

PEARSON BTEC

**HNC
LEVEL 4
CERTIFICATE**

IN

ANIMAL MANAGEMENT

**COURSE HANDBOOK
2023-24**

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1 Introduction

1.1 Welcome to the Sheffield College

Welcome to your Higher Education (HE) studies at The Sheffield College.

Many studies have shown that individuals who take the bold step to undertake HE study lead enriched lives: they have greater social mobility; can earn more money; have better chances of taking part in democratic processes and can contribute so much to their community.

Studying for a Higher Education course is undoubtedly immensely rewarding and challenging, and here at The Sheffield College we admire all our students who undertake HE study.

At The Sheffield College we have developed a whole range of ways we support our HE students. For example:

- we have Academic study support specialists;
- we have developed our Skills and Attributes Framework to give you the support you need to flourish in your studies and beyond;
- our HE students have enhanced career support, and;
- we have specialists who can help if you have a disability.

Our aim is to create a nurturing and supportive environment with good access to teachers and resources, and we hope that you will enjoy learning in our vibrant academic community.

Your tutors are focussed on supporting your journey and providing a positive HE teaching and learning experience, one in which you will develop as an independent learner and gain a whole range of graduate attributes which are valued by employers.

I hope that you enjoy your time here and make the most of the exciting opportunities ahead.

Tina Harrison
tina.harrison@sheffcol.ac.uk
Assistant Principal, Higher Education

1.2 The College

The Sheffield College has around 20,000 students in total, 600 of which are on university level courses. Higher Education at the Sheffield College operates across 3 campuses; City, Hillsborough and Olive Grove. Higher Education is based within departments in order to give you access to specialist facilities. Each course has a designated Course Leader, who is responsible for the day to day running of your course, and is your first point of contact.

We are proud of our vocational facilities, which are among the best in the north of England, and our staff work hard to ensure you get a valuable experience when using them. You will find your tutors and support staff approachable and available to help you every step of your journey. For us, your time here is 'all about you' and we hope that you will work with us to continue to build a vibrant HE community.

1.3 Purpose of this handbook and how to use it

An important aspect of offering high quality courses of study at university level is the provision of information for students which is accurate, comprehensive and reliable for your learning needs.

In support of this objective, this handbook is designed in collaboration with your awarding body, Pearson Edexcel, to meet the expectations of the UK Quality Code.

The handbook provides information about your course team, the course you have chosen to study, assessment, personal academic and pastoral support, learning resources, quality assurance, work-based learning and opportunities for further study. It is a document that you will need to dip into during the course, when you need to look up, for example, what to do if you are ill. It contains the rules by which we all must live; so keep it in a safe place for future reference.

2 Course Team

2.1 Contacting Staff

At the Sheffield College we are proud of the amount of tutor support we provide. We encourage you to contact tutors if you need any help or support with your work, or if you have any queries about their unit. Whilst you can often catch staff in their workrooms during breaks, email is usually the best method of contact at other times, as tutors have busy teaching commitments and may not be readily available by phone. If you do contact by phone, be prepared to leave a message with your phone number; your tutor will always phone you back to arrange a time to meet with you to discuss any concerns you may have.

As well as having tutors for different units of the course, each course has an HE Course Leader, who is responsible for the day to day running of the course. You should contact the HE Course Leader if you have any queries concerning the course and how it operates, or if you are unable to attend class for any reason, for example due to illness.

In addition, your course is managed by a Programme Leader. You are unlikely to need to make contact with the Programme Leader, unless your HE Course Leader is absent from College for any length of time. Contact details for individual tutors will be given to you in class, by the tutors themselves. Contact details for your HE Course Leader and Programme Leader are listed below.

Animal Management - Pearson BTEC Level 4 HNC Certificate

Name	Role	Email
Michelle Twigg	HE Course Leader & HE Academic Tutor	michelle.twigg@sheffcol.ac.uk
Julie Barker	Head of School, Health, Wellbeing, Science and Professional Services	julie.barker@sheffcol.ac.uk
Samantha Wilby	Programme Leader	samantha.wilby@sheffcol.ac.uk

2.2 HE@TSC

The College has a dedicated specialist HE Office to service HE students. This is your first point of contact for all administrative queries. The HE Senior Administrator can be contacted via email; HEOffice@sheffcol.ac.uk and will either be able to answer your query or give you the contact details of the appropriate person to help you. The Assistant Principal, Higher Education, is Tina Harrison, tina.harrison@sheffcol.ac.uk

3 The Course

3.1 Programme Specification

This is the Programme Specification for your proposed course. It gives you information about how you will be taught, assessed, and supported whilst at college.

What Award Will I Get?

Pearson BTEC Level 4 Higher National Certificate (HNC) in Animal Management

Where Am I Going to Study?

Sheffield College, Hillsborough Campus
Livesey Street, Sheffield S6 2ET

What Do I Need to Get onto the Course?

80 UCAS points and GCSE English and Maths at grade C/4. Students who have studied Animal or Equine Management at Level 3 must achieve a Merit or above to gain a place on the HNC course. Potential students with alternative qualifications, or access to Higher Education, but have relevant work experience in the animal sector will also be considered. All applications will be considered on an individual basis.

Is It Approved by any Professional Body?

Pearson BTEC Higher Nationals are designed to provide a specialist vocational programme, linked to professional body requirements and National Occupational Standards where appropriate.

The qualifications provide a thorough grounding in the key concepts and practical skills required in their sector and their national recognition by employers allows direct progression to employment.

Learners who possess an HNC/D in Biological Sciences and have had experience in responsible work in biological sciences or its application of at least five years subsequent or seven years prior to the award are eligible to apply for membership of the Institute of Biology.

Aims of the Programme

The purpose of Pearson BTEC Higher Nationals in Animal Management is to develop students as professional, self-reflecting individuals able to meet the demands of employers in the Animal Management sector and adapt to a constantly changing world. The qualification aims to widen access to higher education and enhance the career prospects of those who undertake them.

This qualification is designed to equip individuals with the knowledge, skills and experience to be able to gain employment in the Animal Management industries and support students to a range of specialist progression pathways, such as top-up undergraduate degrees & specialist careers.

Learning Outcomes of the Programme

You will develop your knowledge and understanding of a wide range of animal biology and animal management subjects through lectures, seminars and directed study. Your communication and study skills will be developed through a planned tutorial programme and a wide variety of assignment tasks including presentations, essay and report writing. Your analytical skills will be developed through laboratory and project work. You will also gain valuable practical experience through your work placement and other organised practical sessions.

Knowledge and Understanding

By the end of the programme you will have knowledge of and be able to understand:

- 1 a range of different organisations involved in the animal management industry, the influence of stakeholders and the relationship between businesses and the local, national and global environments
- 2 recent developments in animal health and welfare and the factors which can affect the health of an animal, the causal agents of disease and disease transmission and the measures which can be adopted to minimise the risks of disease and/or injury
- 3 the dietary needs of a variety of species and of the range of factors that are important in designing a feeding regime
- 4 the fundamental processes of living organisms and the basic cell structure and function that is intrinsic to the existence of living organisms
- 5 the structure, functioning and maintenance of the animal body in mammals, birds and fish
- 6 the relationship between environmental and evolutionary pressures on resulting behaviours in a variety of contexts e.g. animal collections, production livestock and conservation programmes
- 7 the legislation related to animals and the relationship with ethical factors
- 8 the nature of the disease process and the relationship between the host and the infective agent
- 9 the historic and changing modern roles of animals in human societies including human attitudes towards animals and the roles they play in different human societies and cultures
- 10 the trends in the evolution of the animal kingdom and the adaptations shown by a range of animals to the specific problems that are encountered within a range of differing environments.

Intellectual Skills

By the end of the programme you will be able to:

- 1 analyse, synthesise and summarise information critically
- 2 think independently, solve problems and devise innovative solutions
- 3 design, plan, conduct and report on investigations
- 4 use your knowledge, understanding and skills to evaluate and formulate evidence-based arguments critically and identify solutions to clearly defined problems of a general routine nature
- 5 carry out independent enquiry and critical analysis by undertaking a sustained research investigation of direct relevance to your area of specialist knowledge or interest
- 6 evaluate the provisions and effectiveness of current laws relating to the broad topic of animal management

Practical Skills

By the end of the programme you will be able to:

- 1 apply practical competence in the direct handling and management of animals and understand the relationship between husbandry and disease prevention in a range of routine and non-routine situations
- 2 apply your knowledge of all aspects of countryside work, from the commercial exploitation of individual species to the management of whole habitats
- 3 create and manage appropriate animal feeding regimes
- 4 manage animal collections through the study of a range of animal centres

- 5 work confidently in a laboratory setting and be familiar with a range of laboratory equipment

Key Skills

By the end of the programme you will be able to:

- 1 take responsibility for your own learning and recognise your own learning style
- 2 read and use appropriate literature with a full and critical understanding
- 3 communicate the results of your study and other work accurately and reliably using a range of specialist techniques
- 4 apply subject knowledge and understanding to address familiar and unfamiliar problems
- 5 identify and address your own major learning needs within defined contexts and to undertake guided further learning in new areas
- 6 draw on two years of practical work experience in one or more roles within the animal management industry

How will I be taught?

	Learning Methods
Knowledge and Understanding	<ul style="list-style-type: none"> • lectures and seminars • directed study of textbooks and journal articles • assignment work • project work
Intellectual Skills	<ul style="list-style-type: none"> • more active learning processes • assignments & projects • academic tutorials & supported study • group-learning activity such as a seminar or tutorial • laboratory, workshop, or field-based activity
Subject Specialist Skills	<ul style="list-style-type: none"> • application in context • opportunities to practise the activity in an appropriate learning context (e.g. lab, fieldwork, work placement) • workbooks or guidance manuals may also be used to support learning • simulations & practical skill workshops
Key Skills	<ul style="list-style-type: none"> • regular tutorials with the course tutor • through naturally arising opportunities within the curriculum e.g. written communication skills through essays or dissertations • oral communication skills through presentations in seminars • team working skills through collaborative projects

What will my timetable look like?

Your lectures will usually be spread over 3-4 days a week.

Field excursions, residential trips and practical activities may take place on days you are not normally timetabled to attend college and should take priority over other commitments. You will be informed of these activities well in advance to enable you make arrangements.

The units studied are:

Unit Number	Unit Title	No of Credits	Level
1	Animal Health and Welfare	15	4
2	Business and the Business Environment	15	4
3	Managing a Successful Project (Pearson-set)	15	4
4	Animal Behaviour in Society	15	4
5	Animal Husbandry	15	4
6	Animal Anatomy & Physiology	15	4
7	Animal Nutrition	15	4
8	Ecological Principles	15	4

How will I be assessed?

	Assessment Method
Knowledge and Understanding	<ul style="list-style-type: none"> • most methods require some demonstration of knowledge and understanding
Intellectual Skills	<ul style="list-style-type: none"> • problem-based exercises • independent project work • research dissertations
Subject Specialist Skills	<ul style="list-style-type: none"> • application in context • practical demonstration of skill
Key Skills	<ul style="list-style-type: none"> • through naturally arising opportunities within the curriculum • e.g. written communication skills through essays or dissertations • oral communication skills through presentations in seminars • team working skills through collaborative projects

All modules are assessed through a variety of written assignments set by the course tutors; there are no examinations for the Higher Nationals.

Calculation of the overall qualification grade

The calculation of the overall qualification grade is based on the student's performance in all units. Students are awarded a Pass, Merit or Distinction qualification grade using the points gained through all 120 credits, at Level 4 for the HNC or Level 5 for the HND, based on unit achievement. The overall qualification grade is calculated in the same way for the HNC and for the HND.

All units in valid combination must be attempted for each qualification. The conditions of award and the compensation provisions will apply as outlined above.

All 120 credits count in calculating the grade (at each level, as applicable).

Units that have been attempted but not achieved, and subsequently granted compensation, will appear as 'Unclassified'; i.e. a 'U' grade, on the student's Notification of Performance, that is issued with the student certificate.

