

*Professional Certificate*  
***Animal Management***

*BSc (Hons), FD and Top-up*  
***Animal Management,  
Ecology and  
Conservation***

*Programme Quality Handbook*



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## Programme specification - Professional Certificate Animal Management

### Overview/ factual information

<b>Programme/award title(s)</b>	Professional Certificate Animal Management
<b>Teaching Institution</b>	University Centre Somerset/ Bridgwater and Taunton College
<b>Awarding Institution</b>	The Open University (OU)
<b>Date of first OU validation</b>	April 2018
<b>Date of latest OU (re)validation</b>	March 2023
<b>Next revalidation</b>	April 2028 (5 years)
<b>Credit points for the award</b>	60 credits (from specified modules at level 4)
<b>UCAS Code</b>	Not applicable.
<b>HECoS Code</b>	100518
<b>LDCS Code (FE Colleges)</b>	
<b>Programme start date and cycle of starts if appropriate</b>	September 2023
<b>Underpinning QAA subject benchmark(s)</b>	Biosciences (2019)
<b>Other external and internal reference points used to inform programme outcomes</b>	QAA UK Quality Codes for HE (2018) SEEC Credit Level Descriptors (2016)
<b>Professional/statutory recognition</b>	n/a
<b>Mode(s) of Study (PT, FT, DL, Mix of DL &amp; Face-to-Face)</b>	PT, Face-to-Face
<b>Duration of the programme for each mode of study</b>	One year Part Time (PT) Face-to-Face
<b>Dual accreditation (if applicable)</b>	n/a
<b>Date of production of this specification</b>	November 2022

**Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided.**

**More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in student module guide(s) and the student's handbook.**

**The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.**

## 2.1 Educational aims and objectives

### Overview.

The Professional Certificate consists of 60 credits that is selected from a specific combination of three level 4, 20 credit modules within the Animal Management, Ecology and Wildlife Conservation degree programme. It has been developed as a broad-based short programme to attract learners that would like to study general animal management/conservation theory alongside gaining practical competencies in preparation for further higher study and/or employment. In addition, this award is for people that may be engaged in employment within the animal management industry that wish to undertake career development alongside their normal work. Lower entry qualifications allow this to be considered as a potential access course onto a full degree programme.

The programme has been developed in consultation with industry and uses academically challenging vocational learning and real-life experiences to support the curriculum, in doing so, developing research and analytical skills that stretch and challenge learners.

**The overall programme aim** is to provide an integrative short framework for animal management allowing the development of graduates that are competent in aspects of managing animal collections, health, and their environments, with the ability to apply appropriate tools and techniques to demonstrate technical competence.

### **The vocational programme aims are to produce graduates that have:**

- developed knowledge to formulate and critique principles, theories and techniques used to manage and conserve individual animals, species, populations, habitats, and ecosystems within a range of contexts.
- developed scientific practical skills required to formulate, study, and interpret animal management processes in individual animals, species, populations, habitats and ecosystems within collection and laboratory situations.
- an awareness of the legislative and ethical implications of a range of behaviour and health considerations within a range of animal management and conservation situations and industries in the UK and worldwide.
- been provided with an awareness of the dynamic nature of the subject resulting from rapid modern developments in research findings and applications to encourage lifelong learning.
- been provided with a range of teaching and learning experiences to help focus student career aspirations and decision making as responsible members of society and industry.
- Encourage to undertake personal development to improve their capability and resourcefulness in a range of academic competencies and are therefore prepared for higher study, research and/or employment.

## 2.2 Relationship to other programmes and awards

(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

### ***Part Time Routes.***

The Professional Certificate is delivered as a Part Time (PT) route face to face). The length of delivery depends on the module schedule within the programme semester framework (Appendix 1).

### ***Withdrawal or Failure to Complete Professional Certificate.***

If a learner withdraws or fails to complete the Professional Certificate the credit for any modules completed will be awarded.

### ***Progression.***

Progression onto FD or BSc (Hons) qualifications is possible after successfully completing the Professional Certificate award. Accredited Prior Learning (APL) will be gained for modules already studied at Professional Certificate level within the FD or BSc (Hons) programmes.

## 2.3 For Foundation Degrees, please list where the 60-credit work-related learning takes place

n/a

## 2.4 List of all exit awards

- **Individual Module Accreditation:** any modules successfully completed will be awarded the relevant credit.

### 3. Programme structure and learning outcomes

An overview of module semester structure for the programme is shown in Appendix 1.

Programme Structure - LEVEL 4					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC102 Management of Captive Animals	20			Yes	S1&2
AMEC103 Animal Health Diagnostics	20			Yes	S1
AMEC105 Enclosure and Enrichment Design	20			Yes	S2

Intended learning outcomes at Level 4 are listed below:

Learning Outcomes – LEVEL 4	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>A1:</b> Describe and discuss fundamental concepts, principles and theories in animal behaviour, health and ecology in relation to the management and conservation of species, populations and ecosystems.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Debates/peer discussions</li> <li>• Case studies</li> <li>• Workshops</li> <li>• Tutorials</li> <li>• Problem-based learning</li> <li>• Practical: Fieldwork/Labortaory /Animal management</li> <li>• WBL/personal experience</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Group Portfolio</li> </ul>



**Learning Outcomes – LEVEL 4**

**3A. Knowledge and understanding**

**A2:** Identify and explain the husbandry of animal species and ecology of habitats to facilitate effective management and conservation.

**LTS:**

- Lectures
- Debates
- Case studies
- Workshops
- Practical: Fieldwork
- Peer and collaborative learning/Teamwork
- WBL/personal experience

**Assessment:**

- Oral Presentation (Group Showcase)
- Time Constrained Essay

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>B1:</b> Identify, explain, and justify core practical and/or analytical methods for animal and ecological monitoring to facilitate effective management.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Tutorials</li> <li>• Discussion</li> <li>• Case studies</li> <li>• Practical Fieldwork/ Laboratory /Animal management</li> <li>• Problem based learning</li> <li>• WBL experience</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Laboratory Report</li> <li>• Group Electronic Diary and Data Interpretation</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C1:</b> Describe and/or discuss skills developed through handling, husbandry, laboratory and/or field studies in relation to animal management ecology and wildlife conservation theory to demonstrate safe practical competency that can be applied in research and/or industry.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures/Seminars/Tutorials</li> <li>• Reflective practice</li> <li>• Case studies</li> <li>• Practical Fieldwork / Laboratory /Animal management</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning/Teamwork</li> <li>• WBL, personal experience</li> <li>• Data interpretation</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Risk/COSHH Assessment</li> <li>• Personal Development in Practical Skills</li> <li>• Group Electronic Diary and Interpretation</li> </ul>

### 3C. Practical and professional skills

**C2:** Demonstrate personal development, management skills and work productively with others competently in industry-based settings.

**LTS:**

- Lectures
- Seminars
- Reflective practice
- WBL experience
- Networking
- Case studies
- Peer and collaborative working

**Assessment:**

- Personal Development in Practical Skills

<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>D1:</b> Identify, summarise, interpret and communicate a variety of subject-specific information and/or data to diverse audiences using appropriate scientific language.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Case studies</li> <li>• Practical Laboratory/ Animal management</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• WBL experience</li> <li>• Use of electronic recording methods</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Oral presentataion (Group Showcase)</li> <li>• Laboratory Report (Risk.COSHH Assessment)</li> <li>• Group Electronic Diary and Data Interpretation</li> </ul>

**[Exit Award: Individual Module Accreditation (Total of 20 credits per passed/completed module)]**

#### 4. Distinctive features of the programme structure

- Where applicable, this section provides details on distinctive features such as:
- where in the structure above a professional/placement year fits in and how it may affect progression
- any restrictions regarding the availability of elective modules where in the programme structure students must make a choice of pathway/route

#### ***General Distinctive Features.***

The programme provides:

- an introduction to higher level study in a specific area of interest enabling flexibility in study.
- an introduction to academic and practical experience for students within the animal management or conservation industries.
- graduates equipped with a range of skills securely underpinned by fundamental principles and theories of animal management/conservation with a clear application to industry and research. in order that they progress within the workplace and/or higher study.
- access to an excellent range of facilities to support their learning and progression to the workplace and/or higher-level studies/research. This includes an extensive animal collection at University Centre Somerset (Bridgwater and Taunton College) Cannington Campus
- a strong teaching team with lifelong industry related experience and academic qualifications.
- support networks that include 1:1 and group tutorials for personal progress and an academic development programme for transferable skills at every level of study.
- level induction programmes and introductory coursework that will provide up-skilling and initial 1:1 formative feedback on learner academic standards reached.

## 5. Support for students and their learning

During induction week all learners are provided with a personal tutor. Formal meetings with the personal tutor are scheduled for a minimum of four times per year (two per semester). Additional pastoral tutorials can be requested by either the learner or tutor to review academic and personal progress.

Learners with diagnosed learning disabilities on the programme will have their support reviewed by the Additional Learning Support (ALS) team. Introduction coursework also reviews learner skills and could identify individuals that need to be referred to the ALS team for further screening. DSA applications for support will be supported.

Support for mental health issues is also available via the college wellbeing or counselling team. Learners will be supported in accessing this service if required or details are available on the college VLE.

The Colleges HEADStart programme (level 4) and departmental academic development sessions support learners (*Appendix 2*). These sessions develop higher level skills such as:

- identification of suitable resources
- plagiarism/collusion
- use of academic databases
- how to 'read' scientific literature
- presentation of academic coursework
- communication skills (presentations/viva's)
- production of academic electronic posters
- data analysis

Accompanying advice leaflets/booklets are provided on the college programme VLE.

At Bridgwater and Taunton Colleges' Cannington Campus, the HE Learning Resource Centre is also available to learners for self-study or further resource assistance which is provided by LRC staff.

Other resources are available and the Bridgwater Campus and Taunton Campus (University Centre Somerset). Information about these facilities will be disseminated at induction.

## 6. Criteria for admission

The Professional Certificate is specifically designed to update and improve current skills for those working in the land-based industry and wishing to pursue a recognised CPD programme at a higher-level. Those with personal interests in animal management are also welcomed to apply.

