

MODULE SPECIFICATION PROFORMA

<b>Module Title:</b>	Stress & Animal Welfare	<b>Level</b>	6	<b>Credit Value:</b>	20
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<b>Module code:</b>	ANM609	<b>Is this a new module?</b>	Yes	<b>Code of module being replaced:</b>	ANM603
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<b>Cost Centre(s):</b>	GAAN	<b>JACS3 code:</b>	D328
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<b>With effect from:</b>	September 19
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<b>School:</b>	Social & Life Sciences	<b>Module Leader:</b>	Tamsin Young
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Scheduled learning and teaching hours	50 hrs
Guided independent study	150 hrs
Placement	0 hrs
<b>Module duration (total hours)</b>	<b>200 hrs</b>

<b>Programme(s) in which to be offered</b>	Core	Option
BSc (Hons) Equine Science and Welfare Management	✓	<input type="checkbox"/>
BSc (Hons) Animal Science	✓	<input type="checkbox"/>
BSc (Hons) Animal Studies	✓	<input type="checkbox"/>

<b>Pre-requisites</b>
None

Office use only

Initial approval: June 17

APSC approval of modification: *Enter date of approval* Version: 1

**Module Aims**

To explore how stress can be managed in a range of environments and situations.  
To show an understanding of the physiological and behavioural adaptations of animals resulting from modern use and husbandry.

**Intended Learning Outcomes**

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

At the end of this module, students will be able to

Key Skills

At the end of this module, students will be able to		Key Skills	
1	Critically evaluate the ethics associated with the modern use and husbandry of animals	KS1	KS6
		KS3	
		KS4	
2	Critique the physiological changes resulting from modern use and husbandry of animals	KS1	KS5
		KS3	KS6
		KS4	
3	Evaluate the behavioural impacts resulting from modern use and husbandry of the animals	KS1	KS5
		KS3	KS6
		KS4	

Transferable skills and other attributes

Independent learning skills, problem-solving, self-management, communication, creative thinking, use of ICT.

**Derogations**

None

**Assessment:**

Coursework One:

The student will produce a report that investigates the welfare and ethics regarding modern use and husbandry of a given animal (Learning outcome 1). The report must make clear connections between physiological changes and the behavioural impacts resulting from modern use and husbandry of the animal (relevant to their degree programme). Modern uses of animals that may be covered include sporting disciplines, animals used for work such as the Police dogs or animal assisted therapy and companion animals. Husbandry issues such as inappropriate social grouping, intensive rearing practices and transportation may be included. The physiological effects of stress on the animal (Learning outcome 2) must be included in the report, together with examples of behavioural coping responses (Learning outcome 3) such as stereotypic behaviours (Learning outcomes 2 & 3).

Coursework Two:

An in-class test will cover the physiological and behavioural changes experienced by animals exposed to stressful conditions. The test will comprise of multiple choice and short answer questions (Learning outcomes 2 & 3).

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1,2,3	Report	60		2,400
2	2,3	In-class test	40	60 minutes	1,600 equivalent

**Learning and Teaching Strategies:**

The module will enable students' the opportunity to explore the welfare and ethical concerns surrounding husbandry and modern use of animals. It will also explore animal welfare law. The physiological and behavioural impacts resulting from today's use and care of animals will be covered. Both beneficial impacts such as raising health and fitness levels will be included as well as impacts that can be potentially harmful to animals such as the manifestation of negative stress and associated effects that may be detrimental to health and welfare. Students will be expected to evaluate the module content and draw from previous modules to make recommendations for improving the welfare of animals in today's society.

Delivery of module content will consist of taught sessions and study visits. Delivery methods will incorporate lectures, talks from guest speakers and student-centred research. Ethical concerns linked to modern use and care of animals will be debated and visits to the work-place included e.g. a dairy farm and rescue centre. These visits will provide opportunities for applied and experiential learning and group work will permit students to evaluate theory and practice in order to make welfare recommendations.

The module will also develop practical investigative skills. Students will have opportunity to use The Observer (Noldus Technology, The Netherlands) to analyse behaviour from video footage. They will also be able to investigate heart rate, via use of the Polar heart rate monitor and its relevant computer software.

**Syllabus outline:**

- Intensive management/husbandry systems
  - stabling, feeding, turn-out, fitness, training, transportation and competing.
- Modern uses of horses
  - leisure, competition, work.
- Definitions of stress
  - eustress, neutral, distress, chronic stress, exhaustion.
- Animal sentience, animal suffering.
- Physiological effects of stress
  - alarm reaction – adrenaline, adaptation - hypothalamic-pituitary adrenal axis (cortisol), sympatho-adrenomedullar pathway (heart rate).
- Behavioural responses to stress
  - behavioural changes, stereotypies, staleness.
- Welfare recommendations
  - housing, turn-out, daily routine, social companionship, dietary needs, fitness, training, transportation, competition.
- Management of risk
  - collection of primary data from horses including physiological e.g. heart rate, and behavioural observations e.g. video footage.
- Use of specialist equipment / software packages
  - e.g. The Observer (Noldus Technology, The Netherlands), Equine Polar Heart Rate Monitor (such as RS800).
- Designing and running a seminar.
- Communicating in a seminar context – engagement of specialist and non-specialist audiences.

**Bibliography:**

**Essential reading**

Fraser, D. (2008) *UFAW Understanding Animal Welfare*. Wiley and sons. Bognor Regis.

McGreevy, P. (2004). *Equine Behaviour: A Guide for Veterinarians and Equine Scientists*. London: Saunders Publishing

UFAW (2011) *Management and welfare of farm animals*. Wiley Blackwell. Oxford

**Other indicative reading**

Regan, T. (2004) *Empty cages facing the challenge of animal rights*. Rowman and Littlefield, Lanham, Maryland

Skipper, L (2007) *Understanding Horse Behaviour*. London: New Holland Publishers.

Waran, N (2007) *The Welfare of Horses*. Dordrecht: Springer Publishing.

Webster, J. (2005). *Animal Welfare. Limping towards Eden*. Oxford: Blackwell Publishing Limited.

Zeitler-Feicht, M. H. (2004). *Horse behaviour explained: Origins, treatment and prevention of problems*. London: Manson Publishing.

Reference will be made to articles from journals such as:

- Applied Animal Behaviour Science  
e.g. Cooper, J.J, Mcall, N, Johnson, S & Davidson, H.P.B (2005) *The short-term effects of increasing meal frequency on stereotypic behaviour of stabled horses*. Applied Animal Behaviour Science. 90, 351-364.
- World Rabbit Science.  
Trocino A., Xiccato, G (2006) Animal welfare in reared rabbits: a review with emphasis on housing systems. World Rabbit Science, North America, 14: 77 - 93
- Animal Welfare  
e.g. Dawkins, M (2004) *Using behaviour to assess animal welfare*. Animal Welfare. 13:S3-7.
- Equine Veterinary Journal  
e.g. Goodwin, D, Davidson, H.P.B & Harris, P (2002) *Foraging enrichment for stabled horses: effects on behaviour and selection*. Equine Veterinary Journal. 34, 7, 686-691.

Indicative web based materials:

<http://asab.nottingham.ac.uk/ethics/index.php>  
[www.polar-equine.com](http://www.polar-equine.com)