Points per credit:

Pass: 4

Merit: 6

Distinction: 8

Point boundaries

Grade	Point boundaries
Pass	420–599
Merit	600–839
Distinction	840 +

Modelled Student Outcomes

Level 4 Higher National Certificate:

	STUDENT 1					STUDENT 2		STUDENT 3		STUDENT 4		STUDENT 5	
	Credits	Level	Grade	Grade point	Unit points	Grade	Unit points	Grade	Unit points	Grade	Unit points	Grade	Unit points
Core 1	15	4	P	4	60	P	60	P	60	D	120	D	120
Core 2	15	4	P	4	60	P	60	P	60	D	120	M	90
Core 3	15	4	P	4	60	P	60	P	60	D	120	M	90
Core 4	15	4	P	4	60	P	60	M	90	M	90	M	90
Core 5	15	4	M	6	90	P	60	M	90	M	90	M	90
Core 6	15	4	M	6	90	P	60	M	90	M	90	M	90
Opt 1	15	4	M	6	90	M	90	D	120	D	120	D	120
Opt 2	15	4	M	6	90	M	90	D	120	D	120	D	120
TOTAL					600		540		690		870		810
GRADE					M		P		M		D		M

What are my responsibilities as a student?

It is your responsibility to manage your personal and professional development. You will be mentored and supported in this by your academic course tutor. The amount of support given will be driven by your needs, as determined by you and / or Unit tutors, and is therefore expected to decrease in quantity and nature as you progress through the course and become more independent.

Higher National qualifications are vocational courses which prepare you for working in a professional environment as well as to undertake further study. These courses require you to behave in a professional manner, in much the same way as you would in a working environment. Therefore, we expect your attendance rate to be high and that, if you have to miss a class for some unavoidable reason, you inform your Course Leader and make

arrangements to catch up the class you miss. Our courses move at a fast pace, and there is a strong relationship between good attendance and success.

Group work is a key component of all courses, and will form part of your assessment. Good attendance enables you to build working relationships with your peers and play your full part in collaborative activities. Being able to work as part of a team is an important employability skill, and is highly valued on our courses.

For all these reasons, your academic course tutor will monitor your attendance and, should an issue arise for any reason, will help you to action plan so that you get back on track. However, it is your personal responsibility to ensure that you **do not take holidays during term time**. To help you with your planning, you will receive a college calendar at induction.

The College reserves the right to withdraw you from your course should your attendance pattern indicate a lack of commitment to your studies with the likelihood that you will not successfully complete the course. If you have a pattern of haphazard attendance, your Programme Leader will initiate a Positive Engagement Plan, to help you set targets and arrange support if you require it, in order to get you back on track. However, should your attendance not improve, or you do not attend for 4 consecutive weeks, you will be withdrawn and the student loans company will be informed. This will result in your funding being stopped, and you will owe the college the balance of any unpaid fees.

To learn more, go to <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Positive Engagement and Disciplinary Procedure*.

It is your responsibility to keep a copy of all written coursework submitted.

What support and help can I get?

Every student is allocated an academic course tutor. Full time students meet with their academic course tutor during induction and then on a weekly basis for either group or individual tutorials. Part time students meet for individual tutorials by arrangement.

Your academic course tutor will monitor and keep records of your progress. You will be expected to take an active part in this process and take responsibility for your own learning and progress. Your academic course tutor is there to support and guide you on your learning journey and is your first point of contact if you have any concerns or need to access support, counselling or careers guidance. Your academic course tutor will be responsible for writing your reference when you apply for further courses or employment. You will be given contact details for your academic course tutor during induction.

You will also receive academic support from your unit tutors. This may take the form of face to face academic tutorials, advice surgeries, appointments which may be remote (by telephone or email conversations) and conferences on the college intranet. Never be afraid to ask for help or advice - we are here to support you. Unit tutors will provide you with contact details during the first lesson.

Other sources of support

During induction you will be given details of all the support services which the college provides.

A Student Central base is located at the City and Hillsborough campuses, staffed by the [Student Support Team](#) who are there to support you throughout your time at College. This team of staff includes our own [Careers Advice Team](#) who can advise you about appropriate courses and give careers advice, and a team of staff offering personal support. We have various initiatives in place to support you, no matter what issues you might be facing either at home or at college. More information can be found [here](#).

The College offers a wide range of assistance to learners with additional needs. We believe that everyone should be enabled to learn effectively and have access to College facilities.

Learners with additional needs include people with:

- physical or mobility difficulties
- visual impairment e.g. blind and partially sighted
- hearing impairment e.g. deaf or hard of hearing
- communication difficulties e.g. Autistic and Asperger syndrome
- learning difficulty e.g. dyslexia, ADHD
- medical condition e.g. epilepsy, diabetes and heart disease
- mental health difficulties e.g. depression and anxiety

In order to access specialist support you need to apply for Disabled Students Allowance. You need to complete an online [application form](#) and send the documents requested to Student Finance England, who will assess your claim. If successful, they will fund you to attend an assessment centre where your particular support needs can be assessed. For more information visit [Disabled Students' Allowances](#) If you need any help with your application, or have any questions about Disabled Student Allowance, you should contact Charlotte Hope on 0114 260 2969 or by email charlotte.hope@sheffcol.ac.uk

If you have applied for Disabled Students' Allowance and been unsuccessful, ask your Course Leader to refer you to Charlotte Hope, who will liaise with them about your case and agree appropriate strategies for your support.

How Can I Find Out More?

The College has a dedicated specialist HE Office to service HE students. This is your first point of contact for all administrative queries and can be contacted via the following email address; HEOffice@sheffcol.ac.uk. They will either be able to answer your query or give you the contact details of the appropriate person to help you. The Assistant Principal, Higher Education, is Tina Harrison, tina.harrison@sheffcol.ac.uk

4 Additional Course Specific Information

Students are strongly advised to purchase their own USB sticks when they start their course. Students are also encouraged to bring in their own devices (laptops) to help facilitate online learning & access online materials; the college has eurodam WiFi connection to provide all students with online access via their own devices.

Waterproof clothing and footwear are essential. College clothing for Animal Management studies may also be purchased; please make sure you contact the course leader if you would like to order clothing.

Contributions are expected for residential and day trips. These are kept as low as possible and payments can be made in instalments. Attendance on some of these trips may be essential in order for you to complete assignments. You will be informed well in advance of any field trip which is due to take place outside of your normal college hours.

Students should have an up to date tetanus vaccination.

5 Assessment

5.1 Assessment Schedule

Deadlines will be given for each unit during the first lesson for that unit, and published in unit guides and the course assessment schedule.

5.2 Assessment Regulations

All HE students are entitled to have access to fair assessment. The College follows QAA and Awarding Body guidance regarding reasonable adjustments and special considerations. Teachers, trainers and assessors will follow the procedures, and design assessment instruments that give all candidates the fairest possible opportunities to show attainment. Internal verifiers will check that assessments give all students equal opportunities to show attainment, and that there is no discrimination or bias in the design or format.

All courses have a Review Board at the end of the first semester and a final Exam Board at the end of the academic year. These boards confirm your results for all completed units, and for the award at the end of the course. [Pearson BTEC HNC/D regulations](#) require us to specify a set of rules that all HNC/D programmes adhere to, and which are considered during these Boards. The rules are listed below:

- all students must meet the pass or merit or distinction criteria to achieve each unit
- if there are exceptional circumstances explaining why a student is unable to meet deadline dates, the decision to defer outstanding work must be agreed by an Exceptional Circumstances Panel. It follows that the Exceptional Circumstances Panel must meet prior to the Board.
- if a student does not achieve the pass standard for the first submission of summative assessment of the unit, s/he will be given a refer grade, and will be required to resubmit work by a clearly stated deadline. The grade awarded will be capped at a pass.
- the outcome of the refer work will be discussed at a Resit Board; if still not at the required standard, the student will fail the unit and will need to re-register, subject to the unit's availability
- if it is not possible for a student to retake all re-registered units during the planned 2 years, then a decision to allow a student to continue for a 3rd year of the course may be taken at the discretion of the Resit Board
- all students are to be provided with feedback on their work within 3 weeks of the deadline date
- units that are assessed using group work must also include measurable assessment of the contribution of each individual student

Standards Verifiers consider samples of student work to verify quality and standards. The Review/Exam Board will consider their comments about these samples whether or not it is possible for the Standards Verifier to attend in person. Each Board must also report progress on actions taken in response to any Standards Verifier recommendations.

No discussion of individual results or counselling of students takes place prior to the Review/Exam Board. Discussions that take place during the Board are strictly confidential. Only the Board decisions are reported to you.

Your Standards Verifier is **Ken Crafer**. His email address is ken.crafer@gmail.com

5.3 Extenuating Circumstances

The Sheffield College's Extenuating Circumstances Policy is intended to provide support if you experience unexpected and unanticipated difficulties during your time as a student which adversely impacts on your studies and your ability to complete assessments or complete them to your usual standard.

If you are experiencing such difficulties, please refer to the Sheffield College's HE *Assessment & Extenuating Circumstances Policy* for guidance (which outlines timescales and documentation needed to submit) and speak to a member of the teaching staff about your specific situation. They will be able to advise which procedure you need to follow and who to submit the relevant paperwork to.

The college's Extenuating Circumstances Policy is available here, <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Assessment & Extenuating Circumstances Policy*. You will also find a link on your Google classroom/VLE site.

You should read this information if you are experiencing personal problems, for example, if you are ill, have been in hospital, have experienced an exceptional family emergency or are suffering from exceptional stressful life events, and they are having a significant impact on your ability to study.

Whilst studying with us you may well encounter some of the difficulties of life experienced by most people, such as ill-health or personal issues. Normally you will be able to overcome or manage these without any impact on your ability to study and complete assessment.

Occasionally however you might experience ill-health or personal issues that are exceptional in nature and which have a significant impact on your ability to study and to complete assessment. **We define these as extenuating circumstances.** Generally, such circumstances will occur suddenly, will be unexpected and are beyond your immediate control to overcome or manage due to their severity and/or timing. There are different types of extenuation, dependant on the individual situation. Our policy is to help you where we can to mitigate the impact of your extenuating circumstances on your studies and to consider all requests for help sensitively, fairly and equitably.

It is important you inform us as soon as you are aware that your studies and/or ability to take assessment are being affected by ill-health or personal issues. If you need to apply for Exceptional Circumstances, you should adhere to the timescales outlined and contact your **Course Leader** immediately if your circumstances are preventing you from attending classes or are affecting your ability to complete assessment. We understand you might not always feel comfortable doing this particularly when your circumstances are of a personal and sensitive nature. However, we encourage you to do so. Any information you disclose will be handled in confidence.

The appropriate mechanism to help mitigate the impact of your circumstances will depend on the timing and severity of those circumstances.

- Where the circumstances occur close to a coursework submission deadline and are of the type that can quickly be overcome, you can request a short extension to that deadline.
- Where your circumstances will prevent any sustained meaningful engagement with your studies, then you can request a planned break in studies.
- Where your circumstances are having a detrimental impact on your ability to attempt or reach a pass standard in an assessment task, you can request to repeat your attempt at that assessment task.

We will consider any request sensitively, fairly and equitably based on the extent to which you have:

- Submitted the request in a timely manner.
- Clearly stated the nature of your circumstances and the impact they are having on your ability to study and take assessment.
- Provided appropriate documentary evidence where it can be reasonably obtained.

The Sheffield College will support students in completing a Request Extension to Coursework Submission Deadline (RESO), Request Repeat Assessment Attempt (RRAA) or a Break in Study (BIS) form.

In line with the Sheffield College procedure, your Extenuating Circumstances will be reviewed by your Programme Leader, and then forwarded for further review by a panel. This process is undertaken so your individual case can be reviewed and either accepted or declined following the Extenuating Circumstances Policy and Procedure process. The Sheffield College will confirm the outcome to students.