The nature of this study requires GCSE grade 9 to 4 or A\* to C in English language, mathematics and science or equivalent qualification(s).

Under exceptional circumstances, a conditional offer may be made to a prospective student to include an expectation of working towards GCSE mathematics Grade C or level 2 numeracy alongside completing a professional certificate programme.

Applicants with English as their second language must have a minimum IELTS level 6 or equivalent.

Applications are to be made directly to the admissions team at University Centre Somerset /Bridgwater and Taunton College.

## 7. Language of study

All classes are conducted in English. If English is not your first language you will be asked to provide evidence of your English language ability to apply and start the course. The standard English language requirement for entry is IELTS 6.0 or equivalent.



**8. Information about non-OU standard assessment regulations (including PSRB requirements)**

n/a

**9 For apprenticeships in England End Point Assessment (EPA)**

(Summary of the approved assessment plan and how the academic award fits within this and the EPA)

n/a

**10. Methods for evaluating and improving the quality and standards of teaching and learning.**

The quality of the learning programmes is reviewed via the following processes throughout the academic year:

- *Student Feedback through Programme Meetings held once a semester*
- *Teaching/Peer observations and staff development reviews*
- *Statistical information considering issues such as pass rate and module grades*
- *Student Feedback (Student Voice) including UCS student evaluation questionnaires (SPQ) and National Student Survey results (NSS: if student numbers >10)*
- *Self-Evaluation Reports reflecting on the previous academic year and evaluated by the College's academic boards*
- *External Examiner reports (considering quality and standards)*
- *Academic reviewer feedback*

**10. Changes made to the programme since last (re)validation**

*November 2022: Approval of changing Examinations to Time Constraint Essays.*

### Annex 1. Curriculum Map.

These tables indicate which study modules assume responsibility for delivering (shaded) and assessing (✓) particular programme learning outcomes.

Level	Study module	A1	A2	B1	C1	C2	D1
4	AMEC102 Management of Captive Animals		✓		✓	✓	✓
	AMEC103 Animal Health Diagnostics	✓			✓		✓
	AMEC105 Enclosure and Enrichment Design			✓	✓		✓

**Appendix 1.**

**PC Animal Management Part Time: *Module Semester Map.***

<b>Level 4</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMEC102 Management of Captive Animals (20)</b>	
<b>AMEC103 Animal Health Diagnostics (20)</b>	<b>AMEC105 Enclosure and Enrichment Design (20)</b>
<b>Total 60 level 4 credits</b>	

## Appendix 2. Academic Development Programme.

<p><b>Level 4 Topics</b></p>	<ul style="list-style-type: none"> <li>• HEADStart programme to include plagiarism/collusion, referencing, academic literature searches.</li> <li>• Introduction assignment on Literature searches (1:1 feedback)</li> <li>• Studying at higher levels: expectations and support</li> <li>• Active/Passive Learning</li> <li>• Oral presentations and practice</li> <li>• Creating electronic posters: information gathering</li> <li>• What is a viva?</li> <li>• Guide to coursework presentation</li> <li>• Writing reports and essays</li> <li>• Using contextualised criteria to improve assessment grades</li> <li>• Types of feedback</li> <li>• Reporting practical science.</li> <li>• How to revise: time management and learning strategies</li> <li>• Digimap: Mapping resource</li> <li>• Reading and Interpreting results sections in scientific papers</li> <li>• Keeping a laboratory notebook for practical's/research/projects/dissertations</li> <li>• Introduction to Statistical Terms and Analysis</li> <li>• Basic Introduction to Minitab for Statistical Analysis</li> <li>• Selecting and designing a Research Project</li> <li>• PDP production and skills reflection</li> </ul>
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## Programme specification - FD Animal Management, Ecology and Conservation

### 1. Overview/ factual information

<b>Programme/award title(s)</b>	FD Animal Management, Ecology and Conservation
<b>Teaching Institution</b>	University Centre Somerset/ Bridgwater and Taunton College
<b>Awarding Institution</b>	The Open University (OU)
<b>Date of first OU validation</b>	April 2018
<b>Date of latest OU (re)validation</b>	March 2023
<b>Next revalidation</b>	April 2028 (5 years)
<b>Credit points for the award</b>	240 (120 at level 4 and 120 at level 5)
<b>UCAS Code</b>	D303
<b>HECoS Code</b>	100518
<b>LDCS Code (FE Colleges)</b>	
<b>Programme start date and cycle of starts if appropriate</b>	September 2023
<b>Underpinning QAA subject benchmark(s)</b>	Biosciences (2019) Earth Sciences, Environmental Sciences and Environmental Studies (2019)
<b>Other external and internal reference points used to inform programme outcomes</b>	QAA UK Quality Codes for HE (2018) QAA Foundation Degree Characteristics Statement (2020) SEEC Credit Level Descriptors (2016)
<b>Professional/statutory recognition</b>	n/a
<b>Mode(s) of Study (PT, FT, DL, Mix of DL &amp; Face-to-Face)</b>	FT, Face-to-Face PT, Face-to-Face
<b>Duration of the programme for each mode of study</b>	Two years Full Time (FT) Face-to-Face Three years Part Time (PT) Face-to-Face
<b>Dual accreditation (if applicable)</b>	n/a
<b>Date of production of this specification</b>	November 2022

**Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided.**

**More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in student module guide(s) and the student's handbook.**

**The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.**

## 2.1 Educational aims and objectives

### Overview.

The FD Animal Management, Ecology and Conservation has been developed as a broad-based programme to attract learners that would like to study general animal and habitat management, ecology, and conservation theory alongside gaining practical competencies and industry experience in preparation for higher study and/or employment.

The programme has been developed in consultation with students and reflection on industry employability. It uses academically challenging vocational learning and real-life experiences to support the curriculum, in doing so, developing research, analytical and critically evaluative skills that stretch and challenge learners.

**The overall programme aim** is to provide an integrative framework for Animal Management, Ecology and Conservation allowing the development of graduates that are competent in managing animal collections, conserving wildlife and ecological habitats, with the ability to apply appropriate tools and techniques to demonstrate technical competence.

### **The vocational programme aims are to produce graduates that have:**

- developed knowledge to formulate analyse and/or evaluate principles, theories and techniques used to manage and conserve individual animals, species, populations, habitats, and ecosystems within a range of contexts.
- developed scientific practical skills required to monitor, interpret, and analyse animal management/ecological/conservation problems and biological processes in individual animals, species, populations, habitats and ecosystems within field and laboratory situations.
- an awareness of the legislative and ethical implications of a range of behaviour, health, welfare, and ecological issues within a range of animal management and wildlife conservation situations and industries in the UK and worldwide.
- been provided with an awareness of the dynamic nature of the subject resulting from rapid modern developments in research findings and applications to encourage lifelong learning.
- been provided with a range of teaching and learning experiences to help focus student career aspirations and decision making as responsible members of society and industry.
- facilitated personal development to improve their capability and resourcefulness in a range of academic competencies and are therefore prepared for higher study, research and/or employment.
- facilitated work-based learning by seeking and participating in opportunities to interact with industry, potential employers, and the academic community.

## 2.2 Relationship to other programmes and awards

(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

### ***Full Time/ Part Time Routes.***

The FD is delivered as either a Full Time (2 year) or Part Time (3 year) route, both which are delivered face to face.

### ***Withdrawal or Failure to Complete FD.***

If a learner withdraws or fails to complete the FD qualification (120 level 4 and 120 level 5 credits);

- **Professional Certificate** exit award is available after successfully completing 60 credits.
- **or**
- a **Certificate in Higher Education (CertHE)** exit award is available after successfully completing 120 level 4 credits.

### ***Progression.***

Progression onto a BSc (Hons) Top-Up qualification studied either full or part time is possible after successfully completing the FD award.

This could be completed at the University Centre Somerset (Part of Bridgwater and Taunton College) via the BSc (Hons) Animal Management, Ecology and Conservation Top-up programme or at another academic organisation.

## 2.3 For Foundation Degrees, please list where the 60-credit work-related learning takes place

***Work-based learning opportunities*** are embedded across level 4 modules as part of the FD qualification as learners will benefit from this experience. The programme embeds a range of transferable employability skills into all modules. All level 4 modules contain learning outcomes that embed work-based learning skills within the programme. Employers have supported the programme content in relation to employability skills.

***Appendix 2*** relates module learning outcomes to employability skills, summarises the work-based learning requirements of the programme and outlines the process for recording/tracking student work-based learning experiences.

At level 4 the '*Employability and Communication*' module contains a **100-hour minimum element related to work-based learning**. Learners are expected to successfully complete these hours within this module to progress to level 5. Assessment consolidates the work-based learning experience and employability skills.



Learners will be expected to submit documentation confirming their placement and appropriate employers' liability insurance details. These will be reviewed by the work-based learning co-ordinator (Land-based) for approval before the placement commences. The work-based learning co-ordinator maintains a record of placements and will review health and safety with placement providers. Any providers that fail to comply will not be used as a placement and learners will be refused authorisation for the placement. Further details of this process are provided in the *Work-Based Learning Handbook* for the programme.

Industry related experience will be also developed through the programme by:

- incorporating industry/environmental related visits to events, organisations, and industry within the programme to apply theories to practical/industrial situations. These are optional, but students will be informed of these trips and encouraged to participate.
- encouraging opportunities for learners to work with industry or organisations to undertake a small-scale primary research project and/or dissertation. This opportunity would develop student's organisational, interpersonal, critical, and evaluative skills into contextualised situations.

#### 2.4 List of all exit awards

- **Individual Module Accreditation:** any modules successfully completed will be awarded the relevant credit.
- **Professional Certificate** For modules AMEC102, AMEC103 and AMEC105, 60 credits at Level 4
- **CertHE** Animal Management, Ecology and Conservation (Total 120 level 4 credits)

### 3. Programme structure and learning outcomes

An overview of module semester structure for the programme is shown in Appendix 1.

