



FdSc Animal Management and Welfare

UCAS code D392

Institution code H12

Duration 3 years (full-time) including a one-year work placement

Start date September 2019

Location [Harper Adams University campus](#) (and location of work placement)

The course

This three-year course is ideally suited to students who want to work 'hands-on' with animals in kennels and catteries, zoos or wildlife parks, stables, farms, research establishments or animal assistance organisations.

Science is a necessary part of the course because if you are to be able to manage animals in the interests of their best welfare you need to have a good understanding of the underpinning sciences such as how their bodies work, what is needed to maintain health and what happens in the case of disease. However, as with all animal-related courses at Harper Adams, the science modules are very applied so that you can see the relevance of the subject matter from the beginning. Even if you found science difficult or boring before, it is likely that you will enjoy it here because it is all related to animals.

The course covers areas such as husbandry, nutrition, physiology, breeding, behaviour and health which will give you the knowledge required to manage the welfare needs of a diverse range of species. The emphasis is slightly more on companion animals but farm animals, horses, wildlife and collection animals are also included.

On completion of this course you may be eligible to upgrade your qualification to an honours degree in Animal Management, Health and Welfare or in Animal Behaviour and Welfare through one of our [Animals top up courses](#).

A-level entry requirements

- Offers tend to be in the region of **72 - 80** UCAS points
- Students should typically be studying **2 subjects at A2 level** to be considered
- When combining qualifications no more than one Subsidiary Diploma will be considered alongside A levels (one A level for FdSc)
- General Studies and Critical Thinking are encouraged but **not** included in grades required
- Applicants are encouraged to gain experience working with a number of different animals in different settings. Applicants should include details of this in their application. Experience of different animals will enable reflection and will help with many aspects as students' progress through the course.
- **4 GCSEs at grade C/4 or above**, including English Language, Maths and a Science
- Applicants can expect to receive offers including specific grades in specific subjects (for example, a B or C at A level, or an M or D for BTEC modules)
- Key Skills (and other level 2 variants) and First Certificates/Diplomas are not accepted in place of GCSE passes
- Overseas applicants please check our [English Language Requirements](#)
- The majority of candidates will not be called for an interview and a decision will be made via UCAS Track. However, for some students a telephone interview or campus based guidance session will be

required. We will simply want to meet you to understand if the course is the right choice for you and to discuss your application in more detail. We will be keen to know your reasons for choosing the course and your career aspirations.

Note: Entry Requirements are for guidance only, please check the UCAS website or contact Admissions for further information.

Work placement

Students undertake a 44-week period of industrial placement in an animal-related organisation of their choice. Recent industrial placements have included RSPCA hospitals and shelters, research facilities, wildlife parks, zoos, falconry centres, veterinary practices, pet retail outlets, kennels, catteries and stables.

Teaching and learning

Lectures are complemented by tutorials, visits and practical classes. Depending on the module, practicals may take the form of laboratory work, behaviour/welfare assessments or animal handling in the [Companion Animal House](#) or on the [University Farm](#).

Assessment methods

A wide range of assessment methods are used. Depending on the module these include examination, assignments, practical spot-tests and presentations.

Learning in Higher Education – how is it different?

Whilst a student's prior experience or qualifications should prepare them for Higher Education, most will find that study at university level is organised differently than they might have experienced at either school or college. Higher Education sets out to prepare students to think and learn independently, so that they are able to continue learning new things beyond their studies and into the workplace, without needing a tutor to guide them. This means that the time spent in classes with tutors provides direction, guidance and support for work that students undertake independently through:

- finding useful information sources and compiling bibliographies of reading material, in paper and online
- reading and making notes to help make fuller sense of subjects
- engaging with online materials and activities found on the College's own virtual learning environment
- preparing assignments to practise skills and develop new insights and learning
- preparing for future classes so you can participate fully

In order to develop the skills of a graduate (whether at Foundation Degree or Honours Degree levels), students are expected to not only be able to recall and explain what they know but also to be able to:

- **apply** what they know to new problems or situations
- **analyse** information and data and make connections between topics to help make sense of a situation
- **synthesise**, or draw together, the information and understanding gained from a range of sources, to create new plans or ideas
- **evaluate** their own work and also the work of others, so that they can judge its value and relevance to a particular problem or situation

Tutors will expect students working towards a Degree to be able to use what they know to solve problems and answer meaningful questions about the way in which aspects of the world work and not just rote-learn information that they have been told or read, for later recall. This means using all the bullet-pointed skills and to think critically by questioning information, whilst also being rigorous in checking the value of the evidence used in making one's own points. Students will be expected to become increasingly responsible for recognising the areas where they themselves need to develop. Taking careful note of tutor feedback can help to identify the skills and abilities on which attention could usefully be focused. To be successful, students need to be self-motivated to study outside of classes, especially since in higher education, these higher level skills need to be practised independently.