*NB: The following list indicates the type of **situations which do not meet** the definition of extenuating circumstances because we believe they can be avoided or that you can act to limit the impact. The list is not exhaustive.*

Medical

- *long-standing medical conditions (as these should be covered by a Learning Contract)*
- *planned health appointments*
- *minor ailments such as a cold*

Personal

- *the break-up of a short-term relationship*
- *financial difficulties*
- *attending or taking part in sporting events*
- *holidays or travel*
- *moving house*
- *normal domestic issues*
- *work commitments for fulltime students reducing time available for study and coursework*
- *voluntary work*
- *weddings*

Study related

- *completing coursework too late and missing deadlines*
- *losing coursework*
- *not following the assessment timetable*
- *transport difficulties which could have reasonably been avoided*
- *withdrawal of IT facilities as a result of being in debt to the College*
- *circumstances that affect another individual in relation to group work*
- *English being a second language*

For full details of the college's Extenuating Circumstances policy, please go to; <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Assessment & Extenuating Circumstances Policy*. You will also find a link on your Google classroom/VLE site.

5.4 Malpractice

Malpractice is any form of cheating, including plagiarism, collusion, impersonation and the use of inadmissible material. It is a breach of the College's Assessment Regulations. If malpractice is suspected, it will be established beyond all reasonable doubt before any formal sanction is imposed. The College views all instances of malpractice, including plagiarism, as a serious offence, and will respond to all allegations of malpractice in accordance with [Pearson BTEC HNC/D regulations](#). This may require the College to report any suspected malpractice to the Awarding Body. It may also require the College to investigate, in which case the Student Disciplinary procedure will be used. Instances of malpractice that are upheld following investigation, will lead to disciplinary action.

For full details of the policy and procedures regarding Academic Misconduct, see <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Assessment Malpractice Policy & Procedure*. You will also find a link on your Google Classroom/VLE site.

Malpractice includes:

Misconduct, for example:

- any form of impersonation
- falsification, fabrication or alteration of results, certificates or assessment evidence
- failure to follow Awarding Body regulations [Pearson BTEC HNC/D regulations](#) or the instructions or advice of assessors, supervisors or invigilators
- misuse of assessment or examination material
- taking unauthorised material into assessment rooms
- obtaining, receiving, exchanging or passing on assessment-related information during assessment sessions
- behaviour that disrupts or undermines the integrity of assessment
- any form of cheating to gain an unfair advantage
- deliberate destruction of another person's work
- resubmitting previously graded work

Collusion

- unauthorised co-operation between a learner and another person, in or outside of College, in the preparation and production of work that is eventually submitted by one or both learners as the outcome of his or her individual efforts
- allowing another student to copy your work

You should not be discouraged from teamwork, as this is an essential key skill for many subject areas. However, methods of avoiding collusion, for example, the use of minutes, allocating tasks, agreeing outcomes, etc, are an essential part of team work, and the requirement to use such methods must be made clear to all students.

Plagiarism

Plagiarism is where a student submits someone else's work as if it is their own.

- copying work (artwork, images, artefacts, products, designs, words) from a published source and presenting the copied work as if it were the student's own
- the use of another person's work (artwork, images, artefacts, products, designs, words), with or without permission, without appropriately acknowledging the source

Examples of plagiarism include:

- copying from published text without an acknowledgement of source
- copying images, graphs, tables, art, music etc, without acknowledging the source
- copying small or large sections of assignments from other learners;
- downloading original material from the internet without acknowledging the source
- imitating too closely an existing work of art or music, design idea or concept

5.5 Appeals

Appeals may be made against the decisions e.g. on assessment, the decisions of a Review/Exam Board, Extenuating Circumstances Panel or Academic Conduct Panel, on the grounds stipulated in these regulations, no later than 10 days from receiving the decision against which you wish to appeal.

For full details of the appeals regulations, see <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *HE Academic Appeals*. You will also find a link on your Google classroom/VLE site. You are advised to read these regulations in full.

Grounds for appeal can relate to decisions made about procedures such as:

- exceptional extensions
- extenuating circumstances
- academic misconduct

Grounds for appeal can include:

- that there was an error or irregularity in the process
- that the decision was not in accordance with the relevant regulations
- that the person or panel making the decision did not take sufficient account of the circumstances

Failure to follow College procedures and deadlines does not in itself constitute grounds for an appeal. The appeal process should not be used as an opportunity to simply re-enter the procedure under consideration, and documents etc., originally submitted after the relevant deadlines, that were not considered when the original decision was taken, will not necessarily be taken into account during the appeal.

You cannot appeal against an academic judgement of the marks awarded but you may request confirmation of their validity if you think there has been an error or irregularity. You are therefore strongly advised to discuss the nature of the appeal with appropriate members of staff.

Assessment Appeal

If you are not happy with your provisional grades, you must discuss your concerns with the subject tutor in the first instance. He or she will then discuss the reason for the decision for awarding the provisional grade. If you are still not happy with the outcome of discussions over provisional grades with your tutor, then discuss your concerns with the Course Leader. He or she will discuss the decision with the subject tutor and/or an internal verifier. If you are still not fully satisfied with your provisional grade, the matter can be pursued in line with the College Appeals Policy.

Stage 1

1. If you disagree with the assessment decision you must explain the reason, in writing, as soon as possible.
2. The tutor must consider this and provide you with a response e.g.:
 - Clear explanation of the assessment decision following re-evaluation of the evidence, or
 - If appropriate, amendment of the assessment record.

If you agree with the decision then the Appeal does not need to progress further but if you remain unhappy with the decision reached, the Appeal must proceed to Stage 2.

Stage 2

The tutor will pass all of the relevant information to an appropriate curriculum specialist via the moderation procedure, which will examine all the issues and evaluate the original decision. If you are still unhappy with this decision you can go to Stage 3.

Stage 3

Within 10 working days of the decision from Stage 2 your work will be passed to an external manager who will consider your Appeal. The decision reached is final.

If necessary, the matter can be referred to the Awarding Organisation Pearson (<http://qualifications.pearson.com/en/contact-us/feedback-and-complaints.html#tab-LearnersPearson.com>.) and also, the Office of the Independent Adjudicator (OIA) <http://www.oiahe.org.uk>.

5.6 Complaints

Complaints Procedure

The Sheffield College is committed to providing a high quality, educational experience and aims to provide a supportive environment, responsive to any concerns raised by students. Students should feel able to make a complaint relating to the action, or lack of action, or about the standard of a service or facility provided to students of the College. The procedures are intended to ensure that all complaints are treated fairly and consistently and, wherever possible, to resolve the matter to the complainant's satisfaction. Full details of the Complaints Policy can be seen here, <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Complaints Policy*.

The College complaints procedure has two stages:

1. Informal stage - resolving a concern through informal discussion
2. Formal stage - resolving a concern through the formal complaints procedure, of which there are three possible stages

Full details of the two stages, and who to approach for help and advice, can be seen here <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Complaints Policy*.

Informal Stage

Most concerns are straightforward and can be resolved quickly with staff directly involved without the need to complete and submit a complaint form. Therefore, in the first instance, having considered the responsibilities of both students and the College as detailed within the Student Charter*, any concerns/issues should be discussed, informally, with the person concerned or another member of staff. For example, if your complaint concerns teaching/tutorial matters you may wish to talk to your tutor or other members of teaching staff. If your complaint is about a service, then you should talk to an appropriate member of staff from that service. You could also consider raising your concern via the student forums.

If you are not sure who to speak to, or you do not feel able to approach the person most directly involved, you can seek advice regarding this from your HE Personal Tutor, Programme Leader, or from the [Students' Union](#) which acts independently of the College.

You can contact the Students' Union by emailing studentsunion@sheffcol.ac.uk or call into one of the reception areas to make an appointment. At this point managers may wish to speak to staff involved and/or obtain further guidance from Human Resources.

If a satisfactory resolution is not found informally, students are entitled to proceed to the College's formal complaints procedure.

Formal Stage

Stage 1

You should complete a Registration of Complaint form, copies of which can be obtained from College reception areas, or you can complete the online form via the College website <http://www.sheffcol.ac.uk/complaints>. You can ask a member of staff for help to complete the form or ask a friend, parent, carer or a representative of the Students' Union to submit a complaint on your behalf but we would require written agreement from you.

In addition to personal details and other information on the form, you will need to provide:

- details of the complaint
- an explanation of the steps you have already taken to try to resolve the complaint informally and why the responses you have received are not satisfactory
- where applicable, the outcome you would like from your complaint
- any supporting evidence (ie, copies of emails, notes of meetings, references to procedures, handbooks etc).

It is important to keep a copy of the completed form and other documentation submitted for your own records. Completed complaint forms should be submitted to any campus reception area or by email to collegecomplaints@sheffcol.ac.uk.

Within 5 working days of receipt of your complaint form, you will receive an acknowledgement. Your complaint will be considered to determine that the complaints

procedure is appropriate and if so, it will be referred to a senior member of staff who will manage your complaint, ensuring that necessary action is taken and monitoring it through to completion.

After a further 10 working days you will receive a letter informing you of the progress of your complaint. We aim to complete the enquiry and reach a conclusion within 30 working days of receipt of your complaint form. If this is not possible you will be informed of the progress made. Complaints identified as requiring particularly speedy resolution will receive special attention.

You may be invited to attend a meeting to consider your complaint. You may bring a friend or representative to support you and/or for assistance but they cannot be a professional employed to act on your behalf.

Matters raised in a formal complaint will remain confidential to those directly involved in the investigation (which includes any members of staff concerned). All staff and students who become aware of any of the issues involved in a formal complaint are required to keep this information confidential (except as is necessary to progress, investigate or respond to the complaint). Failure to do so may result in formal disciplinary action being taken. However, there may be occasions when it is not possible to maintain confidentiality, for example if another person is at risk. In such cases the situation will be explained to the complainant and/or the representative.

If your complaint is upheld you will be informed how and when any resolution or redress will be implemented. If the complaint is not upheld you can expect to receive clear reasons why this decision has been reached and advice on further action available to you including a review of the process of the complaint by the awarding body where appropriate (see Stage 2 below).

Stage 2

If you are not satisfied with the outcome of Stage 1, you can write to the Chief Executive, within 10 working days of receipt of the letter informing you of the outcome, to apply for a review of the process by the awarding/validating organisation. You should state the reason(s) why you are dissatisfied. Correspondence should be sent to the Chief Executive, c/o PA to the Chief Executive, Sheffield College, Granville Road, Sheffield S2 2RL.

Within 10 working days of receipt of your letter you will be informed of the action to be taken to review your complaint and any action you may need to take directly with the awarding/validating organisation.

Feedback

In accordance with the Student Charter*, at the end of the two formal stages, you will be invited to complete a short evaluation of the process.

Stage 3

Following the action taken at Stage 2 (and not before), if you still feel that the matter has not been resolved to your satisfaction, having exhausted the College's procedures you may wish to contact Pearson, the Awarding Organisation, to refer the matter further.

<https://qualifications.pearson.com/en/contact-us/feedback-and-complaints.html>

If not resolved to the complainant's satisfaction, Higher Education students can apply for a review of their complaint to The Office of the Independent Adjudicator for Higher Education (OIA) <http://www.oiahe.org.uk>

*The Student Charter is located here; [Public Documents || The Sheffield College \(sheffcol.ac.uk\)](http://sheffcol.ac.uk) under the heading *Applicant, Student and Parent Information*

5.7 Marking Arrangements

When you are set coursework, you will be given the deadline by which it is to be submitted. It is vital that you ensure you know the date, time and place for submission of coursework. Failure to meet a deadline counts as non-submission, and has serious repercussions.

It is your responsibility to keep a copy of all written coursework submitted. Your work will be marked by the unit tutor, and a sample will be internally verified by another member of staff. In addition, the Standards Verifier will sample work from all units.

You will receive feedback and marks for your work within 3 working weeks of submission. If for any reason this is not possible, you will be informed of the reason and given a date when work will be returned. The feedback you receive will be both written and oral, and forms a vital part of the learning process. Do make sure that you fully understand the feedback given, so that you can use it to improve your future work. Do not hesitate to ask the tutor if you need further guidance and explanation of your marks.