Programme Structure - LEVEL 4					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC101 Employability and Communication.	20			No	1&2
AMEC102 Management of Captive Animals	20			Yes	1&2
AMEC103 Animal Health Diagnostics	20			Yes	1
AMEC104 Introduction to Ecological Principles and Habitats.	20			Yes	1
AMEC105 Enclosure and Enrichment Design	20			Yes	2
AMEC106 Field and Behavioural Monitoring Techniques.	20			Yes	2

**Intended learning outcomes at Level 4 are listed below:**

**Note:** FDCS; Foundation Degree Characteristic Statement link for FD exit award.

<b>Learning Outcomes – LEVEL 4</b>	
<b>3A. Knowledge and understanding</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>A1:</b> Describe and discuss fundamental concepts, principles and theories in animal behaviour, health and ecology in relation to the management and conservation of species, populations and ecosystems (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Debates/peer discussions</li> <li>• Case studies</li> <li>• Workshops</li> <li>• Tutorials</li> <li>• Problem-based learning</li> <li>• Practical: Fieldwork/Labortary /Animal management</li> <li>• WBL/personal experience</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Group Portfolio</li> <li>• Poster and Viva</li> </ul>

**Learning Outcomes – LEVEL 4**

**3A. Knowledge and understanding**

**A2:** Identify and explain the husbandry of animal species and ecology of habitats to facilitate effective management and conservation (FDCS).

**LTS:**

- Lectures
- Debates
- Case studies
- Workshops
- Practical: Fieldwork
- Peer and collaborative learning/Teamwork
- WBL/personal experience

**Assessment:**

- Oral Presentation (Group Showcase)
- Technical Report
- Time Constrained Essay

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>B1:</b> Identify, explain, and justify core practical and/or analytical methods for animal and ecological monitoring to facilitate effective management.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Tutorials</li> <li>• Discussion</li> <li>• Case studies</li> <li>• Practical Fieldwork/ Laboratory /Animal management</li> <li>• Problem based learning</li> <li>• WBL experience</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Laboratory Report</li> <li>• Technical Report</li> <li>• Group Electronic Diary and Data Interpretation</li> <li>• Case Study Presentation</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C1:</b> Describe and/or discuss skills developed through handling, husbandry, laboratory and/or field studies in relation to animal management ecology and wildlife conservation theory to demonstrate safe practical competency that can be applied in research and/or industry (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures/Seminars/Tutorials</li> <li>• Reflective practice</li> <li>• Case studies</li> <li>• Practical Fieldwork / Laboratory /Animal management</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning/Teamwork</li> <li>• WBL, personal experience</li> <li>• Data interpretation</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Risk/COSHH Assessment</li> <li>• Work-Based Learning</li> <li>• Personal Development in Practical Skills</li> <li>• Group Electronic Diary and Interpretation</li> <li>• Data Analysis (Behavioural)</li> <li>• Case Study Presentation (Fieldwork)</li> </ul>

### 3C. Practical and professional skills

**C2:** Demonstrate personal development, management skills and work productively with others competently in industry-based settings (FDCS).

**LTS:**

- Lectures
- Seminars
- Reflective practice
- WBL experience
- Networking
- Case studies
- Peer and collaborative working

**Assessment:**

- Work-Based Learning Experience
- Work Place Activity and Self-Reflection
- Personal Development in Practical Skills

<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>D1:</b> Identify, summarise, interpret and communicate a variety of subject-specific information and/or data to diverse audiences using appropriate scientific language (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Case studies</li> <li>• Practical Laboratory/ Animal management</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• WBL experience</li> <li>• Use of electronic recording methods</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Covering Letter, CV, and Interview</li> <li>• Oral presentataion (Group Showcase)</li> <li>• Laboratory Report (Risk.COSHH Assessment)</li> <li>• Group Electronic Diary and Data Interpretation</li> <li>• Data Analysis (Behavioural)</li> </ul>

**Exit Awards:**

**Professional Certificate (For modules AMEC102, AMEC103 and AMEC105, 60 credits, at Level 4)**

**CertHE Animal Management, Ecology and Conservation (120 credits at level 4: Total 120 credits)**



Programme Structure - LEVEL 5					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC201 Research Project	20			Yes	1&2
AMEC202 Experimental Design and Analysis	20			Yes	1&2
AMEC203 Applied Animal Welfare and Ethics	20			Yes	1
AMEC204 British Wildlife	20			Yes	1
AMEC205 Evolution and Adaptation	20			Yes	2
AMEC206 Human Impacts on Animals and the Environment	20			Yes	2

Intended learning outcomes at Level 5 are listed below:

Learning Outcomes – LEVEL 5	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>A3:</b> Outline and evaluate animal management, ethics, legislation, policy, and welfare in relation to anthrozoology (FDCA).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorials</li> <li>• Reflective practice</li> <li>• Case studies</li> <li>• Seminars</li> <li>• Debates</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Proposal, Risk/Ethical Assessment</li> <li>• Time Constrained Essay</li> <li>• Essay</li> </ul>

**Learning Outcomes – LEVEL 5**

**3A. Knowledge and understanding**

**A4:** Examine and apply information as to how animal individuals and populations interrelate/interact with each other and humans as part of an environment, community structure and/or ecosystem (FDCS).

**LTS:**

- Lectures
- Case studies
- Seminars
- Problem based learning
- Peer and collaborative learning
- Practical
- Debates

**Assessment:**

- Newspaper Article
- Essay
- Thought Paper

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>B2:</b> Gather, interpret, and analyse evidence in order to address familiar or unfamiliar problems, case studies, experimental data and/or research in relation to animal management, ecology and conservation with reference to industry practice, cultures and/or sectors of society (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Tutorials</li> <li>• Discussion/Debate</li> <li>• Case studies</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> <li>• Reflective practice</li> <li>• Interaction with industry professionals</li> <li>• Practical study</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research report (Style of Journal article)/Research Proposal</li> <li>• Group Oral Presentation</li> <li>• Blog</li> <li>• Data Interpretation</li> <li>• Oral Presentation</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C3:</b> Design, conduct, analyse and report on investigations which may involve primary and/or secondary literature and/or data that solves problems and/or research in a safe, timely and independent manner (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Case studies</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• Data analysis</li> <li>• Interaction with industry professionals</li> <li>• Portfolio building</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Report (Style of Journal Article)</li> <li>• Blog</li> <li>• Oral Presentation</li> </ul>

<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>D2:</b> Collect, record, present and/or analyse data using appropriate scientific techniques using types of visual representations and/or statistical digital tools/formulae.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorials</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Data analysis</li> <li>• Case studies</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Report (Style of Journal Article)</li> <li>• Data Analysis Portfolio</li> </ul>

### 3D. Key/transferable skills

**D3:** Investigate, examine, and evaluate subject-specific literature to undertake dialogue, debate and/or reporting of research, opinions and/or ethics (FDCS).

**LTS:**

- Lectures
- Seminars
- Tutorial
- Self directed study and research
- Peer and collaborative learning
- Problem based learning
- Practical research
- Interaction with independent practitioners/industry
- Data analysis
- Case studies
- Reflective practice

**Assessment:**

- Research Report (Style of Journal Article)
- Group Oral Presentation
- Newspaper Article
- Thought Paper

**Level 5 Exit Awards:**

**CertHE Animal Management, Ecology and Conservation (120 credits at level 4: Total 120 credits)**

#### 4. Distinctive features of the programme structure

- Where applicable, this section provides details on distinctive features such as:
- where in the structure above a professional/placement year fits in and how it may affect progression
- any restrictions regarding the availability of elective modules where in the programme structure students must make a choice of pathway/route

#### ***General Distinctive Features.***

The programme provides:

- a breadth of academic and practical analytical experience for students within the animal management, ecology and conservation topics delivered on the programme.
- graduates equipped with a range of skills securely underpinned by fundamental principles and theories of animal management/conservation with a clear application to industry and research in order that they can progress to the workplace and/or higher study.
- access to an excellent range of facilities to support their learning and progression to the workplace and/or higher-level studies/research. This includes an extensive animal collection at Bridgwater and Taunton College's Cannington Campus and external environments in the locality such as Steart Wetlands.
- a strong teaching team with lifelong industry related experience and academic qualifications.
- links in the locality and nationally to zoological, environmental and wildlife organisations/industries which provide opportunities for field trips, student placement and research.
- industry experience through reflective work-based placements and research project.
- support networks that include 1:1 and group tutorials for personal progress and an academic development programme for transferable skills at every level of study.
- level induction programmes and introductory coursework that will provide up-skilling and initial 1:1 formative feedback on learner academic standards reached.
- flexibility of study through full time and part time routes.



## 5. Support for students and their learning

During induction week all learners are provided with a personal tutor. Formal meetings with the personal tutor are scheduled for a minimum of four times per year (two per semester). Additional pastoral tutorials can be requested by either the learner or tutor to review academic and personal progress.

Learners with diagnosed learning disabilities on the programme will have their support reviewed by the Additional Learning Support (ALS) team. Introduction coursework also reviews learner skills and could identify individuals that need to be referred to the ALS team for further screening. DSA applications for support will be supported.

Support for mental health issues is also available via the college wellbeing or counselling team. Learners will be supported in accessing this service if required or details are available on the college VLE.

The Colleges HEADStart programme (level 4) and departmental academic development sessions (level 4 and 5) support learners (*Appendix 3*). These sessions develop higher level skills such as:

- identification of suitable resources
- plagiarism/collusion
- use of academic databases
- how to 'read' scientific literature
- presentation of academic coursework
- communication skills (presentations/viva's)
- production of academic electronic posters
- data analysis
- project topic research and discussion
- evaluative skills

Accompanying advice leaflets/booklets are provided on the college programme VLE.

At Bridgwater and Taunton Colleges' Cannington Campus, the HE Learning Resource Centre is also available to learners for self-study or further resource assistance which is provided by LRC staff.

Other resources are available and the Bridgwater Campus and Taunton Campus (University Centre Somerset). Information about these facilities will be disseminated at induction.

## 6. Criteria for admission

To gain entry onto the FD candidates must have:

Minimum 64 UCAS tariff points at AS/A2 level (minimum 32 points at A2 or equivalent)

**OR**

Minimum 64 UCAS tariff points in a vocational diploma qualification  
e.g. BTEC (QCF): MPP (Extended), MM (90 Credit Diploma)  
C&G Advanced Technical: M (1080), M (720), D (540)

**OR**

Access to HE Diploma in a relevant subject area

**AND**

5 GCSE's including English language, mathematics, and science to a minimum of GCSE Grade between 9 to 4 (GCSE A\* to C) are required.

