



PEARSON BTEC

HND LEVEL 5 DIPLOMA

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 <u>tina.harrison@sheffcol.ac.uk</u> 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 HE 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.

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

Animal Management - Pearson BTEC Level 5 HND Certificate

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; <u>HEOffice@sheffcol.ac.uk</u> 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, <u>tina.harrison@sheffcol.ac.uk</u>

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 5 Higher National Diploma (HND) 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?

Successful completion of HNC Animal Management.

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 degrees & entry into 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 evidencebased 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
- 7 confidently debate vital topics surrounding the ethics & welfare of animal species

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 advise on animal breeding programmes & draw upon your knowledge of genetics within animal breeding
- 4 apply your knowledge of animal behaviour & understand the ethical concepts surrounding animals within society
- 5 develop skills & knowledge of the human-animal bond & human-animal interactions, to acknowledge the importance of animals & their roles in improving human health & wellbeing
- 6 work confidently in a laboratory setting and be familiar with a range of laboratory equipment
- 7 provide basic animal nursing care & gain confidence in animal first aid

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 experience in animal handling, husbandry and welfare

	Learning Methods
Knowledge and Understanding	lectures and seminars
	 directed study of textbooks and journal articles
	assignment work
	project work
Intellectual Skills	 more active learning processes
	 assignments or projects
	 academic tutorials & supported study
	• group-learning activity such as a seminar or tutorial
	 laboratory, workshop, or field-based activity
Subject Specialist Skills	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 skills workshops
Key Skills	 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

How will I be taught?

What will my timetable look like?

Your lectures will usually be spread over 2-3 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.

Unit Number	Module Title	No. of Credits	Level
23	Biological Principles	15	5
24	Research Project (Pearson-set)	30	5
25	Anthrozoology	15	5
29	Advanced Patient Care	15	5
33	Animal Breeding & Genetics	15	5
35	Wildlife Conservations	15	5
36	Ethics & Consultation	15	5

The units studied are:

How will I be assessed?

	Assessment Method
Knowledge and Understanding	 most methods require some demonstration of knowledge and understanding
Intellectual Skills	 problem-based exercises independent project work research dissertations
Subject Specialist Skills	application in contextpractical demonstration of skill
Key Skills	 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).

The overall qualification grade for the HND will be calculated based on student performance in Level 5 units only.

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

	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	0	0	Р	0	Р	0	D	0	Р	0
Core 2	15	4	Р	0	0	Р	0	Р	0	D	0	м	0
Core 3	15	4	Р	0	0	Р	0	Р	0	D	0	м	0
Core 4	15	4	Р	0	0	Р	0	м	0	м	0	м	0
Core 5	15	4	м	0	0	P	0	м	0	м	0	Р	0
Core 6	15	4	м	0	0	Р	0	м	0	D	0	U	0
Opt 1	15	4	м	0	0	P	0	D	0	D	0	D	0
Opt 2	15	4	м	0	0	P	0	D	0	D	0	D	0
Core 7	30	5	м	6	180	м	180	м	180	Р	120	D	240
Core 8	15	5	м	6	90	м	90	м	90	Р	60	D	120
Opt 3	15	5	м	6	90	м	90	D	120	Р	60	D	120
Opt 4	15	5	м	6	90	Р	60	D	120	Р	60	D	120
Opt 5	15	5	м	6	90	Р	60	D	120	м	90	м	90
Opt 6	15	5	м	6	90	Р	60	м	90	м	90	Р	60
Opt 7	15	5	м	6	90	Р	60	м	90	м	90	м	90
TOTAL	240				720		600		810		570		840
GRADE					м		м		м		Р		D

Level 5 Higher National Diploma:

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 HE 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 Course 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 <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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 <u>Student Support Team</u> who are there to support you throughout your time at College. This team of staff includes our own <u>Careers Advice Team</u> 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 <u>here</u>.

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 <u>application form</u> 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 <u>Disabled Students' Allowances</u> 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 <u>charlotte.hope@sheffcol.ac.uk</u>

If you have applied for Disabled Students' Allowance and been unsuccessful, ask your HE 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; <u>HEOffice@sheffcol.ac.uk</u>. 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, <u>tina.harrison@sheffcol.ac.uk</u>

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. <u>Pearson BTEC HNC/D regulations</u> 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, <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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 **HE 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 (RESD), 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 Course 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; <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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 <u>Pearson BTEC HNC/D regulations</u>. 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 <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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 <u>Pearson BTEC HNC/D regulations</u> 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 <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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, <u>https://www.sheffcol.ac.uk/aboutus/terms-and-conditions</u> 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 <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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 Tutor Mentor, Head of Academy, or from the <u>Students' Union</u> which acts independently of the College.

You can contact the Students' Union by emailing <u>studentsunion@sheffcol.ac.uk</u> 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 <u>collegecomplaints@sheffcol.ac.uk</u>. 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. <u>https://qualifications.pearson.com/en/contact-us/feedback-and-complaints.html</u> 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) <u>http://www.oiahe.org.uk</u>

*The Student Charter is located here; <u>Public Documents || The Sheffield College</u> (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 Tutor Mentor 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 HE and Academic Studies 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 Diploma 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 been seen here, <u>https://www.sheffcol.ac.uk/about-us/terms-and-conditions</u> 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 <u>HEOffice@sheffcol.ac.uk</u> 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 <u>college website</u>, 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 <u>learningresources@sheffcol.ac.uk</u> or <u>LRCteam@sheffcol.ac.uk</u> 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 <u>library catalogue</u> and details of all the services offered are available from all college LRCs, or online in the LRC sections of the <u>college website</u>.

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 <u>learningresources@sheffcol.ac.uk</u> 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 noncourse 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 <u>here</u>, 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; <u>CEIAG@sheffcol.ac.uk</u>

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; <u>https://www.sheffcol.ac.uk/careers-advice</u>

8.2 Other Opportunities

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.

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.

Unit 23: Biological Principles

Unit code	D/616/7849
Unit type	Core
Unit level	5
Credit value	15

Introduction

The aim of this unit is to provide students with the underpinning knowledge of fundamental biological concepts which can be developed within *Unit 6: Animal Anatomy and Physiology, Unit 27: Biochemistry and Medical Microbiology,* and *Unit 33: Animal Breeding and Genetics.* Biological principles relate to all areas of study within the animal management sector.