Please note that any marks you receive as part of the feedback process are provisional until confirmed by the Standards Verifier at an Exam Board.

5.8 Guidance on Referencing

Accurate and consistent referencing is essential in all academic work. Whenever you refer to either the work or ideas of someone, or are influenced by another's work, you must acknowledge this. Similarly, if you make a direct quotation from someone's work this should be referred to accurately.

There are a number of systems of referencing. The system you will use on this course is called the Harvard System. This system is described in the guides which can be found via the link below.

<https://librarydevelopment.group.shef.ac.uk/Assets/pdfs/referencing/harvard.pdf>

Referencing is a skill which improves with practice. It is a very important part of your academic development. The guides are comprehensive and explain how to reference any information source. Your tutor will give you feedback on your referencing in assignments to help you develop your referencing skills. Senior Learning Facilitators and the HE Personal Tutor are also available in the learning centres to provide individual help and offer small group workshops by arrangement.

5.9 Notification of Results

At the end of the first semester there will be a Review Board, and the second semester a final Exam Board, both chaired by the Vice Principle of Higher Education at the College and attended by the HE Course Leader and unit tutors from your course. The Standards Verifier is often, but not always present also. Whether or not the Standards Verifier attends the Board they will have reviewed samples of your assessed work.

The purpose of the Review Board is to review student progress, and the Exam Board will consider your marks and confirm whether or not you have passed each unit, and whether you are awarded the Higher National Certificate at the end of the course. The Sheffield College HE Office sends out results letters at the end of the Academic Year, usually within 2 weeks of the final Exam Board meeting.

Further information regarding Exam Boards can be seen here, <https://www.sheffcol.ac.uk/about-us/terms-and-conditions> and click on *Exam Board Policy & Procedure*.

5.10 Provision of Certificates

On successful completion of the course, your results are submitted to Pearson, who will issue your Certificate to the college. It is vital that you ensure TSC HE Office always has your current address so that these important documents go to the correct address.

You **must** notify The Sheffield College HE Office by emailing HEOffice@sheffcol.ac.uk if you change either your term time or the permanent addresses given at enrolment, as well as your email address and mobile telephone number.

5.11 Graduation

During the summer following successful completion of your course you will receive an invitation to attend our graduation ceremony. This is a memorable occasion where family and friends join you and your tutors to celebrate your achievements. The ceremony takes place in the autumn following successful completion of your course.

6. Learning Resources

All college campuses provide Wi-Fi access so that you can connect your own devices. There are drop in sessions at all college campuses to help you if you experience difficulties.

6.1 Access to College Resources

Learning Resource Centres (LRCs) provide open access to resources, study space and computing facilities, in a pleasant and welcoming environment. You will find a Learning Resource Centre located at all of the College campuses - Hillsborough, Peaks and Sheffield City College. Opening times can be found on the [college website](#), in our information leaflets, and are displayed in each centre, as well as 24/7 electronic access where available.

It is our aim to make the LRC a flexible service, giving support throughout your time in college. Regular Student Forum meetings are held, where we welcome feedback and suggestions from students in order to improve our service.

LRCs provide you with an extensive range of resources to support your learning, including:

- Books, magazines and newspapers
- DVDs, multimedia, online and electronic resources
- Study support materials and learning packages
- Internet access, including Wi-Fi to connect your own device. Secure access to online resources is provided through an authentication service (currently Shibboleth) more information is available via our Google Classroom page [ibllshj](#)
- Resources can be produced in alternative formats, please contact your tutor.

You will be able to borrow many of these resources but others are available only for use in the LRC.

In each LRC we have dedicated staff available to support students' learning needs:

- Senior Learning Facilitators are available during working hours for face to face and remote support, and questions can be sent via email to learningresources@sheffcol.ac.uk or LRCteam@sheffcol.ac.uk they will be answered by the next available assistant.
- Senior Learning Facilitators also offer small group workshops on particular study skills - for example: referencing; researching a subject; effective internet searching, etc. We also have a Study Skills Google Classroom page [kmtfsoe](#)
- Staff are appropriately trained and keep up to date by attending regular updating sessions.

The LRC staff can help you with your study and research skills, and have specialist knowledge of the resources available in your subject area. The team can provide training in a range of library related information skills to enable you to use resources effectively to support your studies. During induction you will be given a tour of the facilities and have the opportunity to meet the staff.

Your access to the College's IT facilities is by means of a Student Account. Students are given a small starting balance on their printing and photocopying account. When that has been used, further credits can be purchased.

You can pre-book a computer to work on at any of the LRCs, so that you know a PC will be available when you need it.

The [library catalogue](#) and details of all the services offered are available from all college LRCs, or online in the LRC sections of the [college website](#).

All students of the Sheffield College can borrow from any campus LRC. In order to borrow resources, students must bring their student card to the issue desk. Students are required to show their student card to gain access to College campuses.

Each student can borrow a total of up to 10 items, which may include:

Type of Loan	No. of items	Loan Terms
Ordinary Loan	Up to 10 items	3 Weeks
Short Loan	Up to 5 items	1 Week
Reference	Discretionary	Discretionary

The loan period is designated depending on the nature of resource and likely demand. The loan period may be changed following consultation with colleagues, or in periods of high demand.

Ordinary and short loan items can be renewed twice, either by calling in to the LRC, by email learningresources@sheffcol.ac.uk or by telephone. Reserved and overdue items will not be renewed.

Fines are charged for overdue items. Costs for lost or damaged items are the full cost of replacement, or is negotiable if the advertised price is not available.

Students can reserve items that are on loan to at the issue desk or via the library catalogue. If a resource is not available at their own centre, LRC staff can request it from another centre. This may take up to 5 working days. If your request cannot be satisfied within the college LRCs, we have access to a range of inter-library loan schemes, including links with the British Library.

The Learning Resource Centre Charter

We are here to help you be successful students - this is what we do for you:

Each working day we can give you:

- A welcoming, quiet place to study
- A wide range of books, journals, audio-visual materials and online resources relevant to your subject or course, most of which you are able to borrow
- A range of subject and study guides to support your learning
- Learning Facilitators to help you with your enquiries and information needs
- Senior Learning Facilitators to help with your course work and IT enquiries
- Computers for you to use for your college work
- Wi-fi (eduroam) access for you to connect your own learning devices
- Photocopiers, printers and a range of learning equipment for you to use
- Access to all Sheffield College Learning Resource Centres to use their facilities
- Help in finding resources kept in other Libraries and Information Services

When you are not in college you can access many of our services 24/7:

- You can log in to our online services using your college user name and password
- You can email queries to us, to be answered when we are next working
- Our online catalogue helps you find resources in advance of your next visit
- We have a growing collection of e-books and e-journals for your course
- You can find our useful information guides through your Google classroom

In return, this is what you can do for us:

- Ask us for any help that you need
- Take anything you want to borrow to the LRC desk with your Student ID Card
- Take care of any resources you use or borrow, and return them on time so they are available for other students to use
- Pay for any loss or damage caused to resources or facilities in your care, and the fines due on any items you didn't return on time
- Use the computers for course work only so they can be used by others too
- Respect the needs of other students and staff by keeping noise to a minimum for a pleasant and peaceful working atmosphere
- Use the LRC as a learning place - please don't bring food or drinks in
- Help us contribute to the environment by not wasting resources
- Tell us if you have any ideas on how we can improve our services

We aim to provide an efficient and effective LRC service. Your suggestions and comments are welcome.

7. Opportunities to Engage in Quality Assurance of the Course

7.1 Student Representation

Students are invited to send representatives to attend Course Committees, where issues relating to the running and development of the course are discussed by teaching teams. At these meetings students can raise any concerns they have, so that prompt action can be taken to resolve matters. In addition, your academic course tutor will discuss any concerns which arise during group tutorials, and report back on action taken. Student representatives are also invited to attend the course review at the end of each academic year.

The college employs a Student Involvement Facilitator, who calls termly meetings of the HE Student Forum, to which you are invited to send representatives. The Forum discusses non-course issues which are then raised with the appropriate college manager, who provides feedback to the next meeting. The Student Forum elects a lead Student Representative, who represents the student voice at HE Quality Standards meetings with senior managers and directors. Feedback from the Student Representatives across the country is taken into account by the Office for Students (OfS), alongside data from the annual NSS (National Student Survey). Their website can be found here:

<https://www.officeforstudents.org.uk/for-students/what-the-ofs-does-for-students/>

Higher Education students elect a representative to sit on the Student Union.

7.2 Student Surveys

The College conducts an annual HE Student Survey, where you are asked to respond to a series of questions about the quality of teaching and learning on your course. In addition, you are asked to complete unit evaluation surveys at the end of each unit in order to help us to continuously improve. The results of these surveys are fed into the Annual Quality Review process, and action plans are devised which take account of student opinion. You will receive feedback on the action arising from these surveys through your representatives on course committees and your academic course tutor during group tutorials.

7.3 Complaints Process

Definition

A complaint is an expression of concern or dissatisfaction with any aspect of the College's provision that requires a response. Complaints concerning assessment and accreditation may sometimes be dealt with through the college Appeals procedures and those set up by awarding/validating organisations.

- For further details of the Appeals procedure, please see paragraph 5.5 of this handbook.
- For further details of the Complaints procedure, please see paragraph 5.6 of this handbook.

8. Opportunities for Further Study

8.1 Opportunities at the Sheffield College

Details of courses suitable for Higher National graduates, including professional courses, can be found in the prospectus online. Located on the college website [here](#), scroll down to *Download our Guides* where you will find the latest *University Level and Professional* prospectus.

If you are uncertain about what you need to study next to progress your career, you can contact the Careers Advice Team via their central email address; CEIAG@sheffcol.ac.uk

You can also keep up to date with careers events, workshops and job opportunities via the Twitter account, @SheffColCareers.

Find out more about our Careers Advice Service on the college website; <https://www.sheffcol.ac.uk/careers-advice>

8.2 Other Opportunities

You can progress onto the HND qualification, on completion of which, you can apply to ‘top up’ your Higher National to an honours degree at any university offering the course. You should research their entry requirements via the UCAS and university websites, where you will also find details of the application process; some courses will require you to apply through UCAS, whilst others may ask you to apply direct to the institution. You should check university websites for their current prospectuses.

If you are a full-time student, you may also consider going directly into employment, in which case you should book a careers interview to discuss the opportunities for trainee graduate and internship positions. Careers advisors can also help you with your job search and recommend sources of information such as graduate recruitment fairs.

9. Units of Study

Unit 1: Animal Health and Welfare

Unit code J/616/7828

Unit type Core

Unit level 4

Credit value 15

Introduction

The animal industry is made up of wide and varied businesses, including pet shops and veterinary surgeries caring for pets such as dogs, cats and rabbits, stables and farms housing horses and livestock, and zoos and wildlife parks caring for a range of wild and exotic animals. Knowledge of how to maintain animal health and how to maximise the welfare of animals across a range of different environments is a fundamental skill which underpins a successful career in the animal, equine and veterinary sectors.

Students will learn how to recognise signs of health and disease across a range of animal species, as well as how to manage animals to promote good health and prevent disease. Key diseases and parasites will be reviewed and interpretation of health in wild animals and animals housed in collections will be undertaken. Legislation which governs animal health will also be outlined.

In addition, students will learn how to measure and influence animal welfare for companion animals, livestock, horses, wildlife and animals in zoological collections, including how to conduct an animal welfare assessment. Positive and negative welfare states will be defined and the use of enrichment to enhance welfare will be discussed in detail.

Learning Outcomes

By the end of this unit a student will be able to:

1. Define causal pathogens and factors that can influence animal health and disease
2. Discuss the concepts of animal health and disease, and methods of disease prevention
3. Assess physiological, behavioural and physical measures of animal welfare
4. Evaluate changes to animal management systems to enhance animal welfare.

Essential Content

LO1 **Define causal pathogens and factors that can influence animal health and disease**

A review of a range of causal pathogens and diagnosis and control measures:
Viruses, bacteria, fungi and protozoa
Endo- and ectoparasites.