The nature of this study requires GCSE Grade between 9 to 4 (GCSE A\* to C) in English language, mathematics, and science or equivalent qualification(s).

Under exceptional circumstances, a conditional offer may be made to a prospective student to include an expectation of working towards GCSE mathematics Grade 4 or level 2 numeracy alongside completing a degree programme.

Applicants with English as their second language must have a minimum IELTS level 6 or equivalent.

## 7. Language of study

All classes are conducted in English. If English is not your first language you will be asked to provide evidence of your English language ability to apply and start the course. The standard English language requirement for entry is IELTS 6.0 or equivalent.

## 8. Information about non-OU standard assessment regulations (including PSRB requirements)

n/a

### **9 For apprenticeships in England End Point Assessment (EPA)**

(Summary of the approved assessment plan and how the academic award fits within this and the EPA)

n/a

### **10. Methods for evaluating and improving the quality and standards of teaching and learning.**

The quality of the learning programmes is reviewed via the following processes throughout the academic year:

- *Student Feedback through Programme Meetings held once a semester*
- *Teaching/Peer observations and staff development reviews*
- *Statistical information considering issues such as pass rate and module grades*
- *Student Feedback (Student Voice) including UCS student evaluation questionnaires (SPQ) and National Student Survey results (NSS: if student numbers >10)*
- *Self-Evaluation Reports reflecting on the previous academic year and evaluated by the College's academic boards*
- *External Examiner reports (considering quality and standards)*
- *Academic reviewer feedback*

### **10. Changes made to the programme since last (re)validation**

*November 2022: Approval of changing Examinations to Time Constraint Essays.*

### Annex 1. Curriculum Map.

These tables indicate which study modules assume responsibility for delivering (shaded) and assessing (✓) particular programme learning outcomes.

Level	Study module	A1	A2	B1	C1	C2	D1
4	AMEC101 Employability and Communication				✓	✓	
	AMEC102 Management of Captive Animals		✓		✓	✓	✓
	AMEC103 Animal Health Diagnostics	✓			✓		✓
	AMEC104 Introduction to Ecological Principles and Habitats	✓	✓	✓			
	AMEC105 Enclosure and Enrichment Design			✓	✓		✓
	AMEC106 Field and Behavioural Monitoring Techniques			✓	✓		✓

Level	Study module	A3	A4	B2	C3	D2	D3
5	AMEC201 Research Project			✓	✓	✓	✓
	AMEC202 Experimental Design and Analysis	✓		✓		✓	
	AMEC203 Applied Animal Welfare and Ethics	✓					✓
	AMEC204 British Wildlife		✓	✓			✓
	AMEC205 Evolution and Adaptation	✓	✓			✓	
	AMEC206 Human Impacts on Animals and the Environment		✓	✓	✓		

Appendix 1.

FD Animal Management, Ecology and Conservation Full Time: *Module Semester Map.*

Level 4	
Semester 1	Semester 2
Work Based Learning Hours (External)	
AMEC101 Employability and Communication (20)	
AMEC102 Management of Captive Animals (20)	
AMEC103 Animal Health Diagnostics (20)	AMEC105 Enclosure and Enrichment Design (20)
AMEC104 Introduction to Ecological Principles and Habitats (20)	AMEC106 Field and Behavioural Monitoring Techniques (20)
Total 120 level 4 credits	

Level 5	
Semester 1	Semester 2
AMEC201 Research Project (20)	
AMEC202 Experimental Design and Analysis (20)	
AMEC201 Applied Animal Welfare and Ethics (20)	AMEC 205 Evolution and Adaptation (20)
AMEC204 British Wildlife (20)	AMEC206 Human Impacts on Animals and the Environment (20)
Total 120 level 5 credits	

FD Animal Management, Ecology and Conservation Part Time: *Module Semester Map.*

Level 4: Year 1	
Semester 1	Semester 2
Work Based Learning Hours (External)	
AMEC 101 Employability and Communication (20)	
AMEC102 Management of Captive Animals (20)	
AMEC103 Animal Health Diagnostics (20)	AMEC105 Enclosure and Enrichment Design (20)
Total 80 level 4 credits	

Level 4 and 5: Year 2	
Semester 1	Semester 2
Work Based Learning Hours (External)	
AMEC104 Introduction to Ecological Principles and Habitats (20)	AWEC105 Field and Behavioural Monitoring Techniques (20)
AMEC 201 Applied Animal Welfare and Ethics (20)	AMEC206 Evolution and Adaptation (20)

<b>Total 80 credits (40 level 4 and 40 level 5)</b>
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<b>Level 5: Year 3</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMWC201 Research Project (20)</b>	
<b>AMWC202 Experimental Design and Analysis (20)</b>	
<b>AMEC204 British Wildlife (20)</b>	<b>AMEC206 Human Impacts on Animals and the Environment (20)</b>
<b>Total 80 level 5 credits</b>	

## **Appendix 2.**

### **Work-Based Learning.**

Work-Based Learning within this programme has been designed with employer involvement and is intended to equip learners with the skills and knowledge relevant to industry-related employment. It incorporates requirements of a Foundation Degree (FD). Subject content throughout level 4 provides a balance between the practical/vocational/technical and academic aspects of the programme. WBL has been fully embedded into the design, delivery, and assessment of the programme.

Learning outcomes for WBL relate to technical skills, vocationally relevant knowledge, personal and interpersonal skills. WBL should have been designed to support staff to contribute to the business objectives of the employer. The key factor in the design is the relationship between theoretical knowledge and practical work taught in the programme linking to the workplace (Table 1).



**Table 1.** Outline of module learning outcomes at level 4 developing practical, vocational, and technical aspects relevant to employability skills within the programme.

Module	Mapping Application of Module Learning Outcomes to Work-Based Learning
<b>AMEC101 Employability and Communication</b>	<b>C1:</b> To gain and reflect upon vocationally relevant professional experience within an animal, ecological and/or conservation organisation(s) through industry practice and networking opportunities.
	<b>C2:</b> Outline how to work safely and effectively by assessing a work environment and producing a risk assessment on an industry related activity
	<b>D1:</b> Communicate personal, academic, and practical skills in a covering letter, CV, and interview in relation to a career opportunity
<b>AMEC102. Management of Captive Animals</b>	<b>A1:</b> Research, describe and justify husbandry approaches used in captive animal management in relation to a species natural history
	<b>C1:</b> Working safely, organise and demonstrate a captive animal husbandry practical skill
	<b>C2:</b> Work effectively as part of an animal husbandry team and reflect on practical skills feedback to create a personal plan for improvement and/or development
	<b>D1:</b> Communicate species specific information to an audience using appropriate scientific language
<b>AMEC103 Animal Health Diagnostics</b>	<b>A1:</b> Outline a veterinary disease that may contribute to poor animal health and discuss measures used to prevent, treat, and control it.
	<b>B1:</b> Analyse a veterinary sample and interpret the findings
	<b>C1:</b> Present a laboratory risk and COSHH assessment
	<b>D1:</b> Undertake, interpret, and present practical work in a scientific format
<b>AMEC104 Introduction to Ecological Principles and Habitats</b>	<b>A3:</b> Identify a range of habitats and explain factors that affect communities, ecosystems, and the distribution of species within environments
	<b>B1:</b> Explore and explain appropriate site requirements for habitats and species
<b>AMEC105 Enclosure and Enrichment Design</b>	<b>A1:</b> Outline and justify an industry enclosure design for a named animal species in relation to its ability to improve animal welfare.
	<b>B1:</b> Explain the success of an enrichment programme in relation to meeting the needs of a named animal species
	<b>C1:</b> Design, implement and monitor an enrichment programme for a named animal species
	<b>D1:</b> Use recording equipment and editing software construct an electronic diary of animal behaviour in response to enrichment as part of collaborative working.
<b>AMEC106 Field and Behavioural Monitoring Techniques</b>	<b>B1:</b> Outline recommendations as to the management of an animal population in a specific habitat based on monitoring outcomes
	<b>C1:</b> Describe specific field techniques to survey species in a natural habitat.
	<b>C2:</b> Identify appropriate methods to monitor and analyse the behaviour of animals.
	<b>D1:</b> Present, analyse and discuss behavioural data

### Employability and Communication Module: Work-based Learning Student Requirements

Within the 100 hours, **FT and/or PT** learners will be expected to:

- gain a placement within an animal and/or conservation-based organisation completing **at least 70 hours** work-based learning to gain practical experience

within relevant animal management and/or conservation industries. The hours maybe completed at one or more placements.

- Network via seeking and attending external industry/organisational talks and/or conferences (**minimum 30 hours**). This develops networking and personal interests within the industry.

**Work-Based Learning: Tracking and Support for Students on Placement.**

- ❖ Students have a named WBL tutor on the programme who tracks the students' progress within the placement through regular contact. There is a dedicated email address for Land-based WBL.
- ❖ There is a WBL co-ordinator for Land-based who is responsible for approving the placement through health and safety checks.
- ❖ The student register's the placement via an online WBL Placement Teams Form. This is sent to the WBL Co-ordinator. The student completes this for each placement provider. The WBL co-ordinator is also a point of contact for the WBL provider if there are issues
- ❖ The Land-based WBL Co-ordinator undertakes Health and Safety checks with the placement provider. When the placement is approved, an email is sent to the student to contact the placement and arrange to start. If the placement is not approved the student will need to find an alternative placement.
- ❖ Hours are entered and checked via a WBL platform by both students and employer.

