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 Campus
Glasgow

Host Institution Faculty

Host Institution Degree

Host Institution Department
Psychology

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