Differences between infectious, contagious and zoonotic diseases

Methods of disease transmission:

Direct transmission
Indirect transmission
Role of vectors.

Factors that influence health and disease:

Environment
Housing types
Management regimes
Social interaction
Stocking density
Immunity
Vaccination.

LO2 **Discuss the concepts of animal health and disease, and methods of disease prevention**

Control measures for common diseases:

Viruses, bacteria, fungi and protozoa
Endo- and ectoparasites
Vaccination
Notifiable diseases.

Prevention of the spread of disease:

Monitoring health
Management
Isolation/quarantine
Euthanasia.

LO3 **Assess physiological, behavioural and physical measures of animal welfare**

Definition of eustress, stress and distress

Physiological measures of welfare assessment:

Role of the autonomic nervous system
Heart rate
Respiratory rate
Catecholamines
Hypothalamic-pituitary axis: glucocorticoid levels.

Behavioural measures of welfare assessment:

Changes in behaviour
Fear behaviour
Eating and drinking behaviour
Social interaction
Abnormal behaviour
Stereotypical behaviour
Preference testing.

Physical measures of welfare assessment:

Body condition score/weight
Productivity measures
Immune function
Disease prevalence
Mortality rates.

LO4 **Evaluate changes to animal management systems to enhance animal welfare.**

Key reasons for assessing animal welfare:

Ethics
Legislation
Productivity
Human-animal interaction.

Factors which can affect animal welfare:

Environment
Housing types
Management regimes
Enrichment
Social interaction
Stocking density.

Welfare assessment in a range of environments:

Companion animals/pets in home environment
Exhibited animals in animal collection and/or zoo environment
Farm animals
Laboratory animals
Wild animals.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Define causal pathogens and factors that can influence animal health and disease		D1 Evaluate environmental factors which can influence the risk of disease outbreaks in animals
<p>P1 Describe causal pathogens and discuss the difference between infectious and contagious diseases</p> <p>P2 Identify an infectious and contagious disease for a named animal species</p>	<p>M1 Discuss the impact of a named disease on animal health</p>	
LO2 Discuss the concepts of animal health and disease, and methods of disease prevention		D2 Produce a management plan to prevent disease for a named animal species
<p>P3 Describe signs of health across three animal species</p> <p>P4 Outline common signs of disease in animals</p>	<p>M2 Review three methods of disease prevention in animals</p>	
LO3 Assess physiological, behavioural and physical measures of animal welfare		D3 Evaluate the importance of assessing animal welfare.
<p>P5 Define physiological, behavioural and physical measures which can be used to assess animal welfare</p> <p>P6 Describe how physiological, behavioural and physical measures are used within animal welfare assessment</p>	<p>M3 Analyse the impact of external factors on animal welfare assessment</p>	
LO4 Evaluate changes to animal management systems to enhance animal welfare		D4 Determine what effect the proposed changes will have on animal welfare
<p>P7 Conduct an animal welfare assessment</p> <p>P8 Produce a management plan to enhance animal welfare for a named animal/named animals</p>	<p>M4 Justify the improvements suggested within the animal management plan</p>	

Recommended Resources

Textbooks

APPLEBY, M.C. and HUGHES, B.O. (2011) *Animal Welfare*. Wallingford: CAB International.

BARR, S.C. and BOWMANN, D.D. (2001) *Canine and Feline Infectious Diseases and Parasitology*. Chichester: Wiley-Blackwell.

BROOM, D.M. and FRASER, A.F. (2015) *Domestic Animal Behaviour and Welfare*. Wallingford: CAB International.

COUMBE, K. (2012) *Equine Veterinary Nursing*. 2nd edn. New Jersey: Wiley-Blackwell.

FRASER, A.F. and BROOM, D.M. (1990) *Farm Animal Behaviour and Welfare*. Wallingford: CAB International.

HOSTON-MOORE, P. and HUGHES, A. (2007) *BSAVA Manual of Practical Animal Care*. Gloucester: BSAVA.

MELLOR, D.J., PATTERSON-KANE, E. and STAFFORD, K.J. (2009) *The Sciences of Animal Welfare*. Oxford: Wiley-Blackwell.

MOBERG, G. and MENCH, J.A. (2000) *The Biology of Animal Stress: Basic Principles and Implications for Animal Welfare*. Wallingford: CAB International.

WILLIAMS, J. (2017) *The Complete Textbook of Animal Health and Welfare*. Philadelphia: Saunders/Elsevier

Web

www.defra.gov.uk Department for Food and Rural Affairs (General reference)

www.oie.int World Organisation for Animal Health (General reference)

www.ufaw.org.uk Universities Federation for Animal Welfare (General reference)

Links

This unit links to the following related units:

Unit 5: Animal Husbandry

Unit 10: Animal Nursing

Unit 12: Horse Husbandry

Unit 13: Management of Equine Facilities

Unit 15: Animal Collection Management

Unit 2: Business and the Business Environment

Unit code L/616/7829
Unit type Core
Unit level 4
Credit value 15

Introduction

The aim of this unit is to provide students with background knowledge and understanding of land-based business, the functions of an organisation and the wider business environments in which organisations operate. Students will examine the different types of land-based organisations (including for-profit and not-for-profit), their size and scope (for instance, micro, SME, transnational and global) and how they operate.

Students will explore the relationships that land-based organisations have with their various stakeholders and how the wider external environments influence and shape business decision-making.

The knowledge, understanding and skill sets gained in this unit will help students to choose their own preferred areas of specialism in future studies and in their professional career.

Learning Outcomes

By the end of this unit a student will be able to:

1. Explain the different types, size and scope of land-based organisations
2. Demonstrate the inter-relationship of the various functions within a land-based organisation and how they link to organisational structure
3. Use contemporary examples to demonstrate both the positive and negative influence/impact the macro environment has on land-based business operations
4. Determine the internal strengths and weaknesses of specific land-based businesses and explain their interrelationship with external macro factors.

Essential Content

LO1 **Explain the different types, size and scope of land-based organisations**

Different types of organisations:

Differences between for-profit and not-for-profit and non-government organisations (NGOs)

Micro, small and medium-sized enterprises (SMEs): different business purposes, objectives and supply of goods and services

The range of legal structures associated with different forms of business: sole traders, partnerships and private limited companies.

Size and scope of organisations:

Differences between large, medium-sized and small organisations e.g. objectives and goals, market share, profit share, growth and sustainability

Global growth and developments of transnational, international and global organisations

Differences between franchising, joint ventures and licensing

Industrial structures and competitive analysis

Market forces and economic operations e.g. scarcity and choice, supply and demand, income elasticity

Stakeholders and responsibilities of organisations to meet different stakeholder interests and expectations.

LO2 **Demonstrate the interrelationship of the various functions within a land-based organisation and how they link to organisational structure**

The various functions within an organisation:

The role of marketing, finance, human resource management and operations within an organisational context and the interrelationships

How functions relate to overall organisation mission and objectives.

Organisational structure:

Different structures depending upon the size and scope of the organisation e.g. bureaucratic and post-bureaucratic, parent, strategic business units (SBUs), matrix and functional levels

Organisation structures and complexities of transnational, international and global organisations.

LO3 **Use contemporary examples to demonstrate both the positive and negative influence/impact the macro environment has on land-based business operations**

The context of the macro environment:

The application of the PESTLE framework and how organisations need to monitor and forecast external influences

How the macro environment influences/impacts upon business activities: the impact of the digital revolution on production and consumption, the impact of social technologies, cybersecurity, emerging BRICS markets, the global shift in economic and social power and ethical and sustainable growth

How organisations go through the transformation process and overcome resistance to change in response to the changing market environment.

LO4 **Determine the internal strengths and weaknesses of specific land-based businesses and explain their interrelationship with external macro factors.**

Frameworks for analysis:

Introduction to SWOT and/or TOWS analysis and how they can assist in the decision-making process within organisations

Key external macro factors e.g. the competitive environment and government intervention that influences organisations and business.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Explain the different types, size and scope of land-based organisations		LO1 LO2 D1 Provide a critical analysis of the complexities of different types of business structures and the inter-relationships of the different organisational functions
P1 Explain different types and purposes of land-based organisations, public, private and voluntary sectors and legal structures P2 Explain the size and scope of a range of different types of land-based organisations	M1 Analyse how the structure, size and scope of different land-based organisations link to the business objectives and products and services offered by the organisation	
LO2 Demonstrate the interrelationship of the various functions within a land-based organisation and how they link to organisational structure		
P3 Explain the relationship between different organisational functions and how they link to organisational objectives and structure	M2 Analyse the advantages and disadvantages of Interrelationships between organisational functions and the impact that can have upon organisational structure	
LO3 Use contemporary examples to demonstrate both the positive and negative influence/impact the macro environment has on land-based business operations		LO3 LO4 D2 Critically evaluate the impacts that both macro and micro factors have upon business objectives and decision-making
P4 Identify the positive and negative impacts the macro environment has upon business operations, supported by specific examples	M3 Appropriately apply the PESTLE model to support a detailed analysis of the macro environment within a land-based organisation	
LO4 Determine the internal strengths and weaknesses of specific land-based businesses and explain their interrelationship with external macro factors		
P5 Conduct internal and external analysis of specific land-based organisations in order to identify strengths and weaknesses P6 Explain how strengths and weaknesses interrelate with external macro factors	M4 Appropriately apply SWOT/TOWS analysis and justify how they influence decision-making	

Recommended Resources

Textbooks

BARON, P. (2012) *Business and Its Environment*. 7th edn. London: Prentice Hall.

PALMER, A. and HARTLEY, B. (2011) *The Business Environment*. 7th edn. Maidenhead: McGraw-Hill.

WEATHERLEY, P. and OTTER, D. (2014) *The Business Environment: Themes and Issues in a Globalizing World*. 3rd edn. Oxford: Oxford University Press.

WORTHINGTON, I. and BRITTON, C. (2014) *The Business Environment*. 7th edn. Harlow: Pearson.

Links

This unit links to the following related units:

Unit 9: Veterinary Practice Management

Unit 16: Human Resource Management

Unit 17: Marketing Essentials

Unit 21: Management Accounting

Unit 3: Managing a Successful Project (Pearson-set)

Unit code F/616/7830
Unit type Core
Unit level 4
Credit value 15

Introduction

This unit is assessed by a Pearson-set assignment. The project brief will be set by the Centre, based on a theme provided by Pearson (this will change annually). The theme and chosen project within the theme will enable students to explore and examine a relevant and current topical aspect of business in the context of the land-based business environment.

The aim of this unit is to offer students an opportunity to demonstrate the skills required for managing and implementing a project. They will undertake independent research and investigation for carrying out and executing a business project which meets appropriate business aims and objectives.

On successful completion of this unit, students will have the confidence to engage in decision-making, problem-solving and research activities using project management skills. They will have the fundamental knowledge and skills to enable them to investigate and examine relevant business concepts within a work-related context, determine appropriate outcomes, decisions or solutions and present evidence to various stakeholders in an acceptable and understandable format.

Learning Outcomes

By the end of this unit a student will be able to:

- 1 Establish project aims, objectives and timeframes based on the chosen theme
- 2 Conduct small-scale research, information gathering and data collection to generate knowledge to support the project
- 3 Present the project and communicate appropriate recommendations based on meaningful conclusions drawn from the evidence findings and/or analysis
- 4 Reflect on the value gained from conducting the project and its usefulness to support sustainable organisational performance.

Essential Content

LO1 **Establish project aims, objectives and timeframes based on the chosen theme**

Project management:

What is project management and what does it involve?

The key stages of project management

The advantages of using project management and why it is important.

Initiation of the project and project planning phase:

Scoping a project: defining objectives, scope, purpose and deliverables to be produced

Steps and documentation required in the initiation phase

Developing the project plan e.g. planning for timescales and time management, cost, quality, change, risk and issues

The work breakdown structure

Use of Bar and Gantt Charts for effective planning.

LO2 **Conduct small-scale research, information gathering and data collection to generate knowledge to support the project**

Project execution phase:

Selecting appropriate methods of information gathering, data collection and material resourcing

The distinct phases which support a coherent and logical argument

Use of secondary research to inform a primary empirical study

Qualitative and quantitative research methods.

