

## Human Physiology and Pathophysiology Course Descriptor

Course Title	Human Physiology and Pathophysiology	Faculty	EDGE Innovation Unit (London)
Course code	NCHNAP490	Course Leader	Professor Scott Wildman (interim)
Credit points	15	Teaching Period	This course will typically be delivered over a 6-week period.
FHEQ level	4	Date approved	Sep 2021
Compulsory/ Optional	Compulsory	Date modified	
Pre-requisites	None		
Co-requisites	None		

### Course Summary

This course focuses on the core principles, theory and concepts of human physiology and pathophysiology. It examines the normal functions and mechanisms of the human organism such as, blood, circulatory system, breathing, digestive, urinary, humoral and nervous systems, from the molecular level to the shared mutual relationships between particular systems. It considers the concept of homeostasis and the factors that ensure the continuous regulation of the human physiological system. This is linked to consideration of factors, from a cellular level to tissues and organs that give rise to physiological abnormalities and the impact these have on mechanisms and systems that may lead to the progression of disease and injury.

### Course Aims

- To introduce the principles, theory and concepts of physiology and pathophysiology.

- To examine the functions of the major organs and physiological systems within the human body.
- To gain insight into abnormalities that affect human physiology.

## Learning Outcomes

On successful completion of the course, learners will be able to:

### Knowledge and Understanding

- K1a Understand the key concepts of human physiology, including organs, systems and their function and the effects of homeostatic disruption on the human body.
- K2a Understand the key experimental and analytical techniques used to study and understand human physiology and pathophysiology.
- K4a Understand the importance and context of pathophysiology in the understanding of disease.

### Subject Specific Skills

- S1a Identify the key characteristics and describe the function of the main organs, systems and mechanisms in the human body.
- S2a Conceptually understand how to implement experimental techniques commonly used in pathophysiology and their context within the workplace.
- S4a Identify symptoms of homeostatic disruption and evaluate their effects on the human body.

### Transferable and Professional Skills

- T1a Autonomously undertake wider research.
- T2a Apply problem-solving skills.
- T3ai Communicate analysis clearly and logically.
- T3aai Display a developing technical proficiency in written English and an ability to communicate clearly and accurately in structured and coherent pieces of writing.

## Teaching and Learning

This is an e-learning course, taught throughout the year.

This course can be offered as a standalone short course.

Teaching and learning strategies for this course will include:

- Online learning

- Online discussion groups
- Online assessment

Course information and supplementary materials will be available on the University's Virtual Learning Environment (VLE).

Learners are required to attend and participate in all the formal and timetabled sessions for this course. Learners are also expected to manage their self-directed learning and independent study in support of the course.

The course learning and teaching hours will be structured as follows:

- Off-the-job learning and teaching (6 days x 7 hours) = 42 hours
- One-the-job learning (12 days x 7 hours) = 84 hours (e.g. 2 days per week for 6 weeks)
- Private study (4 hours per week) = 24 hours

Total = 150 hours

Workplace assignments (see below) will be completed as part of on-the-job learning.

## Assessment

### Formative

Learners will be formatively assessed during the course by means of set assignments. These will not count towards the final degree but will provide learners with developmental feedback.

### Summative

Assessment will be in two forms:

AE	Assessment Type	Weighting	Online submission	Duration	Length
1	Multiple Choice Exam	40%	Yes	1 hour	-
2	Set Exercises (problem-solving)	60%	Yes	Requiring on average 20 – 25 hours to complete	-

### Feedback

Learners will receive formal feedback in a variety of ways: written (via email or VLE correspondence) and indirectly through online discussion groups. Learners will also attend a formal meeting with their Academic Mentor (and for apprentices, including

their Line Manager). These bi or tri-partite reviews will monitor and evaluate the learner's progress.

Feedback is provided on summatively assessed assignments and through generic internal examiners' reports, both of which are posted on the VLE.

## Indicative Reading

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to learners; the indicative reading list provided below is used as part of the approval/modification process only.

### Books

- Mader, S. S. (2004). *Biology* (8th ed.). Boston: McGraw-Hill.
- Sherwood, L. (2001). *Human physiology : from cells to systems* (4th ed.). Pacific Grove, Calif. : Brooks/Cole
- Costanzo, L. S. (2018). *Physiology* (Sixth edition.). Philadelphia, PA : Elsevier

### Journals

Learners are encouraged to read material from relevant journals on human physiology and pathophysiology as directed by their course leader.

### Electronic Resources

Learners are encouraged to consult relevant websites on human physiology and pathophysiology.

## Indicative Topics

- Physiology
- Pathophysiology
- Experimental techniques

## Version History

<b>Title: NCHNAP490 Human Physiology and Pathophysiology Course Descriptor</b>					
<b>Approved by: Academic Board</b>					
<b>Location: Academic Handbook/Programme specifications and Handbooks/ Undergraduate Apprenticeship Programmes/BSc (Hons) Bioscience with Digital Technologies Programme Specification/Course Descriptors</b>					
<b>Version number</b>	<b>Date approved</b>	<b>Date published</b>	<b>Owner</b>	<b>Proposed next review date</b>	<b>Modification (As per AQF4) &amp; category number</b>
3.0	October 2022	January 2023	Scott Wildman	September 2026	Category 1: Corrections/clarifications to documents which do not change approved content.  Category 3: Changes to Learning Outcomes
2.1	May 2022	May 2022	Scott Wildman	September 2026	Category 1: Corrections/clarifications to documents which do not change approved content.
2.0	January 2022	April 2022	Scott Wildman	September 2026	Category 3: Changes to Learning Outcomes
1.0	September 2021	September 2021	Scott Wildman	September 2026	