MODULE SPECIFICATION PROFORMA

Module Title:	Biological Concepts	**Level**:	4	**Credit Value:**	20

Module code:	ANM412	**Is this a new module?**	Yes	**Code of module being replaced:**	ANM405

Cost Centre(s):	GAAN	JACS3 **code**:	C300

With effect from:	September 17

School:	Social & Life Sciences	**Module Leader:**	Fernando da Mata

Scheduled learning and teaching hours	50 hrs
Guided independent study	150 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered	Core	Option
FdSc Animal Studies	✓	☐
BSc (Hons) Equine Science and Welfare Management	✓	☐
BSc (Hons) Animal Science	✓	☐
BSc (Hons) Wildlife & Plant Biology	✓	☐

Pre-requisites
None

Office use only
Initial approval: July 17
Date of revision: *Enter date of approval* Version: 1

Wrexham glyndŵr UNIVERSITY

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Module Aims
1) To develop an understanding of the key principles of animal biology 2) To establish basic practical laboratory skills 3) To develop an understanding of biological pathogens 4) To introduce students to organ systems and function

Intended Learning Outcomes

Key skills for employability

KS1	Written, oral and media communication skills
KS2	Leadership, team working and networking skills
KS3	Opportunity, creativity and problem solving skills
KS4	Information technology skills and digital literacy
KS5	Information management skills
KS6	Research skills
KS7	Intercultural and sustainability skills
KS8	Career management skills
KS9	Learning to learn (managing personal and professional development, self-management)
KS10	Numeracy

At the end of this module, students will be able to		Key Skills	
1	Explain hierarchical structure and evolutionary origins of animal phyla	KS1	KS3
		KS4	KS5
		KS6	
2	Review the structure of animal cells and tissues and explain the functions of the main components	KS1	KS3
		KS4	KS5
		KS6	
3	Understand the role of biological pathogens in disease	KS1	KS3
		KS4	KS5
		KS6	
4	Introduce the structure of organ systems and their function	KS1	KS3
		KS4	KS5, 6

Transferable skills and other attributes

Group work, practical laboratory skills, research skills, illustrative skills, observational competence.

Derogations
N/A

Indicative Assessment:

Essay
Students will have the chance to investigate and present the evidence for evolution of a species of their choice.

In-class test
A practical and unseen written test.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1	Essay	50	N/A	2000
2	2,3, 4	In-class test	50	N/A	2000

Learning and Teaching Strategies:

The module will be taught through a series of lectures, seminars and practical laboratory sessions. Laboratory skills, such as microscopy and scientific drawing will be developed throughout.

Syllabus outline:

Origin and Characteristics of life
Classification Systems
Theory of evolution
DNA and genetic inheritance
Plant and animal phyla
Plant and animal cell structure and function
Plant and animal tissue structure and function
Pathogens; bacteria, virus, algae, fungi, protozoa, prion
Plant and animal disease
Microscopy
An introduction to organs and systems e.g. digestive, respiratory, circulatory, urinary, reproductive

Bibliography:

Essential reading

Hickman, C.P., Keen, S.L., Larson, A., Eisenhour D.J. (2010) Integrated Principles of Zoology. McGraw Hill Higher Education, Boston

Press, S. (2017) Principles of Biology (Principle of Science). Grey House Publishing, Ipswich

Other indicative reading

Allaby, M.A., (2009) A Dictionary of Zoology (Oxford paperback reference) Oxford University Press, Oxford

Eroschenko V. (2017) Atlas of Histology with Functional Correlations. Lippincott Williams & Wilkins, Philadelphia

Reece, W.O (2009) Functional anatomy and physiology of domestic animals. Wiley-Blackwell, Oxford

Sadava,D., Hillis, D., Heller, C., and Brearbaum, M., (2009) Life: The Science of Biology. 9th Edition WH Freeman and Co. Basingstoke

Reference may also be made to contemporary research articles from journals such as:
Journal of Biology
Journal of Zoology
Nature