### Appendix 3. Academic Development Programme.

<p><b>Level 4 Topics</b></p>	<ul style="list-style-type: none"> <li>• HEADStart programme to include plagiarism/collusion, referencing, academic literature searches.</li> <li>• Introduction assignment on Literature searches (1:1 feedback)</li> <li>• Studying at higher levels: expectations and support</li> <li>• Active/Passive Learning</li> <li>• Oral presentations and practice</li> <li>• Creating electronic posters: information gathering</li> <li>• What is a viva?</li> <li>• Guide to coursework presentation</li> <li>• Writing reports and essays</li> <li>• Using contextualised criteria to improve assessment grades</li> <li>• Types of feedback</li> <li>• Reporting practical science.</li> <li>• How to revise: time management and learning strategies</li> <li>• Digimap: Mapping resource</li> <li>• Reading and Interpreting results sections in scientific papers</li> <li>• Keeping a laboratory notebook for practical's/research/projects/dissertations</li> <li>• Introduction to Statistical Terms and Analysis</li> <li>• Basic Introduction to Minitab for Statistical Analysis</li> <li>• Selecting and designing a Research Project</li> <li>• PDP production and skills reflection</li> </ul>
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<b>Level 5 Topics</b>	<ul style="list-style-type: none"><li>• Review and update on Literary searches</li><li>• Introduction assignment on arguing research topics (1:1 feedback)</li><li>• Review of level 4 feedback: Looking forward to improving academic achievement</li><li>• Studying at Level 5: expectations and support</li><li>• Analytical and Evaluative research</li><li>• Developing an argument</li><li>• Reporting research: journal articles and book writing</li><li>• PDP production and skills reflection at level 5.</li><li>• Research ethics</li><li>• Debates and conferences</li><li>• Personal and career planning at level 5</li><li>• Selecting and designing dissertation at level 6.</li></ul> <p><b>Plus review of skills from level 4 as requested by learners.</b></p>
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**Programme specification - BSc (Hons) Animal Management, Ecology and Conservation**

**1. Overview/ factual information**

<b>Programme/award title(s)</b>	BSc (Hons) Animal Management, Ecology and Conservation
<b>Teaching Institution</b>	University Centre Somerset / Bridgwater and Taunton College
<b>Awarding Institution</b>	The Open University (OU)
<b>Date of first OU validation</b>	April 2018
<b>Date of latest OU (re)validation</b>	March 2023
<b>Next revalidation</b>	April 2028 (5 years)
<b>Credit points for the award</b>	360 (120 at level 4, 120 at level 5 and 120 at level 6)
<b>UCAS Code</b>	D303
<b>HECoS Code</b>	100518
<b>LDCS Code (FE Colleges)</b>	
<b>Programme start date and cycle of starts if appropriate</b>	September 2023
<b>Underpinning QAA subject benchmark(s)</b>	Biosciences (2019) Earth Sciences, Environmental Sciences and Environmental Studies (2019)
<b>Other external and internal reference points used to inform programme outcomes</b>	QAA UK Quality Codes for HE (2018) QAA Foundation Degree Characteristics Statement (2020) SEEC Credit Level Descriptors (2016)
<b>Professional/statutory recognition</b>	n/a
<b>Mode(s) of Study (PT, FT, DL, Mix of DL &amp; Face-to-Face)</b>	FT, Face-to-Face
<b>Duration of the programme for each mode of study</b>	Three years Full Time (FT) Face-to Face
<b>Dual accreditation (if applicable)</b>	n/a
<b>Date of production of this specification</b>	November 2022

**Please note: This specification provides a concise summary of the main features of the programme, and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided.**

**More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in student module guide(s) and the student's handbook.**

**The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.**

## 2.1 Educational aims and objectives

### Overview.

The BSc (Hons) Animal Management, Ecology and Conservation has been developed as a broad-based programme to attract learners that would like to study general animal and habitat management, ecology, and wildlife conservation theory alongside gaining practical competencies in preparation for higher study and/or employment.

The programme has been developed in consultation with students and reflection on industry employability. It uses academically challenging vocational learning and real-life experiences to support the curriculum, in doing so, developing research, analytical and critically evaluative skills that stretch and challenge learners.

**The overall programme aim** is to provide an integrative framework for animal management, ecology and conservation allowing the development of graduates that are competent in managing animal collections along with studying ecological relationships/conservation strategies between living organisms and their environments, with the ability to apply appropriate tools and techniques to demonstrate technical competence.

### **The vocational programme aims are to produce graduates that have:**

- developed knowledge to formulate, criticise and/or evaluate principles, theories and techniques used to manage and conserve individual animals, species, populations, habitats, and ecosystems within a range of contexts.
- developed scientific practical skills required to formulate, study, and interpret animal management, ecological and conservation problems and processes in individual animals, species, populations, habitats and ecosystems within field and laboratory situations.
- an awareness of the legislative and ethical implications of a range of behaviour, welfare, and environmental issues within a range of animal management, ecology and wildlife conservation situations and industries in the UK and worldwide.
- been provided with an awareness of the dynamic nature of the subject resulting from rapid modern developments in research findings and applications to encourage lifelong learning.
- been provided with a range of teaching and learning experiences to help focus student career aspirations and decision making as responsible members of society and industry.
- facilitated personal development to improve their capability and resourcefulness in a range of academic competencies and are therefore prepared for higher study, research and/or employment.
- facilitated work-based learning and networking by seeking and participating in opportunities to interact with industry, potential employers, and the academic community.

## 2.2 Relationship to other programmes and awards

(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

### ***Full Time/ Part Time Routes.***

The BSc (Hons) is delivered as a Full-Time route via face-to-face study.

If students require a PT route, a FD with a BSc (Hons) Top-up articulation is possible.

### ***Withdrawal or Failure to Complete BSc (Hons).***

If a learner withdraws or fails to complete the BSc (Hons) qualifications (a total of 360 credits made up of; 120 level 4 credits, 120 level 5 credits and 120 level 6 credits). The following are available as exit awards:

- **Individual Module Accreditation:** any modules successfully completed will be awarded the relevant credit.  
**or**
- a **Professional Certificate** exit award is available after successfully completing 60 specific credits.  
**or**
- a **Certificate in Higher Education (CertHE)** exit award is available after successfully completing a total of 120 level 4 credits.  
**or**
- a **Foundation Degree (FD)** exit award is available after successfully completing a total of 240 credits made up of; 120 level 4 credits and 120 level 5 credits.  
**or**
- a **BSc (Ordinary) Degree** exit award is available after successfully completing a total of 300 credits made up of; 120 level 4 credits, 120 level 5 credits and 60 level 6 credits.

### ***Progression.***

Progression onto MSc Qualifications is possible after successfully completing the BSc (Hons). A higher BSc (Hons) grade i.e., 2.1 or 1<sup>st</sup>, academic reference and successful interview maybe required for this progression. Learners would need to check with the MSc programme provider as to the entry requirements and will be encouraged to do this at level 4 and 5 of their qualification.

Examples of MSc qualifications include topic areas such as:

- Animal Behaviour
- Ecology and Conservation
- Animal Behaviour and Welfare
- Wildlife Conservation
- Conservation Biology
- Zoo Conservation Biology



PhD progression could also be possible upon successful learner academic reference, application, and successful interview with the relevant provider. A higher BSc (Hons) grade i.e., 2.1 or 1<sup>st</sup> is normally required.

### 2.3 For Foundation Degrees, please list where the 60-credit work-related learning takes place

**Work-based learning opportunities** are embedded as part of the BSc (Hons) qualification as learners will benefit from this experience and it forms a basis of a FD exit qualification. The programme embeds a range of transferable employability skills into all modules. All level 4 modules contain learning outcomes that embed work-based learning skills within the programme. Employers have supported the programme content in relation to employability skills.

**Appendix 2** relates module learning outcomes to employability skills, summarises the work-based learning requirements of the programme and outlines the process for recording/tracking student work-based learning experiences.

At level 4 the '*Employability and Communication*' module contains a **100-hour minimum element related to work-based learning**. Learners are expected to successfully complete these hours within this module to progress to level 5. Assessment consolidates the work-based learning experience and employability skills.

Learners will be expected to submit documentation confirming their placement and appropriate employers' liability insurance details. These will be reviewed by the work-based learning co-ordinator (Land-based) for approval before the placement commences. The work-based learning co-ordinator maintains a record of placements and will review health and safety with placement providers. Any providers that fail to comply will not be used as a placement and learners will be refused authorisation for the placement. Further details of this process are provided in **Appendix 2**.

Industry related experience will be also developed through the programme by:

- incorporating industry/environmental related visits to events, organisations, and industry within the programme to apply theories to practical/industrial situations. These are optional, but students will be informed of these trips and encouraged to participate.
- encouraging opportunities for learners to work with industry or organisations to undertake a small-scale primary research project and/or dissertation. This opportunity would develop student's organisational, interpersonal, critical, and evaluative skills into contextualised situations.

## 2.4 List of all exit awards

- **Individual Module Accreditation:** any modules successfully completed will be awarded the relevant credit.
- **Professional Certificate** (For modules AMEC102, AMEC103 and AMEC105, 60 credits, at Level 4)
- **CertHE Animal Management, Ecology and Conservation**  
(Total 120 level 4 credits)
- **FD Animal Management, Ecology and Conservation**  
(Total 240 credits made up from 120 level 4 credits and 120 level 5 credits)
- **BSc (Ordinary) Animal Management, Ecology and Conservation**  
(Total 300 credits made up from 120 level 4 credits, 120 level 5 credits and 60 level 6 credits)

### 3. Programme structure and learning outcomes

An overview of module semester structure for the programme is shown in Appendix 1.

Programme Structure - LEVEL 4					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC101 Employability and Communication.	20			No	1&2
AMEC102 Management of Captive Animals	20			Yes	1&2
AMEC103 Animal Health Diagnostics	20			Yes	1
AMEC104 Introduction to Ecological Principles and Habitats	20			Yes	1
AMEC105 Enclosure and Enrichment Design	20			Yes	2
AMEC106 Field and Behavioural Monitoring Techniques	20			Yes	2

Intended learning outcomes at Level 4 are listed below:

**Note:** FDCS; Foundation Degree Characteristic Statement link for FD exit award.

Learning Outcomes – LEVEL 4	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>A1:</b> Describe and discuss fundamental concepts, principles and theories in animal behaviour, health and ecology in relation to the management and conservation of species, populations and ecosystems (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Debates/peer discussions</li> <li>• Case studies</li> <li>• Workshops</li> <li>• Tutorials</li> <li>• Problem-based learning</li> <li>• Practical: Fieldwork/Labortary /Animal management</li> <li>• WBL/personal experience</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Group Portfolio</li> <li>• Poster and Viva</li> </ul>

**Learning Outcomes – LEVEL 4**

**3A. Knowledge and understanding**

**A2:** Identify and explain the husbandry of animal species and ecology of habitats to facilitate effective management and conservation (FDCS).

