

Module specification

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Module Code	PAR601
Module Title	Investigating life sciences
Level	6
Credit value	20
Faculty	Faculty of Social and Life Sciences
HECoS Code	100749
Cost Code	APA

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Paramedic Science	Core

Pre-requisites

Previous study and sound understanding of anatomy, physiology, and pathophysiology of the human body across the age ranges

Breakdown of module hours

Learning and teaching hours	24 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	24 hrs
Placement / work based learning	0 hrs
Guided independent study	176 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	31/8/22
With effect from date	September 22

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Date and details of revision	
Version number	1

Module aims

To investigate the impact combinations of chronic and acute diseases, illnesses, injuries, and well-being have on the expected functions of the human body and how age, health, environments, and treatments can impact service users' anatomy, physiology, and well-being.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Compare different combinations of pathological conditions and their impact on health and wellbeing
2	Determine the relationship between acute, chronic and exacerbations of pathological conditions and their impact on health and wellbeing
3	Critically analyse the effects of pharmacological treatment and clinical interventions, including polypharmacy, and their impact upon health
4	Evaluate the relationship between environment, human growth, and development with pathophysiological conditions

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Formative Assessment:

The module's formative assessment and feedback opportunities will be outlined in the assessment strategy in the module handbook. Students will undertake formative assessments within the first four to six weeks of the module.

Student's learning will be observed during the teaching of the module with ongoing feedback during topical group discussions to improve their understanding. For the assignment there will be assessment workshops and an opportunity to submit an assignment plan to the module leader for review and feedback through tutorials.

Summative Assessment:

There is one summative element for this module which is the production of a 2,000-word Clinical Case Report. A case report is a detailed yet concise way to analyse and summarise a unique clinical occurrence for other healthcare professionals to learn from. They report on the medical history, symptoms, signs, diagnosis, and treatment of an individual patient encountered in clinical practice. Your case report will describe an unusual or distinctive occurrence where a service user has had multiple conditions (acute and chronic), receives, or required, multiple medical interventions and their individual person-centred needs. Your

report should contain an analysis of relevant anatomy, physiology and pathophysiology that is supported by relevant literature on the topic.

This is a core module and therefore an overall pass of the module is required for progression within the course. You will need to pass the assessment with a mark of 40% or above to receive a passing grade for the module. The case report has a 100% weighting and therefore the mark you achieve will be the overall grade for the module.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2, 3, & 4	Written Assignment	100%

Derogations

- Compensation of marginally failed modules is not permitted
- Condonement of failed modules is not permitted

Learning and Teaching Strategies

Using the spiral curriculum approach, this module follows, and further develops, the foundation knowledge gained from the *Introduction to life sciences* module and the knowledge and the abilities you gained to apply anatomy and physiology to pathology in the *Applied life sciences* module.

With an understanding of the principles of science, anatomy, physiology, and pathophysiology, in this module you will realise how different combinations of chronic and acute diseases, illnesses, injuries, and well-being issues affect the human body and how age, health, environments, and treatments can impact service users' health and well-being.

Students will reflect on service user conditions from their clinical placements and use case studies to review the relevant anatomy and physiology and then discuss the interactions between pathological processes, clinical interventions and environmental circumstances involved.

A blended learning approach, a balance between classroom elements and digitally enabled (online) activity, will be used during the delivery of this module. Face-to-face sessions and online educational materials, using the University's Virtual Learning Environment (VLE) – Moodle, will be combined to allow more flexibility over the time, place, and pace of your study.

There will be directed pre-session materials that will prepare you for the synchronous learning that takes place in real time in the form of seminars or workshops. Post-session learning materials, such as additional reading, worksheets, and quizzes, will be provided to amalgamate and further your understanding of the topics covered. Learners have a responsibility to manage and engage with the asynchronous learning course materials (video clips, recorded lectures, forums, readings, and quizzes) available on Moodle.

Face-to-face sessions – or synchronous learning - will allow students to develop their understanding of a topic through further discussions and tutor-led problem-based tasks and

other learning activities. Teaching will be delivered through seminar style sessions incorporating group and project work.

Indicative Syllabus Outline

- Principles of physical science
- Normal anatomy of the major body systems across the lifespan
- Normal Physiology of the major body systems across the lifespan
- Impact of illnesses, diseases, and injuries Homeostasis
- Pathophysiology of acute illnesses, diseases, injuries, and well-being issues
- Pathophysiology of chronic illnesses, diseases, injuries, and well-being issues
- Comorbidity of illnesses, diseases, injuries, and well-being issues
- Impact of pharmacology to physiology and pathophysiology
- Pharmacology principles and polypharmacy
- Human development and the influence of illnesses, diseases, injuries, and well-being
- Well-being and psychopathology
- The major body systems:
 - Cells, genetics, tissues, and blood
 - Respiratory system
 - Cardiovascular system
 - Nervous system
 - Digestive system
 - Urinary system
 - Lymphatic system
 - Endocrine system
 - Integumentary system
 - Musculoskeletal system
 - Reproductive system
 - Immune system

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

- Roberts, Fiona & MacDuff, Elaine (2018). *Pathology Illustrated*, 8th Edition. Elsevier.

Other indicative reading

- Jeffrey Guy, Bob Willis, Ramsay Ambrose. (2021) *Pharmacology for Paramedics*. Bridgwater: Class Professional Publishing.
- Waugh, Anne, Allison Grant, and Janet S. Ross. *Ross and Wilson Anatomy & Physiology in Health and Illness*. Thirteenth edition. Amsterdam: Elsevier, 2018.
- Julian L Seifter & David E Sloane & Elisa Walsh. *Integrated Physiology and Pathophysiology*, 1st Edition. Elsevier. 2021

- Toy, Eugene C. et al. *Emergency Medicine*. Fourth edition. New York: McGraw-Hill Medical, 2017
- Nair, M. & Peate, I. (2012) *Fundamentals of Applied Pathophysiology: An Essential Guide for Nursing and Healthcare Students*. 2. Aufl. Hoboken: Wiley-Blackwell.

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes

Engaged
Creative
Ethical

Key Attitudes

Curiosity
Adaptability

Practical Skillsets

Critical Thinking
Communication