psychobiological processes which impact on human development and the physiological bases of behavior. By the end of the course students are able to: Describe the basic anatomical structure of the brain, discuss the evidence that brain regions are specialized, describe the contribution of brain systems to the production of behavior; Describe the structure of cells within the nervous system, outline the structural components of neurones that are necessary for cellular communication; Identify the synapse as a method used by neurones for communication, explain how complexity of interconnections allows transfer of information; Identify non synaptic methods of communication within the nervous system, describe how signal transduction events code specific information within the neuron; Describe how guidance cues regulate the formation of axonal pathways, outline the factors regulating synapse formation; Describe how the survival of neurones is regulated by environment; Explain the neuroimaging and neuropsychological evidence to support adolescent brain maturation, outline the possible implications of significant brain development at this stage; Identify the neuroimaging evidence that there is birth of new brain cells well into adulthood, describe changes in neuron growth after brain damage; Explain the characteristic changes in brain and behavior produced by normal ageing, discuss what changes in brain and behavior with age tells us about the control of complex behavior; Describe in some detail (a) major evolutionary theories (e.g., sexual selection, inclusive fitness) and (b) major findings from evolutionary approaches in several areas of psychology (e.g. cognition, perception, social); Evaluate how biological theories can inform psychology and explain common misperceptions of evolutionary approaches (e.g., the Naturalistic Fallacy); Describe in some detail (a) how the different parts of the eye combine to produce a sharp retinal image; (b) the simplified circuitry of the primate retina; (c) the anatomical structure, and segregation of function within, the lateral geniculate nucleus and explain the concept of a receptive field; Describe in some detail: (a) the simplified circuitry of the striate cortex, and how this contributes to receptive field structure and the parallel processing of visual information; (b) how circuitry and receptive-field structure differs in extra-striate cortical areas; Explain key principals underlying the functional organization of the ventral pathway; Demonstrate

awareness of key questions related to the perception of faces and objects and how they have been addressed at multiple scales in the brain; Evidence critical thinking about whether a particular technique is appropriate to solve a given problem in cognitive neuroscience.

**Language(s) of Instruction**

English

**Host Institution Course Number**

PSYCH4065

**Host Institution Course Title**

PHYSIOLOGICAL PSYCHOLOGY

**Host Institution Course Details****Host Institution Campus**

Glasgow

**Host Institution Faculty****Host Institution Degree****Host Institution Department**

Psychology

**Course Last Reviewed**

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