Students will study core concepts of cellular structure and function at organelle level, how cellular transport mechanisms allow the cell to function, and the subsequent organisation of cells into the specialised tissues and organ systems within the bodies of animal species. The importance of the maintenance of the internal environment will also be examined through the regulatory functions of homeostasis, feedback mechanisms and endocrine and nervous system control.

Students will develop essential practical laboratory skills, risk assessment and Health and Safety management within the laboratory, and analytical skills through the planning, development, execution and analysis of investigations into relevant biological principles and processes. Assessment strategies will include online quizzes, assessed practical investigations, written reports and presentations.

Having completed this unit, students will be equipped with the underpinning knowledge of the principles of biological processes as well as the necessary skills for carrying out practical investigations. These broad skills 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 Analyse the structure and function of animal cells, organelles and cellular transport mechanisms
- 2 Assess the interrelationships between the organisation of cells, tissues and organ systems within the animal body
- 3 Determine how the internal environment of the animal body is maintained through the mechanisms of homeostasis
- 4 Demonstrate, through practical investigations, the principles and processes of biological concepts.

Essential Content

LO1 Analyse the structure and function of animal cells, organelles and cellular transport mechanisms

Cell structure and functions:

Prokaryotic cells (capsule, cell wall, plasma membrane, nucleoid, ribosomes, pili)

Eukaryotic cells (plasma membrane, cytoplasm, mitochondria, endoplasmic reticulum (smooth and rough), ribosomes, Golgi apparatus, peroxisomes, lysosomes, centrioles, nucleus), specialist structures (chloroplasts, vacuole, plasmodesmata, cilia, flagella)

Role of enzymes in cellular processes.

Cellular transport mechanisms:

Diffusion, osmosis, facilitated diffusion, active transport, filtration, phagocytosis, pinocytosis.

LO2 Assess the interrelationships between the organisation of cells, tissues and organs systems within the animal body

Tissue types:

Epithelial tissue (simple (squamous, cuboidal, columnar), stratified (squamous, columnar) pseudostratified)

Connective tissue (areolar, adipose, dense fibrous, cartilage, bone, blood).

Muscular tissue (smooth, skeletal, cardiac)

Nervous tissue (neurons, neuroglia, oligodendrocytes, microglia, astrocytes, ependymal cells, Schwann cells).

Organisation of tissues into organs and organ systems:

Nervous (central, peripheral, sympathetic, parasympathetic), endocrine, respiratory, circulatory (arteries, veins, capillaries), digestive, musculoskeletal, urinary, immune, integumentary.

LO3 **Determine how the internal environment of the body is maintained** through the mechanisms of homeostasis

Feedback systems:

Components and functions of feedback systems e.g. receptor, integrating centre, effector

Negative feedback systems e.g. CO_2 , blood glucose, temperature, pH, water, sodium

Positive feedback systems, parturition

Effects when homeostasis is not maintained.

Role of the nervous and endocrine systems:

Nervous system e.g. autonomic nervous system, visceral sensory and motor neurons, rapid signalling

Endocrine system e.g. mechanism of action of hormones, transport into target cells, surface receptors, intracellular receptors, role of the second messenger systems (cyclic AMP, protein/tyrosine kinase, cyclic GMP, calcium), endpoint activity (alteration of enzyme and other dynamic molecule expression, cell physiology, modulation of gene expression).

LO4 **Demonstrate, through practical investigations, the principles and processes of biological concepts.**

Plan and implement a range of investigations:

Scientific experimental method e.g. research, developing hypotheses

Formulation of method e.g. design of practical activities, resources required, controls, sampling strategies, dependent and independent variables

Risk assessment

Selection and competent use of appropriate techniques

Collation of results (appropriate format).

Analysis and evaluation:

Use of appropriate statistical tests to derive valid conclusions

Potential sources of experimental error

Accuracy and validity of practical investigations undertaken

Evaluation of practical investigations against valid sources and potential for further investigation.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction				
LO1 Analyse the structure and fu		Distriction				
cells, organelles and cellular transport mechanisms						
P1 Compare the structure and						
function of the cellular	M1 Critically analyse the function of the cellular	L01 L02				
components of prokaryotic and	components and transport	101 102				
eukaryotic cells	mechanisms in maintaining	D1 Critically evaluate				
P2 Examine how each method	the operation of	how the animal body				
of cellular transport works in	prokaryotic and eukaryotic	integrates cells and				
relation to cellular function	cells	tissues into organs to				
LO2 Assess the inter-relationships		achieve efficiently				
organisation of cells, tissues and o		functioning systems				
animal body	<u> </u>	2 .				
P3 Review the roles of the	M2 Appraise the efficacy					
various tissue types within the	of the integration of					
animal body	tissues into organ					
P4 Discuss how the tissue types	systems within the					
interrelate to form organs and	animal body					
organ systems						
LO3 Determine how the internal e	environment of the body is					
maintained through the mechanis		D2 Provide critical				
P5 Discuss how the components	M3 Analyse the impact of	evaluation of the				
and processes of negative and	homeostatic imbalance in	efficacy of homeostatic				
positive feedback systems	body systems on the	mechanisms in				
maintain homeostasis of major	outcomes of endpoint	maintaining the internal				
body systems	outcomes	environment of the				
P6 Compare the roles of the		animal body				
nervous and endocrine systems						
in homeostasis to include the						
mechanisms of action						
LO4 Demonstrate, through practical investigations,						
the principles and processes of bio		D3 Critically evaluate the practical work				
P7 Independently plan and conduct a series of practical	M4 Justify the accuracy and validity of the	undertaken to include				
activities to investigate a range	outcomes of the	recommendations for				
of biological principles and	investigations	further investigative				
processes		activities				
P8 Analyse the results of these		delivities				
investigations and provide valid						
conclusions.						
conclusions.						

Recommended Resources

Textbooks

JENKINS, G., KEMNITZ, C. and TORTORA, G.J. (2009) *Anatomy and Physiology: v.1 & 2: From Science to Life*. London: John Wiley & Sons.

