

Module Descriptor Form

1	Awarding Body	Askham Bryan College
2	Lead Subject Area	Equine
3	Module title	Equine Anatomy and Physiology
4	Module Code	EQ4002
5	Module level	Level 4
6	Module credits	20 credits
7	Date Module to Commence	September 2022
8	Programmes on which module is Core	EFdSc Equine Science and Management (core) Cert HE Equine Science and Management (core) FdSc Equine Science and Management (core)
9	Aims of the Module	The aim of this module is to develop the students' knowledge and understanding of equine anatomical structures and relate this to their function within the body in a holistic manner.
10	Rationale for Module	Students hoping to work within the equine industry need a thorough understanding of the anatomy of the horse for both physiological and welfare reasons. Equine Anatomy and Physiology will allow the students to learn the different functions and body processes which take place in each body system and start to apply them to the whole animal.
11	Module description	The module will cover the organelles of the cell and explain how the structure of different cell types has allowed the different body systems to adapt to function together. The module will cover all major body systems (the excretory, circulatory, lymphatic, immune, musculoskeletal, reproductive, gastrointestinal, endocrine and nervous systems) and cover organs involved and the function of each.
12	Semester	1
13	Learning Outcomes	LO1 Identify cell components and specialisations in a range of tissues. LO2 Explain the structure and functions of the excretory, circulatory, lymphatic and immune systems. LO3 Describe the structure and function of the musculoskeletal, reproductive and gastrointestinal systems. LO4 Discuss the role of endocrine and nervous system in homeostasis and the control of body processes.
14	Pre-requisite Modules	None

15	Co-requisite Modules	None
16	Banned Combinations	None
17	Is Module Compensatable	Yes
18	Indicative Content	LO1: Cells and tissues The structure of generalised animal cells and the organelles they contain will be examined. Organelles will be identified through light microscopy and viewing electron micrograph and their functions explained. The types of cell specialisation (e.g. shape, number of organelles, matrix, protein expression etc.) will be linked to the functions of those cells. The types of tissue (epithelial, muscle, nervous, connective) and their subtypes will be described. The specialisms allowing the conduction of nerve impulses and synapses will be explained. Students will be able to identify the structure and function of a range of equine tissue cells. LO2: Excretory, circulatory, lymphatic and immune systems The anatomy of the excretory (digestive, urinary and respiratory), circulatory, lymphatic and immune systems will be described. Specific adaptations in the structure and function of these systems in horses will be explained. The physiology of each system will be explained including topics such as digestion and absorption of nutrients, urine formation, ventilation of the lungs, gaseous exchange and their role in the excretion of waste products. The movement of substances around the body within the circulatory and lymphatic systems and the composition of blood will be explained. A basic explanation of the essential components of the immune response will also be covered. LO3: Musculoskeletal, reproductive and gastrointestinal systems. The structure of skeletal muscles, differences between fast and slow twitch muscles fibres and the process of muscle contraction will be described. Types of bone and joint will be identified alongside descriptions of their structure and functions. Bones of the skeleton and superficial muscles will be identified in the equine species. The anatomical structures within the male and female reproductive tracts will be described as well as the reproductive hormones. The structure of the gastrointestinal system, including the different organ types will be discussed. How the structure relates to digestion will also be covered.