At Harper Adams students are gradually supported to become less reliant on class-based learning, so that

they are able to spend a greater proportion of their time in their final year working on projects of interest to themselves and in line with their future career aspirations. Whilst in the first year of a course, a student might spend around one-third of their time in class, they will typically spend 15 - 20% in class by the time they reach their Honours year. At Harper Adams, we are fortunate to have not only an extensive estate and great facilities for students to use as a source of information and inspiration, we also have a well-stocked library and access to countless specialist sources of paper-based and online information. Many of the staff at Harper Adams are involved in research work, which helps ensure the content of the courses is at the forefront of the discipline. This also means that amongst the library books and online journals that students use, there may be some familiar names.

The [Bamford Library](#) and [Faccenda Centre](#) each have spaces in which students can work, either individually or in small groups, using either their own laptop computers or the provided desktop computers, all of which can access the network. Working spaces are zoned to reflect different working conditions, so there is a study space for everybody, whether they need silence or work better in a livelier environment.

Careers

Many Harper Adams graduates are currently working for welfare organisations (at home and abroad), at colleges as lecturers, technicians and animal demonstrators, and within wildlife parks and zoos. Others have become assistant managers and livestock managers within pet superstores, or work in farm and large animal environments at home and within Europe.

Some work in kennels and catteries at various levels of responsibility, or in pharmaceutical research.

Opportunities are developing in the area of animal physiotherapy.

Some students have become education officers in zoos or other welfare organisations such as the Guide Dogs for the Blind Association or the Dogs Trust. Many graduates continue in higher education studying degrees in Zoology, Wildlife Ecology and Animal Behaviour.

What will I study?

Year	Study time (The percentage of time spent in different learning activities)			Assessment methods (This is the breakdown of assessment methods)		
	% time in lectures, seminars and similar	% time in independent study	% time on placement	Written exams	Practical exams	Coursework
1	35%	65%	0%	51%	0%	49%
2	0%	0%	100%	0%	0%	100%
3	29%	71%	0%	42%	0%	58%

Year 1		Year 2		Year 3	
Academic Skills Development (A4001C17)	15	Placement year		Professional Project (P-PROJC17)	15
Fundamentals of Physiology (A4007C17)	15			Companion Animal Studies (A5012C17)	15
Companion Animal Management (A4013C17)	15			Applied Animal Health (A5028C17)	15
Large Animal Management (A4015C17)	15			Principles of Animal Behaviour and Welfare (A5008C17)	15
Introduction to Animal Health (A4008C17)	15			Animal Ethics (A5014C17)	15
Introduction to Animal Welfare, Behaviour and Ethics (A4009C17)	15			Philosophy of Zoos (A5007C17)	15
Adaptive Biology (A4002C17)	15			Options	
Applied Animal Business Management (A3001C17)	15			Introduction to Small Business Management (F5005C17)	15
				Farm Animal Science (A5016C17)	15
				Wildlife Identification and Conservation (C5011C17)	15

Academic Skills Development

Year of study 1

Code A4001C17

Credits 15

Core/option Core

Module contact [Mrs Emily Chapman-Waterhouse](#)

This module supports the development of students' personal, academic, employability and self-management skills for students in the first year of their undergraduate studies. Whilst the module provides a basis for the rest of the Professional Scholarship Programme it also supports learning in every other module. The module will be delivered throughout the academic year to students on animal-health related undergraduate courses. The main rationale for a first year module of this type is to ensure all students are fully equipped for higher education and to provide space in the curriculum in which to develop relevant skills to aid progression within and out with technically oriented modules. The key themes addressed by this module include transition into higher education and beyond the first year, approaches to learning, independent study, effective communication for animal health-related vocations, reading and reviewing literature, referencing convention, using feedback for learning and using technology to enhance learning. Whilst the roots of the module are in academic skill development, learning resources and

assessments will be tailored to the vocational areas relevant to students. Students will need to actively undertake a self- review of progress at regular intervals and develop action plans for self-development.