REED, B., WEYES, J. and JONES, A. (2016) *Practical Skills in Biology*. 6th edn. Harlow: Pearson.

TORTORA, G.J. and DERRICKSON, B.H. (2012) *Essentials of Anatomy and Physiology*. London: John Wiley & Sons.

Web

www.biologymad.com	Biology Mad Additional Resources/Useful websites (General reference)
www.msdvetmanual.com	MSD Manual (Merck) Veterinary Content/Resources (Research/General reference)

Links

This unit links to the following related units:

Unit 6: Animal Anatomy and Physiology Unit 27: Biochemistry and Medical Microbiology Unit 33: Animal Breeding and Genetics Unit codeR/616/7850Unit typeCoreUnit level5Credit value30

Introduction

This unit is assessed by a Pearson-set assignment. Students will choose their own project based on a theme provided by Pearson (this will change annually). The project must be related to students' specialist pathway of study (unless the student is studying a general pathway). This will enable students to explore and examine a relevant and current topical aspect of business in the context of the land-based business environment and their chosen specialist pathway.

The aim of this unit is to offer students the opportunity to engage in sustained research in a specific field of study. The unit enables students to demonstrate the capacity and ability to identify a research theme, develop research aims, objectives and outcomes, and present the outcomes of such research in both written and verbal formats. The unit also encourages students to reflect on their engagement in the research process, as recommendations for future, personal development are key learning points.

On successful completion of this unit, students will have the confidence to engage in problem-solving and research activities which are part of the function of a manager. Students will have the fundamental knowledge and skills to enable them to investigate workplace issues and problems, determine appropriate 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 Examine appropriate research methodologies and approaches as part of the research process
- 2 Conduct and analyse research relevant for a land-based business research project
- 3 Communicate the outcomes of a research project to identified stakeholders
- 4 Reflect on the application of research methodologies and concepts.

Essential Content

LO1 Examine appropriate research methodologies and approaches as part of the research process

Developing a research proposition:

The importance of developing methodical and valid propositions as the foundation for a research project

Rationale – the purpose and significance for research question or hypothesis

The value of the philosophical position of the researcher and the chosen methods

Use of Saunders' research onion as a guide to establishing a methodological approach.

Literature review:

Conceptualisation of the research problem or hypothesis

The importance of positioning a research project in the context of existing knowledge

Significance and means of providing benchmarks by which data can be judged.

Qualitative, quantitative and mixed method research:

Key theoretical frameworks for research

Advantages and limitations of qualitative and quantitative research approaches and methods.

LO2 Conduct and analyse research relevant for a land-based business research project

Research as a process:

Research has distinct phases which support a coherent and logical argument, which includes using secondary research to inform a primary, empirical, study.

Selecting a sample:

The importance of gathering data and information (qualitative or quantitative) to support research analysis

Selecting sample types and sizes that are relevant to the research

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

Ethics, reliability and validity:

Research should be conducted ethically – how is this achieved and reported?

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

Analysing data:

Using data collection tools e.g. interviews and questionnaires Using analytical techniques e.g. trend analysis, coding or typologies.

LO3 Communicate the outcomes of a research project to identified stakeholders

Stakeholders: Who are they? Why would they be interested in the research outcomes? What communication method do they expect?

Communicating research outcomes:

Consideration of different methods of communicating outcomes (e.g. written word, spoken word) and the medium (e.g. report, online, presentation)

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

Convincing arguments:

No matter what the method/medium, all research should be convincing and presented logically where the assumption is that the audience has little or no knowledge of the research process

The importance of developing evaluative conclusions.

LO4 **Reflect on the application of research methodologies and concepts.**

Reflection for learning and practice:

Difference between reflecting on performance and evaluating a research project – the former considers the research process, the latter considers the quality of the research argument and use of evidence

Reflection on the merits, limitations and potential pitfalls of the chosen methods.

The cycle of reflection:

Reflection in action and reflection on action

Considering how to use reflection to inform future behaviour and future considerations.

Reflective writing:

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

Pass	Merit	Distinction
LO1 Examine appropriate researc		
and approaches as part of the research process		
P1 Produce a research proposal	M1 Evaluate different	
that clearly defines a research	research approaches and	L01 L02
question or hypothesis	methodology and make	
supported by a literature review.	justifications for the choice	D1 Critically evaluate
P2 Examine appropriate	of methods selected,	research methodologies
research methods and	based on philosophical/	and processes in
approaches to primary and	theoretical frameworks.	application to a
secondary research.		business research
LO2 Conduct and analyse researc	h relevant for a land-based	project to justify chosen research methods and
business research project		analysis.
P3 Conduct primary and	M2 Discuss merits, limitations and pitfalls of	anarysis.
secondary research using appropriate methods for a	approaches to data	
business research project that	collection and analysis.	
consider costs, access and	collection and analysis.	
ethical issues.		
P4 Apply appropriate analytical		
tools, analyse research findings		
and data.		
LO3 Communicate the outcomes	of a research project to	
identified stakeholders	. 2	D2 Communicate
P5 Communicate research	M3 Coherently and	critical
outcomes in an appropriate	logically communicate	analysis of the
manner for the intended	outcomes to the intended	outcomes and make
audience.	audience, demonstrating	valid, justified
	how outcomes meet set	recommendations.
	research objectives.	
LO4 Reflect on the application of research methodologies and concepts.		
P6 Reflect on the effectiveness	M4 Provide critical	D3 Demonstrate
of research methods applied for	reflection and insight that	reflection and
meeting objectives of the	results in recommended	engagement in the
business research project.	actions for improvements	resource process,
P7 Consider alternative research	and future research	leading to
methodologies and lessons	considerations.	recommended actions
learnt in view of the outcomes.		for future improvement.

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 3: Managing a Successful Project (Pearson-set)

Unit code Y/616/7851 Unit level 5 Credit value 15

Introduction

Anthrozoology is an emerging area of interest within the animal management industry, with increased consciousness of the importance of understanding the associations between humans and animals in differing contexts, from companionship, exhibition, agriculture, and sporting disciplines to situations where the human-animal interaction can be used for mutual benefit.