**LTS:**

- Lectures
- Debates
- Case studies
- Workshops
- Practical: Fieldwork
- Peer and collaborative learning/Teamwork
- WBL/personal experience

**Assessment:**

- Oral Presentation (Group Showcase)
- Technical Report
- Time Constrained Essay

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>B1:</b> Identify, explain, and justify core practical and/or analytical methods for animal and ecological monitoring to facilitate effective management.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Tutorials</li> <li>• Discussion</li> <li>• Case studies</li> <li>• Practical Fieldwork/ Laboratory /Animal management</li> <li>• Problem based learning</li> <li>• WBL experience</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Laboratory Report</li> <li>• Technical Report</li> <li>• Group Electronic Diary and Data Interpretation</li> <li>• Case Study Presentation</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C1:</b> Describe and/or discuss skills developed through handling, husbandry, laboratory and/or field studies in relation to animal management ecology and wildlife conservation theory to demonstrate safe practical competency that can be applied in research and/or industry (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures/Seminars/Tutorials</li> <li>• Reflective practice</li> <li>• Case studies</li> <li>• Practical Fieldwork / Laboratory /Animal management</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning/Teamwork</li> <li>• WBL, personal experience</li> <li>• Data interpretation</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Risk/COSHH Assessment</li> <li>• Work-Based Learning</li> <li>• Personal Development in Practical Skills</li> <li>• Group Electronic Diary and Interpretation</li> <li>• Data Analysis (Behavioural)</li> <li>• Case Study Presentation (Fieldwork)</li> </ul>

### 3C. Practical and professional skills

**C2:** Demonstrate personal development, management skills and work productively with others competently in industry-based settings (FDCS).

**LTS:**

- Lectures
- Seminars
- Reflective practice
- WBL experience
- Networking
- Case studies
- Peer and collaborative working

**Assessment:**

- Work-Based Learning Experience
- Work Place Activity and Self-Reflection
- Personal Development in Practical Skills



<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>D1:</b> Identify, summarise, interpret and communicate a variety of subject-specific information and/or data to diverse audiences using appropriate scientific language (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Case studies</li> <li>• Practical Laboratory/ Animal management</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• WBL experience</li> <li>• Use of electronic recording methods</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Covering Letter, CV, and Interview</li> <li>• Oral presentataion (Group Showcase)</li> <li>• Laboratory Report (Risk.COSHH Assessment)</li> <li>• Group Electronic Diary and Data Interpretation</li> <li>• Data Analysis (Behavioural)</li> </ul>

**Exit Awards:**

**Professional Certificate (For modules AMEC102, AMEC103 and AMEC105, 60 credits, at Level 4)**  
**CertHE Animal Management, Ecology and Conservation (120 credits at level 4: Total 120 credits)**

Programme Structure - LEVEL 5					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC201 Research Project	20			Yes	1&2
AMEC202 Experimental Design and Analysis	20			Yes	1&2
AMEC203 Applied Animal Welfare and Ethics	20			Yes	1
AMEC204 British Wildlife	20			Yes	1
AMEC205 Evolution and Adaptation	20			Yes	2
AMEC206 Human Impacts on Animals and the Environment	20			Yes	2

Intended learning outcomes at Level 5 are listed below:

Learning Outcomes – LEVEL 5	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>A3:</b> Outline and evaluate animal management, ethics, legislation, policy, and welfare in relation to anthrozoology (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorials</li> <li>• Reflective practice</li> <li>• Case studies</li> <li>• Seminars</li> <li>• Debates</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Proposal, Risk/Ethical Assessment</li> <li>• Time Constrained Essay</li> <li>• Essay</li> </ul>

**Learning Outcomes – LEVEL 5**

**3A. Knowledge and understanding**

**A4:** Examine and apply information as to how animal individuals and populations interrelate/interact with each other and humans as part of an environment, community structure and/or ecosystem (FDCS).

**LTS:**

- Lectures
- Case studies
- Seminars
- Problem based learning
- Peer and collaborative learning
- Practical
- Debates

**Assessment:**

- Newspaper Article
- Essay
- Thought Paper

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>B2:</b> Gather, interpret, and analyse evidence in order to address familiar or unfamiliar problems, case studies, experimental data and/or research in relation to animal management, ecology and conservation with reference to industry practice, cultures and/or sectors of society (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Tutorials</li> <li>• Discussion/Debate</li> <li>• Case studies</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> <li>• Reflective practice</li> <li>• Interaction with industry professionals</li> <li>• Practical study</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research report (Style of Journal article)/Research Proposal</li> <li>• Group Oral Presentation</li> <li>• Blog</li> <li>• Data Interpretation</li> <li>• Oral Presentation</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C3:</b> Design, conduct, analyse and report on investigations which may involve primary and/or secondary literature and/or data that solves problems and/or research in a safe, timely and independent manner (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Case studies</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• Data analysis</li> <li>• Interaction with industry professionals</li> <li>• Portfolio building</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Report (Style of Journal Article)</li> <li>• Blog</li> <li>• Oral Presentation</li> </ul>

<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i>  <b>D2:</b> Collect, record, present and/or analyse data using appropriate scientific techniques using types of visual representations and/or statistical digital tools/formulae.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorials</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Data analysis</li> <li>• Case studies</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Report (Style of Journal Article)</li> <li>• Data Analysis Portfolio</li> </ul>

<b>3D. Key/transferable skills</b>	
<p><b>D3:</b> Investigate, examine, and evaluate subject-specific literature to undertake dialogue, debate and/or reporting of research, opinions and/or ethics (FDCS).</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Seminars</li> <li>• Tutorial</li> <li>• Self directed study and research</li> <li>• Peer and collaborative learning</li> <li>• Problem based learning</li> <li>• Practical research</li> <li>• Interaction with independent practitioners/industry</li> <li>• Data analysis</li> <li>• Case studies</li> <li>• Reflective practice</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Research Report (Style of Journal Article)</li> <li>• Group Oral Presentation</li> <li>• Newspaper Article</li> <li>• Thought Paper</li> </ul>

**Level 5 Exit Awards:**

**CertHE Animal Management, Ecology and Conservation (120 credits at level 4: Total 120 credits)**

**FD Animal Management, Ecology and Conservation (120 credits at level 4 and 120 credits at level 5: Total 240 credits)**



Programme Structure - LEVEL 6					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC301 Dissertation	40			No	1&2
AMEC302 Animal Cognition and Consciousness	20			Yes	1
AMEC303 Ecological Monitoring and Habitat Management	20			Yes	1
AMEC304 Current Affairs in Animal Conservation	20			Yes	2
AMEC305 Animal Behavioural Management	20			Yes	2

Intended learning outcomes at Level 6 are listed below:

Learning Outcomes – LEVEL 6	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>A5:</b> Review and critically evaluate current theories, methodologies, factors, paradigms, concepts, or principles that can be applied to the management, ecology and conservation of animals and habitats as part of industry practice and/or management plans.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Discussion/debates</li> <li>• 1:1 tutorials</li> <li>• Case studies</li> <li>• Seminars</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> <li>• Reflective practice/Interaction with industry professionals</li> <li>• Practical work/Media output</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Time Constrained Essay</li> <li>• Thought Paper on Industry Case Study</li> <li>• Portfolio on Written Media Types</li> <li>• Group Case Study Presentation</li> </ul>

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i>  <b>B3:</b> Propose and critically appraise subject-specific evidence in relation to the behavioural, legislative, moral, and ethical aspects in relation to advances in animal management, ecology, and conservation.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• 1:1 tutorials/Seminars</li> <li>• Case studies</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> <li>• Reflective practice</li> <li>• Practical research</li> <li>• Discussion/debate</li> <li>• Self-directed study and research</li> <li>• Interaction with industry professionals</li> <li>• Practical work/Media output</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Oral presentation</li> <li>• Time Constrained Essays</li> <li>• Poster and Viva</li> <li>• Portfolio of Written Media Types</li> <li>• Case Study Report</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C4:</b> Generate independent thought to create methodologies and critically evaluate practical data, in order to propose solutions and make recommendations to solve research hypotheses in relation to, animal management, ecological and/or conservation problems in a safe, timely and ethical manner.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• 1:1 tutorials</li> <li>• Case studies</li> <li>• Seminars</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• Data analysis</li> <li>• Interaction with industry professionals</li> <li>• Practical work</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Poster and Viva</li> <li>• Case Study Report</li> </ul>

<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i>  <b>D4:</b> Review, debate and critically evaluate subject specific information from research using appropriate language to specialist and non-specialist audiences using a variety of media communication types.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• 1:1 tutorials</li> <li>• Case studies</li> <li>• Self directed study and research</li> <li>• Data analysis</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• Practical work</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation/Oral Presentation of Research Findings</li> <li>• Oral Presentation</li> <li>• Poster and viva</li> <li>• Portfolio of Written Media Types/ Radio Interview</li> <li>• Group Case Study Presentation</li> <li>• Case Study Report</li> </ul>

**Level 6 Exit Awards:**

**FD Animal Management, Ecology and Conservation (120 credits at level 4 and 120 credits at level 5: Total 240 credits)**

**BSc Animal Management, Ecology and Conservation (Ordinary Degree) (120 credits at level 4, 120 credits at level 5 and 60 credits at level 6: Total of 300 credits)**

#### 4. Distinctive features of the programme structure

- Where applicable, this section provides details on distinctive features such as:
- where in the structure above a professional/placement year fits in and how it may affect progression
- any restrictions regarding the availability of elective modules where in the programme structure students must make a choice of pathway/route

#### ***General Distinctive Features.***

The programme provides:

- a breadth of reflective and evaluative academic and practical experience for students within the animal management ecology and wildlife conservation industries.
- graduates equipped with a range of skills securely underpinned by fundamental principles and theories of animal management/ecology/conservation with a clear application to industry and research, in order that they can progress to the workplace and/or higher study.
- access to an excellent range of facilities to support their learning and progression to the workplace and/or higher-level studies/research. This includes an extensive animal collection at Bridgwater and Taunton College's Cannington Campus and external environments in the locality such as Steart Wetlands.
- a strong teaching team with lifelong industry related experience and academic qualifications.
- links in the locality and nationally to zoological, ecological, environmental and wildlife organisations/industries which provide opportunities for field trips, student placement and research.
- to gain experience in Health and Safety/Risk Assessments/Ethical Reviews to prepare for employment and/or further study.
- support networks that include 1:1 and group tutorials for personal progress and an academic development programme for transferable skills at every level of study (outline of academic development skills programme in Appendix 3).
- level induction programmes and introductory coursework that will provide up-skilling and initial 1:1 formative feedback on learner academic standards reached.

