University of the West of England
BRISTOL

CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data						
Module Title	Mammalian Systems Biology					
Module Code	UINXR4-15-1		Level	1	Version	1
Owning Faculty	Hartpury		Field	Animal and Land Science		
Contributes towards	FdSc Animal Management FdSc Equine Management					
UWE Credit Rating	15	ECTS Credit Rating	7.5	Module Type	Standard	
Pre-requisites	None		Co-requisites	None		
Excluded Combinations	None		Module Entry requirements	None		
Valid From	01 September 2013		Valid to	01 September 2014		

CAP Approval Date	06 August 2013

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 Demonstrate an awareness of how anatomical and physiological mechanisms have allowed animals to adapt to their environments (A). 3 Demonstrate knowledge of the scientific principles behind the growth and development of animals and equidae (A). 4 Demonstrate a scientific understanding of animal physiology and relate it to a range of species and management (B). 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).
Syllabus Outline	1 Species range: the emphasis will be on equidae, rodents, lagomorphs, equidae and carnivores which are commonly kept as companion or laboratory animals. 2 Anatomy and physiology of the major systems: • Basic tissue types. • Locomotion: bones, joints and muscles. • Senses: sense organs and responses. • Nervous response: central, peripheral; autonomic nervous system (sympathetic and parasympathetic) and link to pain physiology. • Cardiovascular system: heart, blood vessels and blood. • Excretion: kidneys and urinary tract. • Reproductive system: male and female; anatomy and physiology (including hormonal control). • Endocrine system: endocrine glands and hormones, in context of

	behaviour. • Respiration: upper and lower respiratory tract and respiratory cycle including neural control.
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*** Includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops; fieldwork; external visits; work based learning; supervised time in studio/workshop. ***Independent learning*** Includes 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) (or equivalent)*** This module 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: 1 *Written Exam:* Unseen written exam, open book written exam, in-class test. 2 *Coursework:* Written assignment or essay, report, dissertation, portfolio, project. 3 *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 60% Practical exam assessment percentage 40% 100%

Reading Strategy	***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. ***Essential reading*** Any essential reading will be indicated clearly, along with the method for accessing it. Students may be asked to purchase a set text, be given a print study pack or be referred to texts that are available electronically. ***Further reading*** Students will be encouraged to read widely using the library catalogue, a variety of bibliographic and full text databases, and Internet resources. Many resources can be accessed remotely. The purpose of this is to ensure students are familiar with current research, classic works and material specific to their interests from the academic literature. All further reading resources will be available via both College and University libraries.
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. • Davies Morel, M. (Current Edition) *Equine Reproductive Physiology, Breeding and Stud Management.* Oxfordshire: CABI. • 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. • Horowitz, A. and Berg, R. (2012) (Current Edition) *Anatomy of the Horse.* Hanover: Schlutersche Verlagsgesellschaft mbH & Co. KG. • Jenkins, G. (Current Edition) *Anatomy and physiology: from science to life*. Hoboken, N.J.: John Wiley. • Marlin, D. and Nankervis, K. (Current Edition) *Equine Exercise Physiology.* Oxford: Blackwell Publishing. • Parker, R. (Current Edition) *Equine Science.* Andover: Cengage. • 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	A range of assessment techniques will be employed to ensure that learners can meet the breadth of learning outcomes presented in this module alongside the ability to demonstrate transferable skills e.g. communication skills. Open laboratory book practical examination: This form of assessment is designed to encourage engagement in the practical sessions and develop skills of application to industry and research, then apply them to theoretical situations. The laboratory report sessions are aiming to facilitate in depth utilisation of laboratory skills gained in practical's and relating findings/observations to material learnt in lectures and gained in additional study via analysis, evaluation and discussion. A series of practical exercises will explore gross anatomy and physiology, homeostasis, growth and development and adaptation to ecological niches. Scientific Report: For a chosen animal body system, and their anatomical and physiological interrelationships will be examined and compared to a range of species, based on current peer reviewed research. This report needs to be presented in the format of a short industry standard scientific report which will inform animal management processes. Opportunities for formative assessment exist for the assessment strategy used. Verbal feedback is given and all students will engage with personalised tutorials setting SMART targets as part of the programme design. 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 the VLE.		
Identify final assessment component and element	Practical examination.		
% weighting between components A and B (Standard modules only)		**A:**	**B:**
		40%	60%
First Sit			
Component A (controlled conditions) **Description of each element**		**Element weighting**	
1	Open laboratory book practical examination (1 hour 30 minutes) (in-class)	100%	
Component B **Description of each element**		**Element weighting**	
1	Scientific report (1500 words)	100%	
Resit (further attendance at taught classes is not required)			
Component A (controlled conditions) **Description of each element**		**Element weighting**	
1	Open laboratory book practical examination (1 hour 30 minutes) (in-class)	100%	
Component B **Description of each element**		**Element weighting**	
1	Scientific report (1500 words)	100%	
If a student is permitted an **EXCEPTIONAL RETAKE** of the module the assessment will be that indicated by the Module Description at the time that retake commences.			