Knowledge gained from this unit enables a deeper understanding of the human-animal dyad, which is required for a range of positions within the animal management industry, such as consultancy, animal welfare organisations, and lecturing. This unit examines the human-animal interaction, exploring the variety of ways in which animals are utilised in human society and how interactions can be exploited for a number of purposes, including therapy animals. It explores the wide range of human-animal interactions that currently exist, both nationally and internationally, and discusses and evaluates different aspects of these range of skills required for the animal management industry.

Students will develop skills in terms of evaluation and critical analysis in both theoretical and practical settings. In addition, the nature of anthrozoology naturally requires students to develop enhanced research skills and scientific paper analysis.

Learning Outcomes

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

- 1 Demonstrate an awareness of diverse facets of human-animal interactions
- 2 Evaluate the practice of animals in a wide range of human therapies and review ways in which animals can assist alternative areas of development
- 3 Interpret general patterns of behaviour, psychological functions and experience in relation to anthrozoology
- 4 Analyse emerging areas of anthrozoology in relation to human exploitation and animal welfare

Essential Content

LO1 Demonstrate an awareness of diverse facets of human-animal interactions

Human-animal Interaction

Facets of human-animal interaction: Uses of animals across the world Animal-assisted therapy Public service animals Animals for entertainment Conservation Animal Testing National uses of animals International uses of animals

LO2 Evaluate the practice of animals in a wide range of human therapies and review ways in which animals can assist alternative areas of development

Human Therapy: Guide Dogs PAT Dogs Therapy Llamas The use of animals within schools: Human development Animal Development Alternative Therapies

LO3 Interpret general patterns of behaviour, psychological functions and experience in relation to anthrozoology

Anthrozoological Testing: Rehabilitation Mental health Human health

LO4 Analyse emerging areas of anthrozoology in relation to human exploitation and animal welfare

Welfare Issues: Conservation Animals used within cooking Animal used within testing Welfare societies

National and International organisations: WWF IUCN RSPCA DEFRA BIAZA EAZA WAZA

Pass	Merit	Distinction
LO1 Demonstrate an awareness of diverse facets of human- animal interactions		
P1 Investigate a range of facets of the human-animal interaction	M1 Discuss a range of human-animal interactions in a national and	LO1 & LO2 D1 Critically evaluate the human-animal
P2 Compare the benefits provided to humans as a result of human-animal interactions	international context	interaction, highlighting the advantages and disadvantages to human
LO2 Evaluate the practice of anim human therapies and review ways alternative areas of development	in which animals can assist	and non-human species
P3 Assess the use of animals in a range of human therapies	M2 Analyse the methods in which animals are utilised to aid human development processes	
LO3 Interpret general patterns of functions, and experience in relati		D2 Illustrate and
P4 Research and interpret the impact of animals on human biological functioning	M3 Discuss potential positive psychological impacts of the human- animal interaction	evaluate qualitative and quantitative anthrozoological data, highlighting the impact
P5 Explore methods of measuring and monitoring benefits of the human-animal interaction		on human health and psychology
LO4 Analyse emerging areas of anthrozoology in relation to human exploitation and animal welfare		D3 Critically evaluate
 P6 Select and analyse an emerging human-animal conflict with regard to animal health P7 Investigate the influences of 	M4 Analyse animal welfare legislation in relation to a selected human-animal conflict	the exploitation of animals internationally, with specific emphasis on negative animal welfare impacts
national and international organisations on the selected human-animal conflict		

Recommended Resources

Textbooks:

ALTSCHILLER, D. (2011) Animal-Assisted Therapy, Westport: Greenwood

FINE, A.H. (2006) *Handbook on Animal-Assisted Therapy: Theoretical Foundation and Guidelines for Practice*, London: Academic Press

FREUD, L.S. and McCUNE, S. (2016) *The Social Neuroscience of Human-Animal Interaction*, London: Academic Press

HERZOG, H. (2010) *Some We Love, Some We Hate, Some We Eat: Why It's So Hard to Think Straight Abou Animals*, New York: Harpercollins

WEBSTER, J. (2011) *Management and Welfare of Farm Animals: The UFAW Farm Handbook (UFAW Animal Welfare), 5th ed*, New Jersey: Wiley-Blackwell

Web

www.apa-hai.org	Human-Animal Interaction (General reference)
www.bekindexhibit.org	Human-Animal Interaction (General reference) Be kind: A Visual History of Humane Education Background: About Human Education (Timeline)

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 4: Animal Behaviour in Society Unit 36: Ethics and Consultation Unit code T/616/7856 Unit level 5 Credit value 15

Introduction

This unit explores the needs of advanced nursing cases, including medical cases, recumbent patients, infectious patients requiring barrier nursing and patients requiring fluid therapy. Students will be able to discuss multiple factors which influence patient management in non-routine inpatients to optimise their health and welfare, and to recognise how these influence broader practice management. Design of advanced nursing care plans, including the role of the different members of the veterinary team within these, will be undertaken and the benefits and limitations of care plans will be evaluated.

The methods and modes of communication that can occur within a veterinary practice between colleagues and with clients will be evaluated. Students will learn to recognise their own preferred communication style and to reflect on how this influences their interactions with colleagues. Advantages and disadvantages of verbal and non-verbal communication methods are also analysed alongside the influence of religion, socioeconomics and culture upon communication.

Students will develop the skills to be able to admit and discharge surgical cases and discuss inpatient progress with members of the veterinary team and clients. Throughout the unit, students are encouraged to engage in self-reflection to be able to evaluate the quality of the care provided to patients, but also how effective they

The principles and skills gained in this unit will support future employment within the veterinary sector. Understanding how to optimise the welfare of animals with variable needs, and how to provide accommodation and care to optimise positive behaviour and health provide valuable skills for anyone seeking to pursue a career working in the zoo, pet and equine sectors. In addition, gaining an appreciation for how individuals interact and use communication effectively when working is an essential skill to underpin careers across the animal sector, where good client and customer communication skills and effective team working are key to the success of businesses.

Learning Outcomes

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

- 1 Evaluate the role of teamwork and communication within the veterinary practice
- 2 Analyse patient requirements in advanced nursing cases
- 3 Construct advanced nursing care plans
- 4 Critically reflect on own performance

Essential Content

LO1 Evaluate the role of teamwork and communication within the veterinary practice

The veterinary team: Roles and responsibilities.