Fundamentals of Physiology

Year of study 1
Code A4007C17
Credits 15
Core/option Core
Module contact [Jim Huntington](#)

This module introduces important anatomical terms and describes the concepts required to understand the processes involved in the functioning of organ systems and the maintenance of homeostasis in vertebrate species, including humans, food producing animals, companion animals and other species addressed within the programmes this module has been validated for. A broad knowledge of normal body structure and functioning provided by this module will be invaluable for students studying modules within the animal related programmes such as *Companion Animal Studies*, *Principles of Animal Health*, and *Animal Disease Sciences*. For those studying food related programmes the module will be invaluable for the study of *Well-being Through the Lifecycle* and later modules such as *Advanced Aspects of Nutrition*. This module is designed to be a prerequisite (for some courses) to either *Veterinary Physiology* or *Applied Anatomy and Physiology*.

Companion Animal Management

Year of study 1
Code A4013C17
Credits 15
Core/option Core
Module contact [Mrs Jennifer Sadler](#)

An understanding of companion animal management practices is essential for working within the animal industry to promote good health and welfare for companion, collection and experimental animals.

The module will provide learners with knowledge of relevant companion animal management practices with emphasis placed on environmental requirements, nutritional needs, and animal management.

The module will underpin several modules at Levels 5 and 6 including Companion Animal Studies, and Applied Companion Animal Health, Welfare and Behaviour.

Large Animal Management

Year of study 1
Code A4015C17
Credits 15
Core/option Core

It is important that students studying animal-based courses have an understanding of the systems involved with the keeping of large animals and appreciate the commercial context in which many of these animals are kept. This module will highlight the differences in the approach to the management of large animals in comparison to that for companion animals (covered in Companion Animal Management). The underpinning knowledge gained in this module will enable these students to evaluate behavioural adaptation and the welfare of large animals and understand how management can impact upon the health of the animal. The students will be introduced to the husbandry requirements associated with the most common agricultural systems involving animals such as cattle (dairy and beef), sheep, pigs, poultry and horses. Students will gain sufficient knowledge of the requirements of the system, and the effects of the management of the animal on its health and welfare status.

Introduction to Animal Health

Year of study 1
Code A4008C17
Credits 15
Core/option Core
Module contact [Mrs Helen Cartlidge](#)

Knowledge and understanding of key topics related to animal health, such as causes of disease, how the body responds to disease and preventative health care, are essential for all persons working with animals. This module aims to introduce students to these key topics creating a foundation of knowledge in animal health that can be built on in subsequent modules (follow on modules will vary depending on the individual course being studied).

Introduction to Animal Welfare, Behaviour and Ethics

Year of study 1
Code A4009C17
Credits 15
Core/option Core

This module will introduce students to the science of animal behaviour and the importance of behaviour in our understanding of animal welfare. It will also consider the ethics of society's usage of different types of animals and the role of legislation and different organisations in the promotion of the interests of animals. Examples will be drawn from a range of diverse species and scenarios to illustrate the principles and practices discussed.

The content of this module will be of benefit to anyone considering working either directly or indirectly with animals in a range of environments. An appreciation of the science of animal behaviour and welfare and how underlying ethical values may influence the acceptability of animal use, will enhance the ability of the individual to undertake welfare assessments of the animals they are responsible for. The knowledge and understanding gained in the module will be an important foundation for those going on to study the module Principles of Animal Welfare and Behaviour.

Adaptive Biology

Year of study 1
Code A4002C17
Credits 15
Core/option Core
Module contact [Professor Mark Rutter](#)

This module provides a broad overview of how the process of evolution through Darwinian natural selection has resulted in the diversity of life seen on Earth. Historic theories of evolution are evaluated, and the mechanisms underpinning evolution are explored, from microevolution, through speciation to macroevolution. The role of DNA and mechanisms of inheritance are studied, as is animal taxonomy. The evolution of humans is considered, along with the history and process of animal domestication. The effects of evolution and domestication on animal physiology and behaviour are explored. The module is designed to give the students a deeper understanding of evolution and its role underpinning the biological sciences.