		LO4: Endocrine and nervous systems The structure of the nervous system (including its main functional divisions) and endocrine systems will be described. Key anatomical locations and function of the brain will be described. The roles of a range of hormones will be discussed. Basic pathways involved in reflexes and motor movement will be outlined. The role of endocrine and nervous systems in controlling body processes and maintaining homeostasis will be discussed. Within the module links are made to the Education for Sustainable Development goals https://www.gaa.ac.uk/docs/gaa/guidance/education-for-sustainable-development-guidance-executive-summary.pdf?sfvrsn=b121d281_8
19	Inclusivity, access and student support	We are committed to ensuring that our programmes and modules are inclusive of all students including: international, part-time, mature, those from different socio-economic backgrounds (class) and those with protected characteristics according to the Equality Act 2010 (age, disability, gender reassignment, marriage/civil partnership, race, religion or belief, sex, sexual orientation). All lecture material will be available on the VLE for students in advance of the lecture. Lecture material will be designed for diverse learners under accessibility guidelines. Time will be allocated for students to practice and prepare for both assessments. An alternative assessment will be available for all students with a DSA, in line with recommendations in their individual needs assessment.
20	Link to the Digital Vision	The VLE and Teams platforms will be utilised for dissemination of lecture resources. Where possible, planet e-stream and AR suite will be utilised. Virtual reality will be utilised.
21	Total Contact Hours	60
	Lecture	40
	Seminar	10
	Tutorial	0
	Project Supervision	0
	Demonstration	0
	Practical classes/workshops	10
	Fieldwork	0
	External visits	0
	Work based learning / Placements	0
	Guided independent study	140 hours

22	Learning and Teaching Strategy	Lectures will be given on each subject area, covering key content. Practical sessions such as dissections and use of models will be used when appropriate to reinforce learning and give the students the opportunity to learn relevant skills. Seminar sessions will be used to allow for group discussions and application of the content to the animal. 1:1 sessions will use used to discuss written work with students before submission and formative mock TCAs will also be undertaken to ensure students are prepared for their assessment.				
23	Virtual Learning Strategy	All module resources will be available on the VLE, as will links to further reading, videos etc. Students will be encouraged to actively participate in online discussion forums. Formative assessment will take place regularly using online tasks on the VLE. Worksheets, relevant literature, Powerpoints and other media will be made available on the VLE for students to access outside of lectures.				
24	Opportunities for Formative Assessment	Consistent question and answer sessions will take place in every session for the students to practice and further knowledge. Mock TCAs will be given before the assessment.				
25	Method of Summative Assessment	Ass No.	Method	Weighting	Mod. LO's	Prog LO's
		1	Laboratory Report	50%	1 and 2	KU1, KU2, CIT1, CIT2, CIT4, E3
		2	Carousel TCA	50%	3 and 4	KU1, KU2, CIT1, CIT2, CIT4, E3
26	Examination Period	January exam period				
27	Method/s of reassessment	Coursework				
28	Maximum Class Size	24				
29.1	Essential Reading (Books)	Aspinall, V. and Capello, M. 2015. <i>Introduction to Veterinary Anatomy and Physiology</i>. 3rd Ed. Edinburgh:Butterworth-Heinemann Coumbe, K. 2012. <i>Equine Veterinary Nursing</i>. Oxford; Wiley-Blackwell.				
29.2	Recommended Reading (Books)	Goody, P. 2000. <i>Horse Anatomy: a Pictorial Approach to Equine Structure</i> . 2 nd ed. London: JA Allen.				

		Raynor, M. 2006. <i>The Horse Anatomy Workbook: A Learning Aid for Students Based on Peter Goody's Classic Work, Horse Anatomy</i>. London: Allen Student Reece, W. 2009. <i>Functional Anatomy and Physiology of Domestic Animals. 4th ed.</i> Oxford: Blackwell Publishing. Tartaglia, L and Waugh, A. 2005. <i>Veterinary Anatomy and Physiology</i>. Edinburgh:Elsevier Butterworth-Heinemann Tortora, G. and Grabowshi, S. 2013. <i>Principles of Anatomy and Physiology</i>. 14th ed. New Jersey: John Wiley & Sons.
29.3	Essential Reading (Journals)	Journal of Equine Veterinary Science Equine Veterinary Journal In Practice: Journal of Veterinary Postgraduate Clinical Study UK Vet. Veterinary Record Veterinary Times
29.4	Recommended Reading (Journals)	Equine Veterinary Education
29.5	Websites/ Online/ Government Resources etc	DEFRA FEI
30	Date Written/ Revised	February 2022 (Revised 16/6/22 KJ)
31	Module Leader Name	
32	Writing Team Names	Isobel Bannister and Loni Loftus