Verbal and non-verbal communication:

Direct, authoritative, statements, body language, indirect, modes (e.g. face-toface, telephone, written, social media, video) and models of communication (e.g. listening and questioning) in the veterinary environment

Recognising own preferred communication style and how to adapt it to different situations.

The veterinary environment:

The role of ethics in communication

Professional integrity and confidentiality

Knowledge of when to seek peer support when dealing with clients

Factors which can affect professional relationship with clients and veterinary colleagues

Dealing with complaints

Client-veterinary bond.

Understand how emotions can affect communication and how to manage communication in difficult scenarios related to advanced patient care: Terminal illness Culture Socio-economic status Religious beliefs Client age Euthanasia Welfare cases.

LO2 Analyse patient requirements in advanced nursing cases

Identification of advanced nursing cases:

Common medical cases, fluid therapy cases, trauma cases, non-elective surgical cases, paresis and paralysis cases, oncology

Advanced surgical cases

Nursing the infectious/contagious patient: barrier nursing

Nursing the neonate

Preparation of animal accommodation for advanced nursing cases

Aetiopathogenesis of common medical diseases and syndromes in dogs, cats, exotic animals and horses.

Knowledge and understanding of the requirements of advanced nursing cases:

Role of the veterinary surgeons versus role of the veterinary nurse and animal nursing assistants (for the UK, this will include a review of the Veterinary Surgeons Act and Schedule Three, and RCVS Code of Conduct) Drug calculations and dose rates

Basal metabolic rate (BMR) and basal energy requirements (BER)

Methods that encourage eating and drinking e.g. fluid therapy and assisted feeding

Fluid therapy: indication

Fluid calculations: fluid replacement and daily maintenance rate, preparation of equipment for fluid therapy, maintenance of patients on fluid therapy, common issues and how to avoid them

Drug administration methods: oral and parenteral (simulation only)

Risk assessment

Health and Safety

Working protocols: hygiene, prevention of disease transmission, cleaning, waste disposal.

Monitoring of advanced nursing care patients:

Frequency of monitoring in advanced nursing care cases

Routine monitoring e.g. listing relevant parameters which should be monitored for advanced nursing cases

Ability to appraise quality of life related to short- and long-term prognoses in advanced nursing cases.

LO3 **Construct advanced nursing care plans**

Nursing care plans:

Common theories and models Differences between routine and advanced nursing care plans Example nursing care plans Importance of accurate record-keeping Designing and using nursing care plans for individual patients.

LO4 Critically reflect on own performance.

Processes and practices of reflection:

Defining reflection: physical, mental, emotional, values, context, practice, improvement

Reflective models: Schon, Gibbs, Kolb, Ghaye

Reflective writing.

The role of reflection in the veterinary practice and nursing care

Pass	Merit	Distinction
LO1 Evaluate the role of teamwork and communication within the veterinary practice		D1 Evaluate the
 P1 Describe the roles of key personnel in the veterinary team P2 Discuss different models, modes and methods of communication used in veterinary practice 	M1 Debate factors which influence communication in the veterinary practice	suitability of different models, modes and methods of communication used in veterinary practice, using advanced patient care examples
 LO2 Analyse patient requirements P3 Identify which patients are classified as advanced nursing cases P4 Explain the Health and Safety, and hygiene requirements of advanced patients 	M2 Calculate fluid therapy requirements for a specified advanced nursing case	D2 Analyse the role of the veterinary surgeon and veterinary nurse in advanced patient care
LO3 Construct advanced nursing P5 Review common nursing care models used in the veterinary environment P6 Design nursing care plans for specified advanced nursing care cases	care plans M3 Explain the role of advanced patient care plans and outline patient progress for a specified case to the client	D3 Critically analyse the role of different nursing care plans used in the veterinary environment within advanced patient care
 LO4 Critically reflect on own performance P7 Recognise own communication style P8 Discuss how individual personal communication style can influence relationships in the veterinary practice 	ormance M4 Discuss the skills, knowledge and personal attributes required to be an effective nurse	D4 Critically reflect on your own skills, knowledge and personal attributes and how they would support a career in animal nursing

Recommended Resources

Textbooks

ACKERMAN, N. and ASPINALL, V. (2016) *The Complete Textbook of Veterinary Nursing*. 3rd edn. Kidlington: Elsevier Health.

ALDRIDGE, P. and O'DWYER, L. (2013) *Practical Emergency and Critical Care Nursing*. New Jersey: Wiley-Blackwell.

BASSOT, B. (2016) The Reflective Journal. London: Palgrave Macmillan.

COOPER, B., MULLINEAUX, E. and TURNER, L. (2011) *BSAVA Textbook of Veterinary Nursing*. 5th edn. Gloucester: BSAVA.

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

GIRLING, S.J. (2013) *Veterinary Nursing of Exotic Pets*. 2nd edn. New Jersey: Wiley-Blackwell.

ORPET, H. and WELSH, P. (2010) *Handbook of Veterinary Nursing*. 2nd edn. New Jersey: Wiley-Blackwell.

TARRANT, P. (2014) Reflective Practice and Professional Development. London: SAGE.

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

Web

www.theveterinarynurse.com	The Veterinary Nurse Journal Journal search (Online journal articles)
<u>www.vetsonline.com</u>	Vets online The Veterinary Times Journal, Veterinary Nursing Times and Veterinary Business Journal (Online journal articles)

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 7: Animal Nutrition Unit 10: Animal Nursing Unit 15: Animal Collection Management Unit codeJ/616/7859Unit level5Credit value15

Introduction

The breeding of animals is fundamental to the animal industry worldwide, and possessing an understanding of genetic processes has a clear advantage for those breeding animals. Genetics spans several key areas of the animal management industry, including conservation, veterinary science and animal welfare.

This unit introduces the key principles of genetics and how this impacts the overall breeding of animals. Within many settings of the animal management industry, neonatal and young animals are cared for. This unit has an industry-led focus, providing students with the required knowledge to progress into a range of job roles. This unit cover a wide range of topics, opening with genetic information and key principles of heredity. This develops onto the planning of breeding, caring for young animals and potential problems associated with specific species. Finally, reproductive technologies are considered with a key focus on the practicality and availability for breeders.