Applied Animal Business Management

Year of study 1
Code A3001C17
Credits 15
Core/option Core

This module will provide students with an understanding of the range of opportunities available to the graduate who wishes to set up and run their own animal related business. It will also focus on factors to consider when choosing an opportunity to develop and when running your business. It will work from the

premise that the business wants to achieve good welfare standards for the animals they may work with and factors that may influence this will be considered.

The emphasis will be on sole trader, small scale businesses that are most relevant to the graduate just starting to consider being self – employed either on a part or full time basis. It will also be relevant to students who may be considering supplementing their student income as well while an undergraduate here at Harper Adams University.

Placement year

Year of study 2
Core/option Core

Read our dedicated [Placement Learning](#) pages for information on the many benefits of the placement year.

Professional Project

Year of study 3
Code P-PROJC17
Credits 15
Core/option Core
Module contact [Dr Lydia Arnold](#)

This module provides students with the opportunity to carry out an investigation that is of relevance or interest to a company or organisation. In many cases it is expected that students will have identified a problem or challenge arising from their placement or other work-based learning experiences. The topic is to be negotiated between the student and the Supervisor or Professional Project Manager and will be required to meet the broad learning outcomes outlined below. An academic supervisor will support the student with their project on an individual basis, in conjunction with any technical input required from the sponsoring organisation, where applicable. The student is expected to produce and submit a report of 5,000 words in length written in an appropriate format.

You will:

- Identify a specific professional research problem or question for investigation.
- Plan and undertake a programme of work to investigate the current understanding in this area using a literature review, and, where appropriate, primary research.
- Discuss the findings, identify a range of solutions to the problem or research question, evaluate alternative solutions and make clear practical recommendations that can be applied within a particular employment context or professional sector.
- Create a report in an appropriate format, as agreed with the supervisor and, where appropriate, the sponsoring organisation.
- Deliver an effective oral presentation and respond to questions to further explain the project and justify the recommendations.

Companion Animal Studies

Year of study 3
Code A5012C17
Credits 15
Core/option Core
Module contact [Mrs Susan Jeavons](#)

An understanding of the principles of companion animal nutrition, health, and reproduction is essential for the successful management of companion animals.

This module is designed to introduce students to the principles of companion animal nutrition and the effects of differences in digestive anatomy. As well as the physiological processes on nutrients supply, nutrient requirements and diet composition.

Reproductive processes of a variety of companion animals will also be considered, with an understanding of

how genetic information can be passed to the next generation in breeding programmes.

Companion animal health will be explored for a variety of companion animal species. The effect of health on welfare and behaviour will also be considered.

Applied Animal Health

Year of study 3
Code A5028C17
Credits 15
Core/option Core
Module contact [Mrs Helen Cartlidge](#)

This module develops the concepts introduced in **Introduction to Animal Health** and examines the process of disease in more detail. The main procedures available to investigate disease in animals and how these are used in practice will be examined. A range of animal diseases will be studied and control, treatment and disease prevention will be discussed in detail. Zoonotic diseases and their implications are also discussed.

Principles of Animal Behaviour and Welfare

Year of study 3
Code A5008C17
Credits 15
Core/option Core
Module contact [Dr Graham Scott](#)

Their complex behaviour is one of the main factors that distinguish the Animalia from the other Kingdoms of Life. This module aims to explore the richness and diversity of the behaviour we see in the animal kingdom, considering the various factors that have influenced its evolution. Although there will be an emphasis on the more complex behaviour patterns seen in the higher animals, this module will consider the behaviour of animals in general, and will not focus on just the domesticated species. This diverse approach will help in the understanding of the general principles which underpin the development of the various patterns of behaviour we observe in animals.

Animal welfare is of major concern to those working in the animal industry as well as the general public. In this module, students are encouraged to consider the issues that affect the welfare of many groups of animals such as farm, companion, zoo and research animals. The physiological and behavioural changes which occur when welfare is compromised will be studied and how these may be used to assess an animal's welfare status. The philosophical and ethical considerations of how we use animals will be discussed and an overview is given of the legislation which governs animal welfare across a range of species.