Field work:

Selecting a sample of the consumer market, businesses or individuals (those who meet certain characteristics relevant to the research theme) to gather data (qualitative or quantitative)

Sampling approaches and techniques e.g. probability and non-probability sampling.

Ethics, reliability and validity:

All research should be conducted ethically: how is this achieved and reported?

Research should also be reliable (similar results achieved from a similar sample) and valid (the research should measure what it aimed to measure).

Analysing information and data:

Using data collection tools e.g. interviews and questionnaires

- Using analytical techniques e.g. trend analysis, coding or typologies.
- LO3 **Present the project and communicate appropriate recommendations based on meaningful conclusions drawn from the evidence findings and/or analysis**

Communicating outcomes:

Consider the method (e.g. written, verbal) and the medium (e.g. report, online, presentation)

Both method and medium will be influenced by the project research and its intended audience.

Convincing arguments:

All findings/outcomes should be convincing and presented logically where the assumption is that the audience has little or no knowledge of the project process

Developing evaluative conclusions.

Critical and objective analysis and evaluation:

Secondary and primary data should be critiqued and considered with an objective mindset

Objectivity results in more robust evaluations where an analysis justifies a judgement.

- LO4 **Reflect on the value gained from conducting the project and its usefulness to support sustainable organisational performance**

Reflection for learning and practice:

The difference between reflecting on performance and evaluating a project: the former considers the research process, information gathering and data collection, the latter the quality of the research argument and use of evidence.

The cycle of reflection:

Reflection in action and reflection on action

How to use reflection to inform future behaviour, particularly directed towards sustainable performance.

Reflective writing:

Avoiding generalisation and focusing on personal development and the research journey in a critical and objective way.

Generalisation:

Many studies result in generalised findings. Research which has its basis in a specific field e.g. human resource management (HRM) and in a specific context should avoid generalised conclusions

Outcomes should be specific and actionable.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Establish project aims, objectives and timeframes based on the chosen theme		LO1 LO2 D1 Critically evaluate the project management process and appropriate research methodologies applied
P1 Devise project aims and objectives for a chosen scenario P2 Produce a project management plan that covers aspects of cost, scope, time, quality, communication, risk and resources P3 Produce a work breakdown structure and a Gantt Chart to provide timeframes and stages for completion	M1 Produce a comprehensive project management plan, milestone schedule and project schedule for monitoring and completing the aims and objectives of the project	
LO2 Conduct small-scale research, information gathering and data collection to generate knowledge to support the project		
P4 Carry out small-scale research by applying qualitative and quantitative research methods appropriate for meeting project aims and objectives	M2 Evaluate the accuracy and reliability of different research methods applied	
LO3 Present the project and communicate appropriate recommendations based on meaningful conclusions drawn from the evidence findings and/or analysis		LO3 LO4 D2 Critically evaluate and reflect on the project outcomes, the decision-making process and changes or developments of the initial project management plan to support justification of recommendations and learning during the project
P5 Analyse research and data using appropriate tools and techniques P6 Communicate appropriate recommendations as a result of research and data analysis to draw valid and meaningful conclusions	M3 Evaluate the selection of appropriate tools and techniques for accuracy and authenticity to support and justify recommendations	
LO4 Reflect on the value gained from conducting the project and its usefulness to support sustainable organisational performance		
P7 Reflect on the value of undertaking the research to meet stated objectives and own learning and performance	M4 Evaluate the value of the project management process and use of quality research to meet stated objectives and support own learning and performance	

Additional Evidence Requirements

In addition to the above assessment criteria, students will also be required to complete a project logbook to record ideas, changes and developments as they progress and complete the project.

Recommended Resources

Textbooks

COSTLEY, C., ELLIOT, G. and GIBBS, P. (2010) *Doing Work Based Research: Approaches to Enquiry for Insider-researchers*. London: SAGE.

FLICK, U. (2011) *Introducing Research Methodology: A Beginner's Guide to Doing a Research Project*. London: SAGE.

GRAY, D. (2009) *Doing Research in the Real World*. 2nd edn. London: SAGE.

SAUNDERS, M., LEWIS, P. and THORNHILL, A. (2012) *Research Methods for Business Students*. 6th edn. Harlow: Pearson.

Links

This unit links to the following related units:

Unit 24: Research Project (Pearson-set)

Unit 4: Animal Behaviour in Society

Unit code J/616/7831
Unit type Core
Unit level 4
Credit value 15

Introduction

Animals are utilised in a diverse range of roles in human society and animal management practitioners undertake a similarly diverse range of roles, from managing commercial livestock, to coaching animals for sport performance, and effectively caring for companion animals.

Having an understanding of the behaviour of animals is integral to their effective management. Animals can carry out behaviours which have utility for humans and humans have the ability to modify animals' behaviours when necessary. Monitoring and reporting animal behaviours is a crucially important method of assessing animal welfare in captivity.

Through studying this unit, students will gain insight into the scientific methodology used to observe and assess animal behaviour. Students will be able to conduct their own observations and reach conclusions about animals' behaviour, making recommendations for modifying/managing behaviours. The unit will also cover the application of behaviour science to the management of animals in a variety of contexts.

There are many sectors of the animal industry where having skills in interpreting and managing animal behaviour will be important. Upon completion of this unit, students will possess the skills to be effective in a variety of roles including animal training, rehabilitation and welfare assessment. Competently measuring and assessing behaviour will also have value in studying and managing wild animals.

Learning Outcomes

By the end of this unit a student will be able to:

- 1 Explain different fields of study within animal behaviour science
- 2 Demonstrate ability in conducting animal behaviour observations and assessments
- 3 Apply principles of animal behaviour to the management of animals
- 4 Describe the roles and functions of animals in human society in terms of their behaviour.

Essential Content

LO1 Explain different fields of study within animal behaviour science

Ethology and the science of animal behaviour:

History of human study of animal behaviour
Key proponents and theorists in behaviour science.

Cognition:

Memory

Intelligence and consciousness
Associative learning: classical and operant conditioning
Non-associative learning: habituation and sensitisation.

Physiological basis of behaviour:

The endocrine system
The nervous system
Genetics and instinct
Senses: stimulus-response.

Behavioural ecology:

Evolutionary basis for behaviour
Intra/interspecific behaviours in the wild.

LO2 Demonstrate ability in conducting animal behaviour observations and assessments

The scientific method:

Experimental design
Hypothesis
Report writing.

Construction and implementation of ethograms

Sampling techniques:

Continuous
Instantaneous
Ad libitum
Focal studies
Group scanning
Zero-one sampling.

Data analysis:

Statistical and graphical analysis
Qualitative versus quantitative approaches.

Behaviour assessment:

Definition and identification of abnormal behaviour patterns. Behavioural indicators of welfare.

LO3 Apply principles of animal behaviour to the management of animals

Contexts for managing animal behaviour:

Public exhibition
Rehabilitation/rehoming
Training for performance
Management of individuals
Codes of practice

Regulations.

Interactions with animals:

Handling and restraint

Codes of practice

Responding to behaviour

Identifying and modifying abnormal/undesirable behaviour. Behavioural indicators for welfare

Enrichment

Neuropsychopharmacology.

Applications of learning theories:

Conditioning

Reinforcement techniques and schedules

Training regimes.

LO4 **Describe the roles and functions of animals in human society in terms of their behaviour.**

Comparing wild and domestic behaviours:

Social patterns

Feeding behaviour

Activity patterns

Reproductive behaviour.

Behaviour characteristics of animals in society:

Artificial selection

Development/modification of behaviours

Sociality

Docility and aggression

Hierarchies and social structures.

Historical developments of animal roles:

Commercial production

Working roles

Supportive/therapeutic roles

Welfare implications.

Ethics:

Comparative analysis of animal roles.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Explain different fields of study within animal behaviour science		D1 Critically analyse animal behaviour patterns using an appropriate range of different scientific approaches, drawing conclusions on the relevance of fields of study in explaining the behaviour's origins
P1 Compare different fields within animal behaviour – cognition, learning, physiology, ecology	M1 Analyse animal behaviour patterns using an appropriate range of different scientific approaches	
LO2 Demonstrate ability in conducting animal behaviour observations and assessments		LO2 LO43 D2 Plan and implement an appropriate behaviour modification programme for an animal, evaluating the success of observable changes in the animal's behaviour patterns
P2 Perform behaviour observations, utilising appropriate sampling and recording techniques for data collection P3 Analyse behavioural data, drawing conclusions about animals' behaviour	M2 Evaluate the causative factors of observed behaviours	
LO3 Apply principles of animal behaviour to the management of animals		
P4 Explain appropriate techniques for changing animals' behaviour P5 Produce a behaviour management plan based on relevant theoretical principles	M3 Implement a behaviour management plan, evaluating the significance of behaviour changes	
LO4 Describe the roles and functions of animals in human society in terms of their behaviour		D3 Critically examine the historical and contemporary human manipulation of animal behaviour
P6 Explain the development of animals' roles in human society P7 Describe the impact of animals' behavioural characteristics on their roles in society	M4 Evaluate the implication for animals' welfare in working roles	

Recommended Resources

Textbooks

ALCOCK, J. (2009) *Animal Behaviour: An Evolutionary Approach*. 9th edn. Sunderland, MA: Sinauer Associates.

ANDREWS, K. (2014) *The Animal Mind: An Introduction to the Philosophy of Animal Cognition*. Abingdon: Routledge.

APPLEBY, M. (2016) *Dilemmas in Animal Welfare*. Wallingford: CABI Publishing.

ENNOS, R. (2012) *Statistical and Data Handling Skills in Biology*. 3rd edn. Harlow: Prentice-Hall.

PEARCE, J.M. (2008) *Animal Learning and Cognition: An Introduction*. 3rd edn. Hove: Psychology Press.

SIMMONS, P. and YOUNG, D. (2010) *Nerve Cells and Animal Behaviour*. 3rd edn. Cambridge: Cambridge University Press.

UDELL, M. and WYNNE, C. (2013) *Animal Cognition: Evolution, Behaviour and Cognition*. 2nd edn. Basingstoke: Palgrave Macmillan.

Web

iaabc.org International Association of Animal Behaviour Consultants
(General reference)

www.oie.int World Organisation for Animal Health
(General reference)

www.omicsonline.org OMICS Publishing
Database of open access scientific journals
(Research)

Essential requirements

Tutors must be appropriately qualified and experienced within this subject to cover the principles and skills development aspects of this unit.

Links

This unit links to the following related units:

Unit 1: Animal Health and Welfare

Unit 15: Animal Collection Management

Unit 25: Anthrozoology

Unit 26: Evolution and Adaptations

Unit 5: Animal Husbandry

Unit code	L/616/7832
Unit type	Core
Unit level	4
Credit value	15

Introduction

The aim of this unit is to provide students with essential underpinning knowledge and practical experience in animal husbandry and management techniques. This is essential for the development of sector-specific and transferable skills.

The unit promotes keeping animals in an environment where the maintenance of mental and physical health, the prevention of ill health and good welfare practice is paramount.

Students will study core concepts of good husbandry practice, Health and Safety, animal management techniques and administration, as well as practical aspects of handling, accommodation, provision of feed, health and welfare, and legislative requirements relevant to animal husbandry. Assessment strategies will include assessed practical investigations, written reports and presentations.

Having completed this unit, students will be equipped with the practical skills and underpinning knowledge which can be applied to their choices of specialism and career progression.

Learning Outcomes

By the end of this unit a student will be able to:

- 1 Examine Health and Safety practice within animal husbandry
- 2 Demonstrate animal husbandry practices and health monitoring to industry standard
- 3 Demonstrate the management of animal accommodation
- 4 Review methods of record-keeping within animal facilities.

Essential Content

LO1 **Examine Health and Safety practice within animal husbandry**

Legislative considerations for Health and Safety within animal husbandry:

Health and Safety in the workplace
Regulations for management and control of hazardous substances
Reporting of injury, disease or death
Personal protective equipment
Manual handling activities.