#### **Restrictions regarding the availability of optional modules**

n/a

## 5. Support for students and their learning

During induction week all learners are provided with a personal tutor. Formal meetings with the personal tutor are scheduled for a minimum of four times per year (two per semester). Additional pastoral tutorials can be requested by either the learner or tutor to review academic and personal progress.

Learners with diagnosed learning disabilities on the programme will have their support reviewed by the Additional Learning Support (ALS) team. Introduction coursework also reviews learner skills and could identify individuals that need to be referred to the ALS team for further screening. DSA applications for support will be supported.

Support for mental health issues is also available via the college wellbeing or counselling team. Learners will be supported in accessing this service if required or details are available on the college VLE.

The Colleges HEADStart programme (level 4) and departmental academic development sessions (level 4, 5 and 6) support learners (*Appendix 3*). These sessions develop higher level skills such as:

- identification of suitable resources
- plagiarism/collusion
- use of academic databases
- how to 'read' scientific literature
- presentation of academic coursework
- communication skills (presentations/viva's)
- production of academic electronic posters
- data analysis
- project/dissertation topic research and discussion
- critical analysis and evaluative skills

Accompanying advice leaflets/booklets are provided on the college programme VLE.

At Bridgwater and Taunton Colleges' Cannington Campus, the HE Learning Resource Centre is also available to learners for self-study or further resource assistance which is provided by LRC staff.

Other resources are available and the Bridgwater Campus and Taunton Campus (University Centre Somerset). Information about these facilities will be disseminated at induction.

## 6. Criteria for admission

To gain entry onto the BSc (Hons) candidates must have:

Minimum 80 UCAS tariff points at AS/A2 level (minimum 32 points at A2 or equivalent)

**OR**

Minimum 80 UCAS tariff points in a vocational diploma qualification  
 e.g., BTEC (QCF) MMP (Extended), DM (90 Credit Diploma)  
 C&G Advanced Technical: M (1080), D (720), D\* (540)

**OR**

Access to HE Diploma in a relevant subject area

**AND**

5 GCSE's including English language, mathematics, and science to a minimum of GCSE Grade between 9 to 4 (GCSE A\* to C) are required.

The nature of this study requires GCSE Grade between 9 to 4 (GCSE A\* to C) in English language, mathematics, and science or equivalent qualification(s).

Under exceptional circumstances, a conditional offer may be made to a prospective student to include an expectation of working towards GCSE mathematics Grade 4 or level 2 numeracy alongside completing a degree programme.

Applicants with English as their second language must have a minimum IELTS level 6 or equivalent.

## 7. Language of study

All classes are conducted in English. If English is not your first language you will be asked to provide evidence of your English language ability to apply and start the course. The standard English language requirement for entry is IELTS 6.0 or equivalent.

## 8. Information about non-OU standard assessment regulations (including PSRB requirements)

n/a



### 9 For apprenticeships in England End Point Assessment (EPA)

(Summary of the approved assessment plan and how the academic award fits within this and the EPA)

n/a

### 10. Methods for evaluating and improving the quality and standards of teaching and learning.

The quality of the learning programmes is reviewed via the following processes throughout the academic year:

- *Student Feedback through Programme Meetings held once a semester*
- *Teaching/Peer observations and staff development reviews*
- *Statistical information considering issues such as pass rate and module grades*
- *Student Feedback (Student Voice) including UCS student evaluation questionnaires (SPQ) and National Student Survey results (NSS: if student numbers >10)*
- *Self-Evaluation Reports reflecting on the previous academic year and evaluated by the College's academic boards*
- *External Examiner reports (considering quality and standards)*
- *Academic reviewer feedback*

### 10. Changes made to the programme since last (re)validation

*November 2022: Approval of changing Examinations to Time Constraint Essays.*

## Annex 1. Curriculum Map.

These tables indicate which study modules assume responsibility for delivering (shaded) and assessing (✓) particular programme learning outcomes.

Level	Study module	A1	A2	B1	C1	C2	D1
4	AMEC101 Employability and Communication				✓	✓	
	AMEC102 Management of Captive Animals		✓		✓	✓	✓
	AMEC103 Animal Health Diagnostics	✓			✓		✓
	AMEC104 Introduction to Ecological Principles and Habitats	✓	✓	✓			
	AMEC105 Enclosure and Enrichment Design			✓	✓		✓
	AMEC106 Field and Behavioural Monitoring Techniques			✓	✓		✓

Level	Study module	A3	A4	B2	C3	D2	D3
5	AMEC201 Research Project			✓	✓	✓	✓
	AMEC202 Experimental Design and Analysis	✓		✓		✓	
	AMEC203 Applied Animal Welfare and Ethics	✓					✓
	AMEC204 British Wildlife		✓	✓			✓
	AMEC205 Evolution and Adaptation	✓	✓			✓	
	AMEC206 Human Impacts on Animals and the Environment		✓	✓	✓		

Level	Study module	A5	B3	C4	D4
6	AMEC301 Dissertation	✓	✓	✓	✓
	AMEC302 Animal Cognition and Consciousness	✓	✓		
	AMEC303 Ecological Monitoring and Habitat Management		✓	✓	✓
	AMEC304 Current Affairs in Animal Conservation		✓		✓
	AMEC305 Animal Behavioural Management	✓	✓		

**Appendix 1.**

**BSc (Hons) Animal Management, Ecology and Conservation Full Time only:  
Module Semester Map.**

<b>Level 4</b>	
<b>Semester 1</b>	<b>Semester 2</b>
Work Based Learning Hours (External)	
AMEC101 Employability and Communication (20)	
AMEC102 Management of Captive Animals (20)	
AMEC103 Animal Health Diagnostics (20)	AMEC105 Enclosure and Enrichment Design (20)
AMEC104 Introduction to Ecological Principles and Habitats (20)	AMEC106 Field and Behavioural Monitoring Techniques (20)
<b>Total 120 level 4 credits</b>	

<b>Level 5</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMEC201 Research Project (20)</b>	
<b>AMEC202 Experimental Design and Analysis (20)</b>	
<b>AMEC203 Applied Animal Welfare and Ethics (20)</b>	<b>AMEC205 Evolution and Adaptation (20)</b>
<b>AMEC204 British Wildlife (20)</b>	<b>AMEC206 Human Impacts on Animals and the Environment (20)</b>
<b>Total 120 level 5 credits</b>	

<b>Level 6</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMEC301 Dissertation (40)</b>	
<b>AMEC302 Animal Cognition and Consciousness (20)</b>	<b>AMEC305 Animal Behavioural Management (20)</b>
<b>AMEC303 Ecological Monitoring and Habitat Management (20)</b>	<b>AMEC304 Current Affairs in Animal Conservation (20)</b>
<b>Total 120 level 6 credits</b>	

## **Appendix 2.**

### **Work-Based Learning.**

Work-Based Learning within this programme has been designed with employer involvement and is intended to equip learners with the skills and knowledge relevant to industry-related employment. It incorporates requirements of a Foundation Degree (FD). Subject content throughout level 4 provides a balance between the practical/vocational/technical and academic aspects of the programme. WBL has been fully embedded into the design, delivery, and assessment of the programme.

Learning outcomes for WBL relate to technical skills, vocationally relevant knowledge, personal and interpersonal skills. WBL has been designed to support staff to contribute to the business objectives of the employer. The key factor in the design is the relationship between theoretical knowledge and practical work taught in the programme linking to the workplace (Table 1).

**Table 1.** Outline of module learning outcomes at level 4 developing practical, vocational, and technical aspects relevant to employability skills within the programme.

Module	Mapping Application of Module Learning Outcomes to Work-Based Learning
<b>AMEC101 Employability and Communication</b>	<b>C1:</b> To gain and reflect upon vocationally relevant professional experience within an animal, ecological and/or conservation organisation(s) through industry practice and networking opportunities.
	<b>C2:</b> Outline how to work safely and effectively by assessing a work environment and producing a risk assessment on an industry related activity
	<b>D1:</b> Communicate personal, academic, and practical skills in a covering letter, CV, and interview in relation to a career opportunity
<b>AMEC102. Management of Captive Animals</b>	<b>A1:</b> Research, describe and justify husbandry approaches used in captive animal management in relation to a species natural history
	<b>C1:</b> Working safely, organise and demonstrate a captive animal husbandry practical skill
	<b>C2:</b> Work effectively as part of an animal husbandry team and reflect on practical skills feedback to create a personal plan for improvement and/or development
	<b>D1:</b> Communicate species specific information to an audience using appropriate scientific language
<b>AMEC103 Animal Health Diagnostics</b>	<b>A1:</b> Outline a veterinary disease that may contribute to poor animal health and discuss measures used to prevent, treat, and control it.
	<b>B1:</b> Analyse a veterinary sample and interpret the findings
	<b>C1:</b> Present a laboratory risk and COSHH assessment
	<b>D1:</b> Undertake, interpret, and present practical work in a scientific format
<b>AMEC104 Introduction to Ecological Principles and Habitats</b>	<b>A3:</b> Identify a range of habitats and explain factors that affect communities, ecosystems, and the distribution of species within environments
	<b>B1:</b> Explore and explain appropriate site requirements for habitats and species
<b>AMEC105 Enclosure and Enrichment Design</b>	<b>A1:</b> Outline and justify an industry enclosure design for a named animal species in relation to its ability to improve animal welfare.
	<b>B1:</b> Explain the success of an enrichment programme in relation to meeting the needs of a named animal species
	<b>C1:</b> Design, implement and monitor an enrichment programme for a named animal species
	<b>D1:</b> Use recording equipment and editing software construct an electronic diary of animal behaviour in response to enrichment as part of collaborative working.
<b>AMEC106 Field and Behavioural Monitoring Techniques</b>	<b>B1:</b> Outline recommendations as to the management of an animal population in a specific habitat based on monitoring outcomes
	<b>C1:</b> Describe specific field techniques to survey species in a natural habitat.
	<b>C2:</b> Identify appropriate methods to monitor and analyse the behaviour of animals.
	<b>D1:</b> Present, analyse and discuss behavioural data

### Employability and Communication Module: Work-based Learning Student Requirements

Within the 100 hours, **FT and/or PT** learners will be expected to:

- gain a placement within an animal and/or conservation-based organisation completing **at least 70 hours** work-based learning to gain practical experience



within relevant animal management and/or conservation industries. The hours maybe completed at one or more placements.

