



CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Animal Structure and Motion				
Module Code	UINV6A-15-2	Level	2	Version	1
UWE Credit Rating	15	ECTS Credit Rating	7.5	WBL module?	No
Owning Faculty	Hartpury	Field	Animal and Land Sciences		
Department	Animal Land	Module Type	Standard		
Contributes towards	BSc (Hons) Applied Animal Science with Therapy BSc (Hons) Applied Animal Science with Therapy (SW)				
Pre-requisites	None		Co- requisites	None	
Excluded Combinations	None		Module Entry requirements	None	
First CAP Approval Date	18 February 2016		Valid from	01 September 2016	
Revision CAP Approval Date			Revised with effect from		

Review Date	01 September 2022
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ol style="list-style-type: none"> 1. Explain the basic principles of biomechanics and analyse how they influence animal structure and motion. (A) 2. Analyse the anatomical and physiological factors which constrain gait in quadrupeds. (A) 3. Evaluate how biomechanical constraints can limit maximal locomotor performance and influence injury risk in animals. (A) 4. Appraise the use of modern technologies for quantitative gait analysis in a range of species. (A) 5. Evaluate the role of musculoskeletal function in locomotor performance. (A)
Syllabus Outline	<ul style="list-style-type: none"> • Key principles of biomechanics • Functional anatomy of dogs and horses • Symmetrical and asymmetrical gaits of quadrupedal animals • Consideration of the collection of kinetic and kinematic data

	<ul style="list-style-type: none"> • The use of quantitative gait analysis for the detection of lameness and other musculoskeletal and neurological pathologies • The biomechanical limits to terrestrial quadrupedal locomotion • Dynamics and energetics of locomotor behaviour 																				
Contact Hours	<p>Indicative delivery modes:</p> <ul style="list-style-type: none"> • Lectures and seminars 33 • Self-directed learning 3 • Independent learning 114 <p>TOTAL 150</p>																				
Teaching and Learning Methods	<p>This module is delivered using large group learning sessions with opportunities for small group work and practical sessions. Additionally, essential and recommended reading and exercises will be introduced to guide students through the core syllabus. Both practical and seminar sessions will allow students to apply the theoretical knowledge gained in lectures.</p> <p>Scheduled Learning includes lectures, seminars and tutorials.</p> <p>Independent Learning includes hours engaged with essential reading, exam preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below.</p> <p>Virtual Learning Environment (VLE) 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.</p>																				
Key Information Sets Information	<p>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.</p> <table border="1" data-bbox="477 1301 1378 1709"> <thead> <tr> <th colspan="5">Key Information Set - Module data</th> </tr> <tr> <td colspan="4">Number of credits for this module</td> <td>15</td> </tr> <tr> <th>Hours to be allocated</th> <th>Scheduled learning and teaching study hours</th> <th>Independent study hours</th> <th>Placement study hours</th> <th>Allocated Hours</th> </tr> </thead> <tbody> <tr> <td>150</td> <td>36</td> <td>114</td> <td>0</td> <td>150</td> </tr> </tbody> </table> <p>The table below indicates as a percentage the total assessment of the module which constitutes a:</p> <p>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</p>	Key Information Set - Module data					Number of credits for this module				15	Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours	150	36	114	0	150
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	<p>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:</p> <table border="1" data-bbox="416 277 1075 506"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Final assessment percentage</td> <td></td> <td></td> <td>100%</td> <td></td> </tr> <tr> <td>Formative assessment percentage</td> <td></td> <td></td> <td>0%</td> <td></td> </tr> <tr> <td>Exam assessment percentage</td> <td></td> <td></td> <td>0%</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>100%</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						Final assessment percentage			100%		Formative assessment percentage			0%		Exam assessment percentage			0%					100%						
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<p>Reading Strategy</p>	<p>Essential Reading Any essential reading will be indicated clearly, along with the method for accessing it e.g. students may be required to purchase a set text, be given a print 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.</p> <p>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 accessed remotely. The purpose of this further reading is to ensure students are familiar with current research, classic works and material specific to their interest from the academic literature.</p> <p>Access and Skills Formal opportunities for students to develop their library and information skills are provided within the induction period and the student skills sessions. Additional support is available through online resources. This includes interactive tutorials on finding books and journals, evaluating information and referencing. Sign up workshops are also offered.</p>																														
<p>Indicative Reading List</p>	<p>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.</p> <p>Books:</p> <p>Alexander, R. M. N. (Current Edition) <i>Principles of Animal Locomotion</i>. Woodstock: Princetown University Press.</p> <p>Biewener, A. (Current Edition) <i>Animal Locomotion</i>. New York, USA: Oxford University Press.</p> <p>Fischer, M. S. and Lilje, K. E. (Current Edition) <i>Dogs in Motion</i>. Stuttgart, Germany: VDH.</p> <p>Nigg, B. M. and Herzog, W. (Current Edition) <i>Biomechanics of the musculoskeletal system</i>. Chichester: J. Wiley & Sons.</p> <p>Williams, J. and Evans D. (Current Edition) <i>Training for Equestrian Performance</i> Wageningen, Holland: Wageningen Press.</p> <p>Journals:</p> <p>American Journal of Veterinary Research</p> <p>Equine Veterinary Journal</p> <p>Journal of Biomechanics</p>																														

	Journal of Experimental Biology
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Part 3: Assessment	
Assessment Strategy	<p>The assessment strategy for the module is via an open book written examination (2 hours). The open book written examination has been chosen to facilitate broad assessment of knowledge and understanding of the subject matter while allowing students to demonstrate their ability to apply this knowledge. Examples of this include the application of quantitative gait analysis to pathological cases and the utilisation of biomechanical principles such as scaling to determine success in performance animals. To support student achievement, formative opportunities to engage in reflection and to evaluate individual case studies, with staff feedback, will be provided during seminars and lectures. Formative feedback will also be provided throughout the module via tutorial support, class discussions and various exercises that enable students to apply key biomechanical principles. Interactive VLE tasks will also be used to develop individuals' knowledge and understanding of the subject and to practise applying key knowledge and critical skills to different case studies.</p> <p>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.</p>

Identify final assessment component and element	Open book written examination (2 hours)	
% weighting between components A and B (Standard modules only)	A:	B:
	100%	N/A
First Sit		
Component A (controlled conditions) Description of each element	Element weighting	
1. Open book written examination (2 hours)	100%	

Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting	
1. Open book written examination (2 hours)	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.		