Risk assessment:

Why carry out risk assessment, HSE
Methods of risk assessment.

Factors affecting safe handling:

When to, and when not to handle animals
Animal: species, size, temperament, age, physiological condition
Handler: experience, confidence, competence
Enclosure: access, size
Procedure: grooming, health check, veterinary consultation/treatment.

LO2 **Demonstrate animal husbandry practices and health monitoring processes to industry standard**

Principles of industry standard animal husbandry practice:

Relationship between environment and physiological status
Five needs.

Animal handling and restraint:

Handling techniques for a range of companion, exotic and large animals, and physiological condition
Approach methods and techniques
Capture and restraint techniques for a range of situations
Selection and correct use of PPE and handling equipment
Consideration of toxic and venomous species
Movement of animals in line with legislative guidelines
Grooming techniques.

Animal health and monitoring:

Signs of good and ill health and interpretation of these
Assessment and reporting of health status
Prophylaxis and treatment of disease
Quarantine and PETS
Barrier nursing and isolation
Euthanasia: reasons for, methods and disposal.

LO3 **Demonstrate the management of animal accommodation**

Animal accommodation requirements:

Codes of practice for housing (RSPCA)
Species specificity for a range of companion, exotic and large animals: size, materials, ventilation, drainage, temperature, safety and security, substrate/bedding, furnishings, and feeding and watering equipment

Provision of food and water

Enrichment of accommodation

Legislation pertaining to animal accommodation: kennels and catteries, animal boarding establishments, riding establishments, farms.

Preparation and maintenance of accommodation:

Design, preparation and maintenance of a range of accommodation: aquaria, vivaria, aviaries, small mammal cages, kennels, catteries, stables, livestock housing, paddocks, fields

Daily, weekly and monthly cleaning and maintenance: regimes, use of PPE and Health and Safety, chemicals suitable for various species

Disposal of waste and environmental impact

Appraisal of animal facilities.

LO4 **Review methods of record-keeping within animal facilities.**

Legislative requirements for record-keeping:

DEFRA stock identification requirements: large and farm animals, poultry, PETS

Drugs legislation and COSHH

Data protection and privacy of electronic communications regulations.

Data management:

Identification of records and data required

Methods of data gathering and retrieval (manual, computerised).

Learning Outcomes and Assessment Criteria

Pass		Merit	Distinction
LO1 Examine Health and Safety practice within animal husbandry		M1 Examine how Health and Safety considerations interact with the factors affecting safe handling within animal husbandry scenarios	D1 Complete and analyse the overall process of risk assessment within animal husbandry Health and Safety practice
P1 Describe the legislation pertaining to Health and Safety and risk assessment within animal husbandry	P2 Explain the factors affecting the safe handling of animals using relevant examples across a range of species		
LO2 Demonstrate animal husbandry practices and health monitoring to industry standard		M2 Assess the practice of animal husbandry techniques undertaken	D2 Analyse how the principles of industry standard animal husbandry practice underpin the management of both the health and husbandry of animal species.
P3 Explain how the principles of good animal husbandry practice apply to the maintenance of the physiological welfare of given species	P4 Demonstrate, for a range of species, varying situations and physiological conditions, the processes of health monitoring and reporting		
P5 Demonstrate, for a range of species, varying situations and physiological conditions, appropriate handling and restraint techniques	P6 Review the roles and practice of prevention and treatment of disease, as part of the monitoring of animal health		
LO3 Demonstrate the management of animal accommodation			
P7 Explain the requirements for the provision and ongoing maintenance of adequate accommodation for a range of species, ensuring that enrichment of the environment is considered	P8 Demonstrate the design, preparation and ongoing maintenance of a range of accommodation for a variety of species	M3 Provide a justification of the planning and design of animal accommodation in terms of codes of practice and any relevant legislation	D3 Critically analyse accommodation in two different animal facilities
LO4 Review methods of record-keeping within animal facilities			
P9 Review the legislation relevant to recordkeeping within animal facilities.	P10 Explain the methods used to gather, retrieve and interpret specified data within the animal care sector	M4 Apply an appropriate data management system to an animal collection and analyse information collected	D4 Provide an evaluation of a data management system used within an animal facility

Recommended Resources

Textbooks

COOPER, B., MULINEAUX, E. and TURNER, L. (2011) *BSAVA Manual of Veterinary Nursing*. Gloucester: British Small Animal Veterinary Association.

HUBRECHT, R. and KIRKWOOD, J. (2010) *UFAW Handbook on the Care and Management of Laboratory and Other Research Animals*. 8th edn. Chichester: Wiley-Blackwell.

MEREDITH, A. and JOHNSON-DELANEY, C. (2010) *BSAVA Manual of Exotic Pets*. Gloucester: British Small Animal Veterinary Association.

RAITI, P. and GIRLING, S. (2004) *BSAVA Manual of Reptiles*. Gloucester: British Small Animal Veterinary Association.

WARREN, D. (2015) *Small Animal Care and Management*. 2nd edn. Ontario: Thompson Learning.

Web

www.gov.uk

UK Government Department for Environment Food & Rural Affairs
(Research/General reference)

www.hse.gov.uk

Health and Safety Executive
Zoonoses
(Research/General reference)

worksmart.org.uk

TUC Work Smart
Health
(General reference)

Essential requirements

Tutors must be appropriately qualified and experienced within this subject to cover the principles and skills development aspects of this unit.

Links

This unit links to the following related units:

Unit 1: Animal Health and Welfare

Unit 14: Management of Exotic Animal Species

Unit 15: Animal Collection Management

Unit 6: Animal Anatomy and Physiology

Unit code R/616/7833
Unit level 4
Credit value 15

Introduction

Animals of any species and setting require high levels of care and attention to ensure optimal health and welfare. A person holding responsibility for this should have an established knowledge of biological functioning in an aim to understand normal biological measures, what changes may occur and the influences of these changes to the overall health of an animal.

This unit develops knowledge of the biological systems of animals, with a detailed look at functioning. It will require students to analyse the interaction of systems and how environmental factors may impact an animal's health. It is through this that students will be able to enter roles within the animal sector feeling confident to make decisions and advise others in best management practices.

The unit looks at the structure and functioning of the biological systems, and highlights the important roles they play in maintaining the life of an animal. Students will study the systems with the key themes attached: muscular and skeletal systems and how they interact with one another to create movement; lymphatic and cardiovascular systems and their involvement with the transportation of essential materials, with a detailed look at the role of blood; respiratory, digestive and urinary systems, evaluating how they interact to obtain raw materials for metabolism and excrete waste; male and female reproductive systems, reproductive stages and the management of these to influence the breeding of animal species.

On completion of the unit, students should hold sufficient knowledge on the biological systems of animals to understand how animal gait, lifestyle and management can influence animal health and normal biological functioning. They should be able to interpret information given to them by a veterinary professional, and develop improvements to how an animal is cared for in response. Students will also be able to review the management of breeding animals, and make informed choices with animal wellbeing in mind. The knowledge gained from this unit will create links between other units covering health, disease and husbandry management of animals.

Learning Outcomes

By the end of this unit a student will be able to:

- 1 Determine how the skeletal and muscular systems interact with one another to provide support and create movement
- 2 Discuss how the body transports essential materials around the body to maintain life and compensates to meet demands
- 3 Describe the functioning of systems which obtain raw materials for metabolism and excrete waste to highlight the effects changes in management systems may have on animal wellbeing
- 4 Develop material to share information on animal reproductive processes and the ways that these processes can be managed for animal owners to make informed choices.

Essential Content

LO1 **Determine how the skeletal and muscular systems interact with one another to provide support and create movement**

Support systems:

Types of support systems: hydroskeleton, endoskeleton and exoskeleton

Bone types and functions, structure and composition of bone tissue

Bone renewal and growth

Types of joint (fibrous, cartilaginous, synovial), synarthrosis, amphiarthrosis, diarthrosis

Joint anatomy

Range of joint movement.

Movement:

Structure and composition of muscle types: skeletal, cardiac, smooth

Muscle contraction: sliding filament theory

Skeletal muscle types associated to particular movements

Tendons and ligament structure and role

Common types and sites of injury through movement.

LO2 **Discuss how the body transports essential materials around the body to maintain life and compensates to meet demands**

Blood:

Composition and function of blood

Function and morphology of blood cells: erythrocytes, leucocytes – neutrophils, eosinophils, basophils, lymphocytes, monocytes, macrophages

Origin of blood cells

Role of platelets and fibrinogen

Blood plasma

Environmental and management impact on blood composition: altitude, workload, diet.

Cardiovascular system:

Structure and function of the heart, origin and conduction of heartbeat, cardiac cycle, structure and function of blood vessels, circulatory pathways (pulmonary circulation, systemic circulation, coronary circulation)

Open and closed circulatory systems

Circulatory physiology, response to demand (thermoregulation, exercise, fight/flight response).

Lymphatic system:

Lymphatic vessels, formation and transportation of lymph, structure and location of lymph nodes, lymphoid tissues and organs. Conditions affecting correct functioning.

LO3 Describe the functioning of systems which obtain raw materials for metabolism and excrete waste to highlight the effects changes in management systems may have on animal wellbeing

Respiratory system:

Structure and function of the respiratory tract
Ventilation of lungs, gaseous exchange
Transport of respiratory gases
Management of respiratory diseases and disorders.

Digestive system:

Structure and functions of the organs of the digestive tract (ruminant, monogastric, hindgut fermenter)

Phases of digestion and absorption, digestive enzymes, neural and hormonal control of digestion

Functions of the liver and pancreas.

Urinary system:

Structure and functions of the kidney
Urine formation
Urine movement through the system
Osmoregulation and pH regulation.

Husbandry techniques and wellbeing:

Impact of animal management systems on the respiratory, digestive and urinary systems

Bedding/substrate use, cleaning procedures, feeding and watering systems, housing, exercise.

LO4 Develop material to share information on animal reproductive processes and the ways that these processes can be managed for animal owners to make informed choices

Reproductive system:

Structure and function of the male and female reproductive systems, oestrus, hormonal control, spermatogenesis and oogenesis

Variations between species.

Reproductive stages and management:

Sexual maturity, fertilisation, implantation/egg and shell production, embryonic development, parturition

Breeding management, natural breeding, artificial insemination, embryonic transfer, surrogacy, cloning.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Determine how the skeletal and muscular systems interact with one another to provide support and create movement		D1 Evaluate sites of weakness where the muscular and skeletal systems interact for a named animal species to influence management of the species
P1 Explain how skeletal and muscular systems function P2 Identify the methods of interaction between the skeletal and muscular systems to provide support and create movement	M1 Explain in detail the functioning of skeletal and muscular systems to include the differences between bone and muscle types	
LO2 Discuss how the body transports essential materials around the body to maintain life and compensates to meet demands		LO2 LO3 D2 Critically review the demands placed on a named animal species through human interaction, which affects the animals' wellbeing, and identify potential improvements to care
P3 Describe the structure and function of the cardiovascular and lymphatic systems P4 Discuss the composition of blood and how it may vary to meet demands	M2 Explain the morphology of erythrocytes and leucocytes to determine cell health through blood samples	
LO3 Describe the functioning of systems which obtain raw materials for metabolism and excrete waste to highlight the effects changes in management systems may have on animal wellbeing		
P5 Evaluate how the respiratory, digestive and urinary systems function effectively on a daily basis for a named species P6 Describe two examples of management systems, which may affect the functioning of either the respiratory, digestive or urinary system in a named species	M3 Analyse the reasoning for management systems used, which may affect animal wellbeing	
LO4 Develop material to share information on animal reproductive processes and the ways that these processes can be managed for animal owners to make informed choices		D3 Evaluate artificial breeding interventions to provide unbiased information for the animal owner/carer
P7 Create a means of Communicating information to animal owners on the reproductive processes of a named animal species and describe how these can be managed for breeding purposes	M4 Explain in detail the events of oestrus in a named species and how this can affect behaviour traits	

Recommended Resources

Textbooks

AKERS, R.M. and DENBOW, D.B. (2013) *Anatomy & Physiology of Domestic Animals*. 2nd edn. Chichester: Wiley.

