

Exemplar CG(xi)

Exemplar Module Descriptor

MODULE CODE: HB1105

LEVEL: 4

CREDITS: 15

TITLE: Introduction to the anatomy and physiology of the human nervous system

PRE-REQUISITES: HB1101 Introduction to Human Anatomy

CO-REQUISITES: None

MODULE SUMMARY This module is a core module in the Human Biology field. It can be taken as an option module by students studying other fields provided they also take HB1101 *Introduction to Human Anatomy*. It is also a core module in the Applied Psychology field. The module introduces students to the gross and micro-anatomy of the nervous system. The module goes on to explain how the component cells of the nervous system communicate with each other and with the muscles of the body. Nearly 50% of the teaching time in the module is spent in laboratory practical work. Core factual material is provided via StudySpace with keynote lectures used to explain concepts. The module provides an essential introduction to later human biology modules that look in more detail at the physiology of the neuro-muscular system.

AIMS

- to introduce students to the gross and micro-anatomy of the human nervous system
- to provide students with an understanding of how the cells of the nervous system communicate with each other and with the muscles of the body
- to introduce students to the practical techniques used to study the nervous system
- to develop the skills of writing practical reports and making oral presentations

LEARNING OUTCOMES: on successful completion of the module, students will be able to:

- describe the structure and organisation of the nervous system and its gross and micro-anatomy
- describe and explain how the components of the nervous system communicate with each other and with the muscles of the body
- write succinct, accurate laboratory reports
- present oral reports clearly and accurately

CURRICULUM CONTENT (INDICATIVE)

- a brief introduction to the evolution of the vertebrate nervous system
- the gross anatomy of the central nervous system, the brain and the spinal cord, and associated structures

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- the gross anatomy of the peripheral nervous system (motor and sensory), including the autonomic (sympathetic and parasympathetic) nervous system and the functions of the cranial and spinal nerves
- introduction to the types of cells found in the nervous system and their organisation
- introduction to how cells communicate with each other, including an analysis of the mechanism of the nerve impulse (action potential) and how cells communicate with each other (synapses: using the nerve-muscle junction and spinal motor neurons, with an introduction to the concepts of neuropharmacology)

TEACHING AND LEARNING STRATEGY (*INDICATIVE*)

The knowledge-based materials for the module are provided by the module team in Blackboard. These consist of notes and diagrams produced by the module team for each week of the module. These are supplemented by access to supplementary accounts available on-line, the links being provided in the StudySpace materials. The supplementary materials are also available as core texts in multiple copies in the Learning Resource Centre. Each week new material will be released into StudySpace for students to read and study before attending a weekly “key-note” lecture that will be designed to explain the key concepts in the week’s reading. Key questions will then be provided to test understanding of the work. Students will be divided into groups for this activity and will be encouraged to meet in the Knowledge Centre before attending a weekly seminar. In the seminar every student will be given the opportunity of making an informal presentation. During the module there will be 8 practical sessions for which practical reports will be required. These will show students how to use equipment utilised in the study of the nervous system.

In summary the module will be made up of:

- 11 one hour keynote lectures – total 11 hours
- 11 seminars of 2 hours each (including time for the in-course test in week 6) – total 22 hours
- 9 practical sessions of 2 hours each – total 22 hours
- Student independent study – 95 hours

Total module study time, classes and independent study time – 150 hours.

ASSESSMENT STRATEGY (*INDICATIVE*)

The total marks are equally divided between an examination and coursework. The coursework consists of a short answer test for 25% of the module marks (also partly a trial run for the examination) and practical reports which also comprise 25% of the module marks. Students will also be provided with feedback on the development of laboratory and presentation skills, which will help them prepare for summative assessments in later modules.

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LEARNING OUTCOME	ASSESSMENT STRATEGY
On completion of the module students will be able to:	
1) describe the structure and organisation of the nervous system and its gross and micro anatomy.	In course short answer test 25% of the module marks and short answer section of examination paper 25% of module marks.
2) describe and explain how the components of the nervous system communicate with each other and the muscles of the body.	Long answer section of examination paper 25% of module marks.
3) use practical equipment accurately.	Formative assessment only, no summative marks awarded.
4) write succinct, accurate laboratory reports.	Submission of laboratory reports, 25% of in-course assessment.
5) present oral reports clearly and succinctly.	Formative assessment only no summative marks awarded.

MAJOR CATEGORIES OF ASSESSMENT

1. Examination 50% (25% short answer questions and 25% long answer questions).
2. Coursework 50% (25% in-course short answer test and 25% practical reports).

ACHIEVING A PASS

It is not a requirement that any major categories of assessment must be passed separately in order to achieve an overall pass for the module:

BIBLIOGRAPHY (INDICATIVE):

Core Text(s):

“Introduction to the anatomy and physiology of the human nervous system” – module teaching team notes issued to students via Blackboard each week during the module.

Jones, D (2006). “Introduction to the anatomy of the nervous system”. Poppleton University Press.

Jones, D (2007). “Introduction to the physiology of the nervous system”. Poppleton University Press.

Recommended Reading:

Smith, J. (2002). How the nervous system functions. Whitewell Press.
etc.