Animal Ethics

Year of study 3
Code A5014C17
Credits 15
Core/option Core
Module contact [Mr Stephen Baugh](#)

Most of us interact with animals on a daily basis, whether that be via our pets, via commercial animals in a work environment or through the animal products that most of us eat. Through these interactions animals are treated by humans in particular ways dependent on many factors including species, utility, religious or cultural beliefs and beliefs based on an animal's sentience or intrinsic value. This module considers our interactions with animals and explores the challenges we face when making moral judgements about how we utilise and treat animals. We will consider many questions that underpin our beliefs about other species and our interactions with them. How should we treat animals? Is it acceptable to use animals for our own benefit? Do animals have intrinsic value? Do animals have rights?

The main ethical theories that are useful when exploring these issues are discussed and explained and examples of how these theories can be applied to our interactions with animals are discussed.

Philosophy of Zoos

Year of study 3
Code A5007C17
Credits 15
Core/option Core
Module contact [Dr Graham Scott](#)

Zoos and menageries began as prestigious private collections, notably amongst the ruling classes, though even from the times of Alexander, animal collections enabled the study of animals. In the 19th Century many zoos were established as a prestigious addition City resources (particularly in capital cities) where the middle classes could promenade and be entertained, as part of the wholesome "self-improvement". Some Zoos were established to protect endangered species (e.g. bison). The primary role of entertainment continued to the 1960s but as societies views have changed, zoos have had to revise their "missions". Through the British and Irish Association of Zoos and Aquaria (BIAZA) and similar groups zoos have expanded their role. Legislation has also been placed on the statute books which establish criteria for licensing of zoos. These include zoos establishing, for example, educational, breeding, conservation and preservation. Furthermore the types of animal enclosure have changed as the behavioural and welfare requirements of species have been appreciated. The use of enrichments is particularly important to prevent boredom and welfare insults to the animals on display. The survival of zoos depends on public understanding of their aims, objectives and policies. The future of animal collections will mean changing roles and involvement with captive breeding and visitor participation. However, there is an increasingly rich resource of media material where animals are filmed in their natural environment. There is an ethical argument concerning keeping animals in collections and whether there is a need for such.

Introduction to Small Business Management

Year of study 3
Code F5005C17
Credits 15
Core/option Option
Module contact [Mary Munley](#)

This module provides a general introduction to business creation and management for students training to be animal health practitioners and other related disciplines in the veterinary sector. This module introduces students to the business planning approaches necessary to establish and manage a small business.

The module will present basic managerial concepts and techniques in marketing and finance that students need to understand to operate a small business. It enables them to acquire and demonstrate attitudes and skills necessary for communication, numeracy, problem solving and teamwork skills. It is designed to be a stand-alone module although students may have the opportunity to develop their interests further in subsequent modules.

Farm Animal Science

Year of study 3
Code A5016C17
Credits 15
Core/option Option
Module contact [Dr Emma Bleach](#)

The ability of farmers to manipulate the outputs of animal production systems and consequently their productivity, environmental impact and profitability depends on the successful application of animal sciences. This module will build on the first year agricultural /animal science and animal production modules and will cover the essential principles of animal reproduction, lactation, breeding, nutrition, growth and health & welfare in a number of farm animal species and a range of livestock production systems.

Wildlife Identification and Conservation

Year of study 3
Code C5011C17
Credits 15
Core/option Option
Module contact [Nicky Hunter](#)

This module aims to provide students with an extension of knowledge from the level 4 ecology module and to focus primarily on the synthesis and analysis of the ecological requirements of species and habitats, and the issues around conservation and funding currently in the UK. In order to fully understand the ecology of species, correct identification and adaptation features for the major groups of fauna and flora needs to be recognised.

A practical knowledge and skills-based understanding of the selection and use of identification keys and community classification systems is one of the corner stones to effective assessment of biodiversity for conservation. Students will develop practical knowledge of, and skills in, the use of species identification techniques. Particular attention will be focused on species that are associated with the UK countryside, but the module will also address globally applicable general principles and concepts. Essentially a hands-on approach to learning is encouraged introducing students to the flora and fauna found in a range of habitats which will reinforce the competences of survey skills studied previously.