HARTPURY
UNIVERSITY CENTRE

Module Specification

Part 1: Basic Data						
Module Title	Introduction to Racehorse Performance Analysis					
Module Code	UIEV7L-15-2		Level	2	Version	1
Credit Rating	15	ECTS Credit Rating	7.5	WBL module?	No	
Owning Faculty	Hartpury		Field	Equine Science		
Department	Equine		Module Type	Standard		
Contributes towards	BSc (Hons) Racehorse Performance and Rehabilitation BSc (Hons) Racehorse Performance and Rehabilitation (SW)					
Pre-requisites	None		Co- requisites	None		
Excluded Combinations	None		Module Entry requirements	None		
Last Major Approval Date	23 February 2017		Valid from	01 September 2017		
Amendment Approval Date			Revised with effect from			

Part 2: Learning and Teaching	
Learning Outcomes	On successful completion of this module students will be able to: 1. Appraise the merits and limitations of performance measures utilised within the racing industry. (A, B) 2. Discuss how physiological and biomechanical constraints can limit racehorse performance. (B) 3. Propose and analyse the impact of intrinsic and extrinsic factors which can enhance welfare, limit performance and / or predispose the racehorse to injury. (A, B) 4. Evaluate the use of breeding strategies used within the racing industry to promote inheritance of superior performance. (A)
Syllabus Outline	• Definitions of performance and success in the racing industry: objectivity vs. subjectivity • Industry monitoring of performance: fall statistics, pulled up horses, completion rates, speed • Race characteristics: British vs. rest of the world, flat vs. jump, age classes, handicap system, graded stakes / condition races including subdivision of classes of race, maiden races, allowance race, claiming races, distance, course characteristics, influence of surface, draw (stalls / barrier gates), obstacle type and location • Racehorse characteristics: flat vs. jump vs. dual purpose, pedigree analysis • Heritability of racing ability: pedigree analysis, breeding strategies to enhance performance, introduction to genetic evaluation of performance • Industry measures of performance: time (final, best, average, winning, course and distance records), handicap or performance ratings (handicap weight, best handicap weight, timeform rating, length behind winner, position or ranking rates, weight performance), earnings (annual earnings, earnings /

	starts, average earning index, standards starts index, log of earnings, log of earnings / start, tapered earning or prize-money rating), race related ratings (black type) • Welfare related performance measures: health, career length, days out of training / off the track, career record, behaviour, orthopaedic health • Physiological measures of performance: cardiovascular, respiratory, biochemical, endocrine and musculoskeletal markers • Biomechanical measures of performance: stride length, stride frequency, stride duration • Reproductive performance measures: fecundity, conception rate, live foal rate, offspring performance, stallion ratings
Teaching and Learning Methods (and contact hours)	A variety of learning strategies will be used to support delivery; these will include lectures and seminars, analysis of case study examples and review of industry records. The integration of industry professionals within lectures will provide students with opportunities to gather additional insights in to the integration of performance analysis within the racing industry. In addition, students will be expected to engage in independent learning and complete a range of guided learning activities throughout the course of the module. Examples of these include guided completion of case study examples. This independent and guided learning will support students with the preparation of assessments and will develop their subject knowledge via further reading. Teaching and learning will be supported via the VLE.
Key Information Sets Information	HEFCE require Key Information Sets (KIS) to be produced at programme level for all undergraduate programmes of more than one year in length. 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	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours
150	36	114	0	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*** Core material will be indicated to the student via module guides and dedicated VLE module presence. No requirement for the purchase of set text(s) will be made and students will have full access to library services, online applications and inter-library loans. ***Further reading*** Students will be encouraged to source reading from a variety of sources including those indicated by the module leader to aid the development of literature searching and facilitate the start of a critical appreciation of the quality of different sources of information. Students should utilise the library catalogue service, a variety of databases, internet sources and lay press publications. Additional resources and interactive activities will be available via the VLE and other online platforms enabling them to be accessed remotely. ***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 and tutorials are also offered.
Indicative Reading List	The following list is offered to provide the Curriculum Approval Committee/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. Books: Binns, M., Morris, T. (Current Edition) *Thoroughbred Breeding: Pedigree theories and the science of genetics.* London: J.A. Allen & Co Ltd. Bruns, E. (1990) *Breeding values and estimation of genetic trends in riding horses*. Proceedings of the 4th World Congress on Genetics Applied to Livestock Production, Edinburgh. Clayton, H.M. (Current Edition) *The Dynamic Horse*. Canada: Sports Horse Publications. Hinchcliff, K.W., Kaneps, A.J. and Geor, R.J. (Current Edition) *Equine exercise physiology: the science of exercise in the athletic horse*. Edinburgh. Elsevier Saunders. Hughes, M. Franks, I. (Current Edition) *Essentials of Performance Analysis in Sport*. London: Routledge. O'Donoghue, P. (Current Edition) *Research Methods for Sports Performance Analysis*. London: Routledge. Marlin, D. and Nankervis, K. (Current Edition) *Equine exercise physiology*. Oxford: Blackwell Science. Roman, S.A. (Current Edition) *Dosage: Pedigree and performance*. Neenah, USA: The Russell Meerdink Company Ltd. Specogna, M. (Current Edition) *Become a Winner Claiming Thoroughbred Racehorses: handicap like a pro, claim like a pro, a guide for the beginner or pro*. Bloomington, USA: iUniverse Williams, J.M. and Evans, D. (Current Edition) *Training for Equestrian Performance*. Wageningen, Netherlands: Wageningen Press. Websites: Centaur Biomechanics: http://www.centaurbiomechanics.co.uk/

	Equinome: http://www.equinome.com/ Fine Equinity: http://www.fineequinity.com/ Racing Post: http://www.racingpost.com/ British Horseracing Authority: http://www.britishhorseracing.com/ Journals: Comparative Exercise Physiology Equine Veterinary Journal Equine Veterinary Education Journal of Veterinary Behaviour Veterinary Clinics of North America: Equine Practice The Veterinary Journal Theriogenology

Part 3: Assessment	
Assessment Strategy	Students will be provided with a case study, prior to the written examination, and are expected to engage in guided and independent research to prepare for the assessment. The examination will require the student to debate and critique performance measures used in the racing industry in the context of the case provided, under controlled conditions to determine if a named horse's career was successful or not. This will allow students to demonstrate their analytical skills and detailed knowledge of the broader subject area. Formative assessment opportunities will be facilitated by tutors in seminar sessions, where students will work through example case studies and develop pedigree and performance analysis skills, and received verbal feedback on their progress. The written assignment will be in the form of a lay press article, targeted for publication in the racing press, communicating to the general public how science could be used to enhance performance in the racehorse. Scheduled drop in sessions for assignment and examination support and verbal feedback will be provided by the module team. To support students' development, formative opportunities to engage in interactive learning opportunities which test their understanding of the topics covered by the module will also be provided via the module page on the VLE. Interactive VLE tasks will also be used to develop individuals' academic, reflective and evaluation skills through verbal, written and digital communication. Students are also encouraged to engage with relevant academic skill development workshops available outside of the module to support personal development. In line with the Institution'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	**Written Assignment**	
% 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**
1. Seen case study examination (1.5 hours)	100%
Component B **Description of each element**	**Element weighting**
1. Written assignment (1500 words)	100%

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) **Description of each element**	**Element weighting**
1. Seen case study examination (1.5 hours)	100%
Component B **Description of each element**	**Element weighting**
1. Written assignment (1500 words)	100%
If a student is permitted a retake of the module under the Academic Regulations and Procedures, the assessment will be that indicated by the Module Specification at the time that retake commences.	