There is an opportunity for providers to integrate practical skills with breeding and genetics knowledge within this unit. Student can undertake laboratory sessions to enhance the learning of key content, and animal breeding is also encouraged to provide students with actual breeding and husbandry skills.

Learning Outcomes

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

- 1. Analyse genetic information and principles of inheritance in relation to breeding animals
- 2. Manage the breeding process from oestrus to parturition
- 3. Manage neonatal and young animals from parturition to adolescence
- 4. Explore the uses of reproductive technologies when breeding animals

Essential Content

LO1: Analyse genetic information and principles of inheritance in relation to breeding animals

Genetic Information: Deoxyribonucleic acid Ribonucleic acid Chromosomes Genes Alleles.

Protein synthesis:	
Transcription and translation.	
Gene interactions:	
Incomplete dominance	
Lethal alleles	
Co-dominance	
Multiple alleles	
Epistasis	
Sex-linkage.	

Meiosis and mitosis: Each stage of division for somatic cells and gametes. Mendelian genetics: The work of Gregor Mendel Monohybrid and dihybrid crosses using probability tables (Punnett squares).

LO2: Manage the breeding process from oestrus to parturition

Mate selection: Purpose of intended breeding Genotype analysis Breeding for specific phenotypes Pedigree analysis.

Reproductive stages and potential problems: Oestrus Ovulation Conception Gestation Parturition Record-keeping Health and Safety considerations.

LO3: Manage neonatal and young animals from parturition to adolescence

Neonatal care and young animal care: First days of life Nutrition Housing Husbandry Handling Health Vaccinations.

Potential problems: Orphaned neonates Species-specific problems.

Legislative requirements: Species-specific legislative requirements Sale/transfer of animals Notifiable disease Animal welfare standards.

LO4: Explore the uses of reproductive technologies when breeding animals

Genetic technologies: Genetic analysis DNA screening Hormone therapy Superovulation Ovulation indicators Artificial insemination Oestrus synchronisation

Embryo transfer

Confirmation of gestation.

Pass	Merit	Distinction
LO1 Analyse genetic information		
inheritance in relation to breeding		D1 Critically evaluate
P1 Compare the properties of	M1 Investigate the	the work of Gregor
DNA and RNA with specific	impacts of the following	Mendel in relation to
emphasis on their roles in	gene interactions with	the relevance of his
protein synthesis	specific emphasis on	laws in modern-day
	phenotypic traits:	breeding programmes
P2 Discuss the role of meiotic	 Lethal alleles 	
and mitotic cell division in the	 Epistasis 	
development of offspring	 Incomplete dominance 	
	 Co-dominance 	
P3 Review the use of probability	 Multiple alleles 	
tools when predicting the	 Sex-linkage 	
outcome of specific		
crosses/matings		
LO2 Manage the breeding proces	s from oestrus to parturition	
P4 Analyse the factors that		
influence mate selection in a	M2 Provide an analysis of	
given species	how breeders may	
P5 Discuss stages of the	prevent, manage and	
breeding process for a given	eradicate potential	
species	reproductive problems	
P6 Discuss the potential	from a breeding	LO2 and LO3
problems during each stage of	programme for a specific	
reproduction for a given species	species	D2 Evaluate
P7 Assess the Health and		information available to
Safety and record-keeping		breeders when planning
requirements for a given species		a breeding programme
LO3 Manage neonatal and young	animals from parturition to	from oestrus
adolescence	animals from partaillion to	identification to the
P8 Discuss the care		weaning of young
requirements of neonates and	M3 Create a husbandry	animals for a given
young animals for a given	plan for the care of	species
species	neonatal and young	
P9 Investigate the potential	animals from parturition to	
problems that may arise with	adolescence for a given	
neonatal and young animals for	species	
a given species		
P10 Analyse legislative		
requirements when caring for		
neonatal and young animals for		
a given species	<u> </u>	
LO4 Explore the uses of reproduc	tive technologies when	
breeding animals		
P11 Discuss a range of	M4 Evaluate the success	D3 Justify the
reproductive technologies	of reproductive	evaluation
available to breeders of a range	technologies in relation to	and recommendations
of species	functionality, cost and	of different approaches
	availability for a range of	to enhance
	species	development in practice

Recommend Resources

Textbooks

BOURDON, R.M. (1999) Understanding Animal Breeding. 2nd edn. Harlow: Pearson.

DALTON, C. and WILLIS, M.B. (1998) Introduction to Practical Animal Breeding. Oxford: Blackwell.

HAFEZ, E.S.E. and HAFEZ, B. (2000) Reproduction in Farm Animals. Lippincott: Williams & Wilkins.

HOLT, W.V., PICKARD, A.R., RODGER, J.C. and WILDT, D.E. (2002) Reproductive Science and Integrated Conservation. Cambridge: Cambridge University Press.

KLUG, W.S., CUMMINGS, M.R. and SPENCER, C.A. (2007) Essentials of Genetics. 6th edn. San Francisco: Benjamin Cummings.

MEPHAM, T.B. (1991) Physiology of Lactation. New Jersey: John Wiley & Sons Ltd.

MINORSKY, P.V. and JACKSON, R.B. (2008) Biology, 8th edn. San Francisco: Benjamin Cummings.

WATSON, J.D., BAKER, T.A., BELL, S.P., GANN, A., LEVINE, M. and LOSICK, R. (2008) Molecular Biology of the Gene, 6th edn. San Francisco: Benjamin Cummings.

WINTER, P., HICKEY, I. and FLETCHER, H. (2002) Instant Notes in Genetics. Didcot: BIOS Scientific Publishers.