BREGA, J. (2005) *Essential Equine Studies: Book One: Anatomy and Physiology*. London: J.A. Allen.

BRITISH HORSE SOCIETY and HASTIE, P. (2012) *The BHS Veterinary Manual*. 2nd edn. Shrewsbury: Kenilworth Press.

FRANDSON R.D., WILKE, W.L. and FAILS, A.D. (2013) *Anatomy & Physiology of Farm Animals*. 7th edn. Oxford: Blackwell.

REECE, W.O. and ROWE E.W. (2017) *Functional Anatomy and Physiology of Domestic Animals*. 5th edn. Chichester: Wiley.

TORTORA, G.J and DERRICKSON, B.H. (2014) *Principles of Anatomy and Physiology*. 14th edn. Chichester: Wiley.

Web

www.khanacademy.org

Khan academy
Human Biology
(General reference)

www.onlineveterinaryanatomy.net

Online Veterinary Anatomy Museum
Whole site
(General reference/Research)

Essential Requirements

Tutors must be appropriately qualified and experienced within this subject to cover the principles and skills development aspects of this unit.

Links

This unit links to the following related units:

Unit 1: Animal Health and Welfare

Unit 5: Animal Husbandry

Unit 7: Animal Nutrition

Unit 12: Horse Husbandry

Unit 31: Equine Health and Disease

Unit 7: Animal Nutrition

Unit code Y/616/7834

Unit level 4

Credit value 15

Introduction

Understanding the nutritional requirements of animals is essential to be able to devise and plan diets to maintain animal health and production. This unit introduces students to the scientific basis of animal nutrition, supporting a range of careers within the animal management, agricultural and pet industries.

Students will define the macro and micro-nutrients which make up food, and evaluate how each constituent contributes to balanced animal nutrition and influences metabolism. They will also explore the importance of hydration and acid-base balance within homeostasis.

The dietary requirements for a range of different animal species and how these vary with life stage, health status, reproduction, production, live weight gain and activity levels will be analysed. Students will further learn how to calculate feed rations for a range of animal species and explore the relationship between diet and productivity, and behaviour.

In addition, students will conduct basic laboratory tests to analyse foodstuffs, providing them with practical skills they could use in the workplace.

Learning Outcomes

By the end of this unit a student will be able to:

- 1 Describe the role of macro and micronutrients and water within animal nutrition
- 2 Analyse the dietary requirements of animals during different stages of their lives
- 3 Formulate dietary rations that meet animals' nutritional requirements
- 4 Evaluate the advantages and disadvantages of different types of diet to provide animals' nutritional and behavioural needs.

Essential Content

LO1 **Describe the role of macro and micronutrients and water within animal nutrition**

Key nutrients and their roles:

Macro-nutrients: carbohydrates, lipids, proteins, fibre

Micro-nutrients: vitamins, minerals

Water.

Metabolism

Hydration

Acid-base balance

Digestion, absorption and synthesis of key nutrients

Key differences between herbivores, carnivores and omnivores

LO2 **Analyse the dietary requirements of animals during different stages of their lives**

Nutritional requirements of a range of animal species:

Companion animals: dog, cat, small mammals

Exotics

Birds

Horses

Livestock

Captive animals

Wildlife.

Nutritional requirements of animals – life stage:

Pregnant

Lactation

Neonate

Growth

Adult

Breeding

Geriatric.

Nutritional requirements of animals – activity:

Working

Production

Disease.

Grassland management for herbivores:

Rotation

Fertilisers

Mowing

Weed control

Stocking density.

LO3 **Formulate dietary rations that meet animals' nutritional requirements**

Design ration formulation sheets:

Scientific rationing

Systems of rationing

Use of excel spreadsheets

Animal requirements.

Commercial diets:

Commercial manufacture of animal feeds
Legislation and labelling
Availability of foodstuffs
Nutrient analysis.

LO4 **Evaluate the advantages and disadvantages of different types of diet to provide animals' nutritional and behavioural needs**

Animal nutritional needs:

Effects of deficiencies and excesses of core nutrients
Impact on behaviour
Impact on health
Impact on productivity/performance/function/live weight gain
Impact on longevity
Impact on reproduction
Impact of obesity.

Treatment for deficiencies and excesses:

Inclusion of additives
Restriction/removal of certain foodstuffs.

Management of obesity:

Exercise
Diet.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Describe the role of macro and micronutrients and water within animal nutrition		D1 Appraise the role of macro and micronutrients, and water, in maintaining homeostasis and supporting metabolism
P1 Describe the role of macronutrients in animal nutrition P2 Explain the role of micronutrients and water in animal nutrition	M1 Assess how key nutrients are absorbed or synthesised in the animal body for two animal species	
LO2 Analyse the dietary requirements of animals during different stages of their lives		D2 Interpret how nutritional requirements of animals vary between species and at different stages of their lives
P3 Define the key dietary requirements for named animals to support adult health P4 Recognise how nutritional requirements differ between the growing and geriatric animal	M2 Evaluate how nutritional requirements vary within gestation, reproduction and during lactation	
LO3 Formulate dietary rations that meet animals' nutritional requirements		D3 Justify how the ration proposed meets the nutrient and energy requirements of the selected animal
P5 Design a ration formulation spreadsheet P6 Calculate an appropriate daily ration for a named animal	M3 Choose suitable feedstuffs to deliver the formulated ration	
LO4 Evaluate the advantages and disadvantages of different types of diet to provide animals' nutritional and behavioural needs		D4 Examine the impact of dietary deficiencies and excesses on animal health, production and function, and how these can be rectified
P7 Describe how diet can influence animal behaviour P8 Outline advantages and disadvantages of two different diets for a named animal	M4 Assess the relationship between feeding, diet and animal behaviour and production	

Recommended Resources

Textbooks

BLAS, C. and WISEMAN J. (1998) *The Nutrition of the Rabbit*. New York: CABI Publishing.

BURGER, I.H. (1996) *The Waltham Book of Companion Animal Nutrition*. Oxford: Pergamon.

FRAPE, D. (2010) *Equine Nutrition and Feeding*. Oxford: Blackwell Science Ltd.

HILL, J. (2003) *Nutritional Physiology of the Horse*. Nottingham: Nottingham University Press.

LONSDALE, C. (1989) *Straights: Raw Materials for Animal Feed Compounders and Farmers*. Marlow: Chalcombe Publications.

MCDONALD, P., EDWARDS, R.A., GREENHALGH, J.F.D. and MORGAN, C.A. (2011) *Animal Nutrition*. Harlow: Longman Scientific & Technical.

NATIONAL RESEARCH COUNCIL (2007) *Nutrient Requirements of Horses*. Washington, DC: National Academy Press.

NATIONAL RESEARCH COUNCIL (1995) *Nutrient Requirements of Laboratory Animals*. Washington, DC: National Academy Press.

NATIONAL RESEARCH COUNCIL (2001) *Nutrient Requirements of Dairy Cattle*. Washington, DC: National Academy Press.

NATIONAL RESEARCH COUNCIL (2006) *Nutrient Requirements of Dogs and Cats*. Washington, DC: National Academy Press.

POND, W.G., CHURCH, D.C. and POND, K.R. (2005) *Basic Animal Nutrition and Feeding*. New York: Wiley.

WILLIAMS, J.M. (2009) *The Complete Textbook of Animal Health and Welfare*. London: Elsevier.

Essential Requirements

Tutors must be appropriately qualified and experienced within this subject to cover the principles and skills development aspects of this unit.

Links

This unit links to the following related units:

Unit 1: Animal Health and Welfare

Unit 5: Animal Husbandry

Unit 10: Animal Nursing

Unit 12: Horse Husbandry

Unit 15: Animal Collection Management

Unit 8: Ecological Principles

Unit code D/616/7835

Unit level 4

Credit value 15

Introduction

This unit provides a broad introduction to the key principles of ecological processes. Ecology is a growing area of the animal management industry, with increased awareness of human impacts on the health of flora and fauna globally. Key principles of ecology form the basis for further study across the animal management industry.

The unit aims to provide a holistic approach to covering the expansive subject of ecology. Initially, fundamental mechanisms of evolution are explored, with a key focus on individual response to a range of factors. The interrelationship between species is investigated with specific populations identified. Finally, population dynamics are studied within a given context.

The nature of this unit promotes scientific and academic skill development. Upon completion of this unit, students will have the ability to analyse ecological mechanisms and apply strategies to managing specific populations, which directly contributes to the overall employability profile of students. Ecological principles directly relate to conservation, environmental and wildlife positions within the land-based sector.

Learning Outcomes

By the end of this unit a student will be able to:

- 1 Explain the mechanisms and ecological implications of evolution
- 2 Describe factors impacting flora and fauna within a range of environments
- 3 Analyse the complexity of interrelationships between organisms
- 4 Assess mechanisms governing fluctuations and stability within populations.

Essential Content

LO1 Explain the mechanisms and ecological implications of evolution

Natural selection
Evolution
Adaptations
Ecological implications
Darwin
Genetic drift
Hardy-Weinberg principle.

LO2 Describe factors impacting flora and fauna within a range of environments

Biotic factors
Abiotic factors
Biogeochemical cycles
Edaphic conditions
Climate
Geographic demographics
Natural disaster.

LO3 Analyse the complexity of interrelationships between organisms

Biomes
Food webs
Mutualism
Trophic levels
Commensalism
Optimality theory.

LO4 Assess mechanisms governing fluctuations and stability within populations.

Migration
Immigration
Survivorship
Death rates
Birth rates
Food webs
Predation
Competition
Boom-bust cycles.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
L01 Explain the mechanisms and ecological implications of evolution		L01 L02 D1 Evaluate a given species' mechanisms of evolution in response to biotic and abiotic factors
P1 Define evolution by natural selection and provide examples of the theory in action P2 Outline how species adapt to their environment	M1 Compare the evolution of species in a variety of environments	
L02 Describe factors impacting flora and fauna within a range of environments		
P3 Investigate the impacts of biotic and abiotic factors within given populations P4 Explain the impacts natural disaster can have on flora and fauna within a population	M2 Analyse the significance of the introduction of non-native species to a given location	
L03 Analyse the complexity of interrelationships between organisms		L03 L04 D2 Analyse boom-bust cycles within a range of populations, including detail on the interdependence between all species involved
P5 Describe a range of biomes in the biosphere, citing representative species from each P6 Analyse a food web within a given biome, detailing how the removal of a single species would impact the overall demographic of the ecosystem	M3 Describe the optimality theory and evaluate the relevance of the theory	
L04 Assess mechanisms governing fluctuations and stability within populations		
P7 Describe the population dynamics within a given ecosystem	M4 Discuss the impacts of predation and competition within a given population	

Recommended Resources

Textbooks

BEEBY, A. and BRENNAN, A. (2003) *First Ecology: Ecological Principles and Environmental Issues*. 2nd edn. Oxford: Oxford University Press.

BOWMAN, W. D., HACKER, S. D. and MICHAEL, L. C. (2017) *Ecology*. 4th edn. Cary NC: Sinauer Publishing.

DODDS, W. and WHILES, M. (2010) *Freshwater Ecology: Concepts and Environmental Applications of Limnology (Aquatic Ecology)*. 2nd edn. Cambridge MA: Academic Press.

MOLLES, M. (2012) *Ecology: Concepts and Applications*. 6th edn. New York: McGraw-Hill Higher Education.

MOSS, B. (2017) *Ponds Small Lakes: Microorganisms and Freshwater Ecology*. 1st edn. Exeter: Pelagic Publishing.

Web

www.britishecologicalsociety.org British Ecological Society
Publication
(Learning & Resources)

www.ecology.com Ecology
Energy, Humans
(General reference)

Essential Requirements

Tutors must be appropriately qualified and experienced within this subject to cover the principles and skills development aspects of this unit.

Links

This unit links to the following related units:

Unit 26: Evolution and Adaptations

Unit 35: Wildlife Conservation

Unit36: Ethics and Consultation