University of the West of England
BRISTOL

ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data						
Module Title	Systems Biology					
Module Code	UINXK4-15-1		Level	1	Version	1.1
UWE Credit Rating	15	ECTS Credit Rating	7.5	WBL module?	No	
Owning Faculty	Hartpury		Field	Animal and Land Science		
Department	Animal and Land		Module Type	Standard		
Contributes towards	FdSc Animal Behaviour & Welfare FdSc Animal Science & Management BSc (Hons) Animal Behaviour & Welfare					
Pre-requisites	None		Co- requisites	None		
Excluded Combinations	None		Module Entry requirements	None		
First CAP Approval Date	29 May 2013		Valid from	01 September 2013		
Revision CAP Approval Date	29.05.13 version 1 02.12.15 version 1.1		Revised with effect from	01 September 2016		

Review Date *(6 years from full CAP approval date (not revisions)*	01 September 2019

Part 2: Learning and Teaching	
Learning Outcomes	On successful completion of this module students will be able to: 1. Describe the structure of the animal body at a cellular level and relate this to the gross anatomy and management of the animal (A, B); 2. Identify how the anatomical and physiological mechanisms of a range of animals have adapted to their ecological niches (A); 3. Demonstrate knowledge of the scientific principles behind the growth and development of animals (A); 4. Demonstrate a scientific understanding of animal physiology and relate it to a range of species and management (A); 5. Understand the physiological mechanisms involved in homeostasis and relate this to effective management of a range of animals (A); 6. Demonstrate preparation of laboratory reports to industry standard (B); 7. Process, interpret and present data using appropriate qualitative and quantitative techniques (A, B).
Syllabus Outline	1. Basic tissue and cell types. 2. Development of tissues and cells into organs and organ systems. 3. Structure of the major organ systems. 4. Integration of systems in control of bodily functions.

	5. Anatomical plains, directions, boundaries and modes of movement of body segments and joints. The above will be contextualised by application to a range of species, including rodents, lagomorphs, equidae and carnivores which are commonly kept as companion or laboratory animals.
Contact Hours	Indicative delivery modes: Lectures, guided learning, seminars etc 33 Self directed study 3 Independent learning 114 **TOTAL 150**
Teaching and Learning Methods	**Scheduled learning** May include lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops; fieldwork; external visits; work based learning; supervised time in studio/workshop. **Independent learning** May include hours engaged with essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below. Scheduled sessions may vary slightly depending on the module choices you make. **Virtual learning environment (VLE)** This specification is supported by a VLE where students will be able to find all necessary module information. Direct links to information sources will also be provided from within the VLE.
Key Information Sets Information	Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for. **Key Information Set - Module data** *Number of credits for this module* 15 Hours to be allocated: 150 Scheduled learning and teaching study hours: 36 Independent study hours: 114 Placement study hours: 0 Allocated Hours: 150 The table below indicates as a percentage the total assessment of the module which constitutes a - **Written Exam**: Unseen written exam, open book written exam, In-class test **Coursework**: Written assignment or essay, report, dissertation, portfolio, project **Practical Exam**: Oral Assessment and/or presentation, practical skills assessment, practical exam Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:

	Total assessment of the module:
	Written exam assessment percentage: 0%
	Coursework assessment percentage: 50%
	Practical exam assessment percentage: 50%
	100%
Reading Strategy	**Essential reading** Any essential reading will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given a study pack or be referred to texts that are available electronically, or in the Library. Module guides will also reflect the range of reading to be carried out. **Further reading** Further reading will be required to supplement the set text and other printed readings. Students are expected to identify all other reading relevant to their chosen topic for themselves. They will be required to read widely using the library search, a variety of bibliographic and full text databases, and internet resources. Many resources can be found remotely. The purpose of this further reading is to ensure students are familiar with current research, classic works and material specific to their interests from their academic literature. **Access and skills** Formal opportunities for students to develop their library and information skills are provided within the induction period and student skills sessions. Additional support is available through online resources. This includes interactive tutorials on finding books and journals, evaluation information and referencing. Sign up workshops are also offered.
Indicative Reading List	The following list is offered to provide validation panels/accrediting bodies with an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. However, as indicated above, CURRENT advice on readings will be available via other more frequently updated mechanisms, including the module guide. Akers, R.M. (Current Edition) *Anatomy and Physiology of domestic animals*. Oxford: Blackwell Publishing. Aspinall, V. (Current Edition) *Introduction to veterinary anatomy and physiology textbook*. Edinburgh: Butterworth Heinemann. Boyd, J.S. (Current Edition) *Colour atlas of clinical anatomy of the dog and cat*. London: Mosby-Wolfe. Evans, H.E. and Christensen, G.C. (Current Edition) *Miller's anatomy of the dog*. Philadelphia: W. B. Saunders Company. Frandson, R.D. and Spurgeon, T.L. (Current Edition*) Anatomy and physiology of farm animals*. Philadelphia: Lea & Febiger. Jenkins, G. (Current Edition) *Anatomy and physiology: from science to life*. Hoboken, N.J.: John Wiley. Ruckebusch, Y., Phaneuf, L-P. and Dunlop, R. (Current Edition) *Physiology of small and large animals.* Philadelphia: BC Decker Inc. Thibodeau, G. (Current Edition) *Anatomy and physiology*. St. Louis, Mo: Mosby Elsevier. The above sources give an indication of the area of study involved. Although students may be directed to some specific titles, they will also be encouraged to identify other relevant material for themselves.

Part 3: Assessment	
Assessment Strategy	Assessment for this module will address a wide range of learning outcomes in a practical format to enable the student to demonstrate their ability to apply their knowledge. The practical examination will involve work stations testing skills the students have been able to develop during practical sessions undertaken throughout the module. During these sessions students will receive guidance and formative feedback to support them developing these skills and the associated knowledge required to fulfil the learning outcomes. The laboratory report requires students to write up their practical sessions, interpreting their outcomes and findings in line with current understanding. This is designed to encourage engagement in the module's practical sessions to develop skills that they will be able to use in the future during their studies and within a future career within industry and research. The assessment facilitates in depth utilisation of laboratory skills gained in these practicals and requires the student to relate their findings/observations to knowledge gained within the module. Feedback will be provided throughout the module via tutorial support, class discussions, short exercises and review of results of practical sessions, in addition to that written on assignment submissions and examination scripts. In line with the College's commitment to facilitating equal opportunities, a student may apply for alternative means of assessment if appropriate. Each application will be considered on an individual basis taking into account learning and assessment needs. For further information regarding this please refer to VLE.

Identify final assessment component and element	Practical examination	
% weighting between components A and B (Standard modules only)	**A:** **50%**	**B**: **50%**

First Sit	
Component A (controlled conditions) **Description of each element**	**Element weighting** **(as % of component)**
1. Practical examination (45 minutes)	100%
Component B **Description of each element**	**Element weighting** **(as % of component)**
1. Laboratory report (1250 words)	100%

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) **Description of each element**	**Element weighting** **(as % of component)**
1. Practical examination (45 minutes)	100%
Component B **Description of each element**	**Element weighting** **(as % of component)**
1. Laboratory report (1250 words)	100%
If a student is permitted a retake of the module under the University Regulations and Procedures, the assessment will be that indicated by the Module Description at the time that retake commences.	