Web

www.animalgenetics.eu	Research Canine, Equine (General reference)
www.animalsmart.org	Animal Science Breeding and Genetics (General reference) Research Canine, Equine (General reference)

Links

This unit links to the following related units:

Unit 1: Animal Health and Welfare Unit 5: Animal Husbandry Unit 6: Animal Anatomy and Physiology

Essential Requirements

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

Unit code F/616/7861 Unit level 5 Credit value 15

Introduction

The natural world faces ever-increasing pressures from human activities. As ecosystems reduce in size and productivity, this impacts on the wildlife populations that inhabit them. In recent decades, conservation action has increased in significance and effectiveness to a point where human activity can now greatly benefit the sustainability of wildlife populations. In the land-based sector, there are many activities which impact on natural spaces and, as such, the workforce must be knowledgeable and skilled in understanding and interacting with wildlife and their habitats.

In this unit, students will study the theories and principles for analysing wild animal species and explore how to apply this knowledge in the field. They will examine the threats to wild animal populations and explore the solutions to conservation problems that face the modern world. Through studying wildlife conservation, students will gain insights into the variety of approaches to promoting wildlife, from working with key species directly, to managing natural spaces and habitats, and engaging in political and economic issues.

This unit will also allow students to develop knowledge of the natural world and evaluate the human impact on wildlife species. They will again insight into the practical realities of working in the conservation field and examine existing and theoretical conservation projects and activities.

With the experience gained through studying this unit, students will be well equipped to engage in solving wildlife conservation problems, underpinned by knowledge of the relevant theories and principles. Students will find their knowledge and skills useful if looking to progress into a wide range of roles in the land-based sector, from the management of natural spaces and game-keeping, to responsible agriculture, as well as working in the wildlife conservation field specifically.

Learning Outcomes

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

- 1 Evaluate human influences on wildlife species and their natural habitats
- 2 Discuss species-centred approaches to wildlife conservation
- 3 Discuss habitat management strategies to promote wildlife conservation
- 4 Explore economic, social and political approaches to wildlife conservation.

Essential Content

LO1 Evaluate human influences on wildlife species and their natural habitats

Population disruption: Overharvesting Exploitation.

Habitat disruption: Destruction Fragmentation.

Ecological disruption: Disruption of food chains Fragmentation of populations Alien/invasive species introduction.

Environmental impacts: Pollution Climate change.

Impact of human development: Industry Agriculture Urbanisation.

LO2 Discuss species-centred approaches to wildlife conservation

Species ecology: Life history Behavioural ecology Population dynamics.

Wildlife rehabilitation: Capture and transportation Captive care and management Translocation of animals Release and post-release monitoring.

Breeding programmes: Gene pool management Gene flow Genetic drift Inbreeding Captive breeding management Collaborative systems Hybridisation Cross-fostering Hand-rearing.

Assessing animal populations: Wildlife census Tracking and monitoring techniques and equipment Population viability analysis Data interpretation and analysis.

LO3 Discuss habitat management strategies to promote wildlife conservation

Habitat ecology: Abiotic factors Biome definitions and issues.

Habitat rehabilitation and management: Recovering vegetation Fire management Corridors Erosion control Protected areas National and transnational parks Invasive species control.

Common practices: Action planning Legislative considerations Codes of practice Equipment and materials Considering sensitive environments.

Ecological surveying: Techniques for investigating habitats Using ecological survey data.

LO4 **Explore economic, social and political approaches to wildlife conservation**

Wildlife economics: Animal trade Wildlife product trade Market regulation and black markets Ecotourism Economic impact of productive ecosystems.

Conservation legislation: National, international and transnational legislation Wildlife crime investigation and enforcement Codes of practice.

Socio-cultural considerations: Human perspectives on wildlife Community demands Community education Campaigning and marketing Fundraising.

Pass	Merit	Distinction
LO1 Evaluate human influences on wildlife species and their natural habitats		D1 Critically analyse the
 P1 Investigate the impact of human activity on wildlife population numbers P2 Assess the impact of human activity on the natural environment 	M1 Evaluate the ecological significance of human industry and agriculture on wildlife	influencing factors for the decline of a wildlife population
LO2 Discuss species-centred appr conservation	oaches to wildlife	
 P3 Assess strategies for managing wild animal populations in captivity for conservation purposes P4 Explain the practices and considerations for managing a wild animal population LO3 Discuss habitat management wildlife conservation P5 Discuss the ecological components of wildlife habitats P6 Compare strategies for influencing environmental factors 	M3 Analyse the ecological implications of human alteration of environmental factors.	LO2 LO3 D2 Critically evaluate the conservation actions taken to promote a wildlife population and justify suggested alternatives/ improvements
 LO4 Explore economic, social and wildlife conservation P7 Analyse the economic significance of wildlife and their habitats P8 Evaluate political and social actions undertaken in the promotion of conservation 	political approaches to M4 Compare the needs of different stakeholders in a conservation project	D3 Critically analyse the economic, cultural and political context for a conservation project

Recommended Resources

Textbooks

BEGON, M. (2006) *Ecology: from Individuals to Ecosystems*. 4th edn. New Jersey: John Wiley & Sons.

BELL, J.R., COOK, P.A. and WHEATER, C.P. (2011) *Practical Field Ecology: A Project Guide.* New Jersey: Wiley.

CAUGHLEY, G., FRYXELL, J.M. and SINCLAIR, A.R.E. (2014) *Wildlife Ecology, Conservation, and Management.* 3rd edn. London: Wiley-Blackwell.

CONROY, M.J. and PETERSON, J.T. (2013) *Decision Making in Natural Resource Management: A Structured, Adaptive Approach.* London: Wiley-Blackwell.

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

KNIGHT, J. (2013) *Natural Enemies: People-wildlife Conflicts in Anthropological Perspective.* London: Routledge.

Web

<u>www.cites.org</u>	Convention on the International Trade in Endangered Species (General reference)
www.iucn.org	The International Union for the Conservation of Nature (General reference)
theiwrc.org	The International Wildlife Rehabilitation Council (General reference)
<u>www.wwf.org.uk</u>	World Wide Fund for Nature (General reference)

Links

This unit links to the following related units:

Unit 14: Management of Exotic Animal Species Unit 8: Ecological Principles Unit 26: Evolution and Adaptations Unit 33: Animal Breeding and Genetics Unit codeJ/616/7862Unit level5Credit value15

Introduction

This unit focuses on key ethical theories within a consultation setting. The animal management industry is a varied and diverse sector with multiple applications where ethics require consideration. From agriculture to captive animal collections, ethical approaches enable decision-making and justification of actions. Consultation on animal activity is imperative to ensure animal welfare is maintained, whilst enabling human benefit. Consultants are required throughout the industry to see all angles of an argument and provide a logical course of action that considers animal welfare and ethical standings.

Students are given the opportunity to investigate a range of areas within the animal management industry and apply ethical theory. They are also able to select specific topics that interest them and that align with their future career aspirations.

The key aim of the unit is to combine animal welfare and ethical approaches within a consulting context. Within the first two Learning Outcomes, students assess current issues within the animal industry and apply philosophical and ethical approaches whilst considering animal welfare and human requirement. The third Learning Outcome requires students to develop consultation skills within legal parameters. The final Learning Outcome of the unit enables students to recognise animal welfare indicators through behaviour and physiology within a cultural context.

This unit encourages active debate and professional argument which supports progression into a wide range of professional settings. The ability to convey logical arguments in a professional way is a highly-regarded skill within any professional setting. A working knowledge of ethical applications is also imperative within any consultation position. This unit combines both areas to provide a solid base for future employment.

Learning Outcomes

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

- 1 Analyse current ethical dilemmas in animal science/welfare
- 2 Demonstrate an awareness of present difficulties/insights at the head of animal science, and the philosophical, welfare and ethical issues related to these
- 3 Apply consultation practices while representing an understanding of legal implications of working as an expert in the animal sector
- 4 Evaluate general patterns in animal behaviour, psychological functioning and experience in relation to ethics.

Essential Content

LO1 Analyse current ethical dilemmas in animal science/welfare

Ethics: Meta-ethics Normative ethics Applied ethics.

Current ethical dilemmas: Animal welfare conflicts Animal science conflicts.

LO2 Demonstrate an awareness of present difficulties/insights at the head of animal science, and the philosophical, welfare and ethical issues related to these

Present issues within the animal industry:

Production: Slaughter Accommodation Transportation

Exhibition: Competition Body modification e.g. tail docking.

Hunting: Predatory animals Kinship Welfare impacts Fair chase.

Experimentation: Wild-caught Animal welfare.

Captivity: Home range Aquatic mammals.

International conservation threats: Nuclear power Human impacts Philosophical applications to issues within the animal industry Welfare impacts Ethical standpoints.

LO3 Apply consultation practices while representing an understanding of legal implications of working as an expert in the animal sector

Regulation of animal welfare: Statutory and regulatory

Methods of consultation

Practice of consultation.

LO4 Evaluate general patterns in animal behaviour, physiological functioning and experience in relation to ethics.

Animal behaviour patterns: Signs of negative welfare impacts Measuring of negative welfare impacts

Physiological function and experience: Physiological responses to welfare impacts.

Ethical viewpoints:

Application of ethical standings in relation to the actions of individuals and cultures towards animals.

Pass	Merit	Distinction
LO1 Analyse current ethical dilem		
science/welfare		
P1 Discuss key ethical theories	M1 Assess given ethical	
in relation to the animal	theories, highlighting the	L01 L02
management industry,	relevance of said theories	
including:	in the modern-day animal	D1 Critically evaluate a
	industry	given issue within the
Meta-ethics		animal industry,
Normative ethicsApplied ethics		including ethical and philosophical
• Applied ethics		standings, and
P2 Analyse two ethical theories		recommend changes to
and apply to a specific animal		improve animal welfare
welfare or science conflict		
LO2 Demonstrate an awareness of	of present	
difficulties/insights at the head of		
philosophical, welfare and ethical		
P3 Select and discuss a current	M2 Review a selected	
issue within the animal industry,	issue within the animal	
including the philosophical,	industry, recognising all	
ethical and welfare	standpoints of the	
considerations LO3 Apply consultation practices	argument	
understanding of legal implication		D2 Demonstrate
the animal sector	s of working as an expert in	consultation methods
P4 Investigate applications of	M3 Design a consultation	within a given situation
consultation within the animal	plan within a given	whilst considering legal
industry	situation, considering	implications
P5 Report legal considerations	client requirements, legal	
in relation to consulting within	frameworks, and animal	
the	welfare	
animal industry		
LO4 Evaluate general patterns in		D2 lustify the use of
physiological functioning and expe		D3 Justify the use of animals within a cultural
P6 Describe methods of assessing animal welfare	M4 Evaluate the use of animals within a cultural	context and analyse the
indicators within a given context	context, determining	significance of ethical
P7 Discuss physiological and	whether animal welfare is	viewpoints in relation to
behavioural functioning as	considered	possibilities of
indicators of animal welfare		consultation to improve
states		animal welfare
P8 Select a human-animal		
conflict and apply ethical		
standpoints in relation to welfare		
indicators		

Recommended Resources

Textbooks

APPLEBY, M. (2001) What Should We Do About Animal Welfare? A Rational Examination of the Politics and Economics of Animal Welfare. Oxford: Blackwell Science.

GREGORY, N.G. (2004) *Physiology and Behaviour of Animal Suffering*. Oxford: Blackwell Science.

MICHELL, A.R. and EWBANK, R. (1998) 'Ethics, Welfare, Law and Market Forces: The Veterinary Interface', *Proceedings of RCVS & UFAW Symposium*. Oxford: Blackwell Science.

ROLLIN, B.E. (2006) *An Introduction to Veterinary Medical Ethics: Theory and cases.* New Jersey: John Wiley & Sons.

TURNER, J. and D'SILVA, J. (2006) Animal, Ethics and Trade. Abingdon: Earthscan.

Web

<u>www.ciwf.org.uk</u>	Compassion in World Farming Farm Animals, Factory Farming (General reference)
<u>www.gov.uk</u>	UK Government Research and testing using animals Farm Animal Welfare Committee (General reference)
<u>www.howtoconserve.org</u>	Conserve Marine Species Human-Animal Threats
www.rspca.org.uk	RSPCA Advice and Welfare Pets, Lab Animals, Farm Animals, Wildlife (General reference)
www.WWF.org	World Wide Fund for Nature Species threats, Habitat loss, Illegal wildlife trade (General reference)

Links

This unit links to the following related units:

Unit 1: Animal Health and Welfare Unit 5: Animal Husbandry