- Network via seeking and attending external industry/organisational talks and/or conferences (**minimum 30 hours**). This develops networking and personal interests within the industry.

**Work-Based Learning: Tracking and Support for Students on Placement.**

- ❖ Students have a named WBL tutor on the programme who tracks the students' progress within the placement through regular contact. There is a dedicated email address for Land-based WBL.
- ❖ There is a WBL co-ordinator for Land-based who is responsible for approving the placement through health and safety checks.
- ❖ The student register's the placement via an online WBL Placement Teams Form. This is sent to the WBL Co-ordinator. The student completes this for each placement provider. The WBL co-ordinator is also a point of contact for the WBL provider if there are issues
- ❖ The Land-based WBL Co-ordinator undertakes Health and Safety checks with the placement provider. When the placement is approved, an email is sent to the student to contact the placement and arrange to start. If the placement is not approved the student will need to find an alternative placement.
- ❖ Hours are entered and checked via a WBL platform by both students and employer.

### Appendix 3. Academic Development Programme.

<p><b>Level 4 Topics</b></p>	<ul style="list-style-type: none"> <li>• HEADStart programme to include plagiarism/collusion, referencing, academic literature searches.</li> <li>• Introduction assignment on Literature searches (1:1 feedback)</li> <li>• Studying at higher levels: expectations and support</li> <li>• Active/Passive Learning</li> <li>• Oral presentations and practice</li> <li>• Creating electronic posters: information gathering</li> <li>• What is a viva?</li> <li>• Guide to coursework presentation</li> <li>• Writing reports and essays</li> <li>• Using contextualised criteria to improve assessment grades</li> <li>• Types of feedback</li> <li>• Reporting practical science.</li> <li>• How to revise: time management and learning strategies</li> <li>• Digimap: Mapping resource</li> <li>• Reading and Interpreting results sections in scientific papers</li> <li>• Keeping a laboratory notebook for practical's/research/projects/dissertations</li> <li>• Introduction to Statistical Terms and Analysis</li> <li>• Basic Introduction to Minitab for Statistical Analysis</li> <li>• Selecting and designing a Research Project</li> <li>• PDP production and skills reflection</li> </ul>
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<b>Level 5 Topics</b>	<ul style="list-style-type: none"><li>• Review and update on Literary searches</li><li>• Introduction assignment on arguing research topics (1:1 feedback)</li><li>• Review of level 4 feedback: Looking forward to improving academic achievement</li><li>• Studying at Level 5: expectations and support</li><li>• Analytical and Evaluative research</li><li>• Developing an argument</li><li>• Reporting research: journal articles and book writing</li><li>• PDP production and skills reflection at level 5.</li><li>• Research ethics</li><li>• Debates and conferences</li><li>• Personal and career planning at level 5</li><li>• Selecting and designing dissertation at level 6.</li></ul> <p><b>Plus review of skills from level 4 as requested by learners.</b></p>
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<b>Level 6 Topics</b>	<ul style="list-style-type: none"><li>• Review and update on Literary searches</li><li>• Review of level 5 feedback: Looking forward to improving academic achievement.</li><li>• Introduction assignment on critical review of dissertation topic (1:1 feedback)</li><li>• Critical Thinking</li><li>• Review of statistical analysis</li><li>• Personal and career planning at level 6</li><li>• Higher study: MSc's and PhD's</li><li>• Sources of higher funding</li><li>• Communicating appropriate to audience and purpose</li><li>• Job hunting, recruitment agencies, self-employment</li><li>• Volunteering, memberships, and professional bodies.</li></ul> <p><i>Plus review of skills from level 4 and 5 as requested by learners (especially for external Top-up candidates)</i></p>
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**Programme specification - BSc (Hons) Animal Management, Ecology and Conservation Top-Up**

**1. Overview/ factual information**

<b>Programme/award title(s)</b>	BSc (Hons) Animal Management, Ecology and Conservation Top-Up
<b>Teaching Institution</b>	University Centre Somerset / Bridgwater and Taunton College
<b>Awarding Institution</b>	The Open University (OU)
<b>Date of first OU validation</b>	April 2018
<b>Date of latest OU (re)validation</b>	March 2023
<b>Next revalidation</b>	April 2028 (5 years)
<b>Credit points for the award</b>	120 (120 at level 6)
<b>UCAS Code</b>	D304
<b>HECoS Code</b>	100518
<b>LDCS Code (FE Colleges)</b>	
<b>Programme start date and cycle of starts if appropriate</b>	September 2023
<b>Underpinning QAA subject benchmark(s)</b>	Biosciences (2019) Earth Sciences, Environmental Sciences and Environmental Studies (2019)
<b>Other external and internal reference points used to inform programme outcomes</b>	QAA UK Quality Codes for HE (2018) SEEC Credit Level Descriptors (2016)
<b>Professional/statutory recognition</b>	n/a
<b>Mode(s) of Study (PT, FT, DL, Mix of DL &amp; Face-to-Face)</b>	FT, Face-to-Face PT, Face-to-Face
<b>Duration of the programme for each mode of study</b>	One-year Full Time (FT) Face-to-Face Two years Part Time (PT) Face-to-Face
<b>Dual accreditation (if applicable)</b>	n/a
<b>Date of production of this specification</b>	November 2022

**Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided.**

**More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in student module guide(s) and the student's handbook.**

**The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.**

## 2.1 Educational aims and objectives

### Overview.

The BSc (Hons) Animal Management, Ecology and Conservation Top-up has been developed to attract learners that would like to Top-up a level 5 qualification previously gained in an animal, ecology, or conservation topic area. Animal consciousness/cognition is studied alongside behavioural management, ecological monitoring, habitat management and animal conservation. Theory alongside gaining practical competencies in preparation for higher study and/or employment is key in the programme.

The programme has been developed in consultation with students and reflection on industry employability. It uses academically challenging vocational learning and real-life experiences to support the curriculum, in doing so, developing research, analytical and critically evaluative skills that stretch and challenge learners.

**The overall programme aim** is to provide an integrative framework for animal management, ecology and conservation allowing the development of graduates that are competent in managing animal collections, developing into an ecological consultant and/or conserving wildlife. Thus, learners will have the ability to apply appropriate tools and techniques to demonstrate technical competence for a range of career pathways.

### **The vocational programme aims are to produce graduates that have:**

- developed knowledge to criticise and/or evaluate principles, theories and techniques used to manage and conserve individual animals, species, populations, habitats and ecosystems within a range of contexts.
- developed scientific practical skills required to study, interpret and critique animal behavioural management, ecology and conservation problems in individual animals, species, populations, habitats and ecosystems within field and laboratory situations.
- an awareness of the legislative and ethical implications of a range of behaviour, and ecological issues within a range of animal management and wildlife conservation situations in the UK and worldwide.
- been provided with an awareness of the dynamic nature of the subject resulting from rapid modern developments in research findings and applications to encourage lifelong learning.
- enabled personal development to review individual skill sets to be prepared for higher study, research and/or employment.
- facilitated research opportunities to interact with industry and the academic community.

## 2.2 Relationship to other programmes and awards

(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

### **Full Time/ Part Time Routes.**

The BSc (Hons) Top-up is delivered as a Full Time or Part Time route face to face.

### **Withdrawal or Failure to Complete BSc (Hons) Top-up.**

If a learner withdraws or fails to complete the BSc (Hons) Top-up qualification (120 level 6 credits) the following are available as exit awards:

- **Individual Module Accreditation:** any modules successfully completed will be awarded the relevant credit.
- or
- a **BSc (Ordinary) Top-up** exit award is available after successfully completing 300 credits in total: comprising of 60 level 6 credits on this programme and entering with 120 level 4 and 120 level 5 credits.

### **Progression.**

Progression onto MSc Qualifications is possible after successfully completing the BSc (Hons) Top-up after a FD or HND. A higher BSc (Hons) Top-up grade i.e., 2.1 or 1<sup>st</sup>, academic reference and successful interview maybe required for this progression. Learners would need to check with the MSc programme provider as to the entry requirements and we would encourage students to do this before level 6 of their qualification.

Examples of MSc qualifications include topic areas such as:

- Animal Behaviour
- Ecology and Conservation
- Animal Behaviour and Welfare
- Wildlife Conservation
- Conservation Biology
- Zoo Conservation Biology

PhD progression could also be possible upon successful learner academic reference, application, and successful interview with the relevant provider. A higher BSc (Hons) Top-up grade i.e., 2.1 or 1<sup>st</sup> is normally required.



**2.3 For Foundation Degrees, please list where the 60-credit work-related learning takes place**

*n/a*

**2.4 List of all exit awards**

- **Individual Module Accreditation:** any modules successfully completed will be awarded the relevant credit.
- **BSc (Ordinary) Animal Management, Ecology and Conservation** exit award is available after successfully completing 300 credits in total: comprising of 60 level 6 credits on this programme and entering with 120 level 4 and 120 level 5 credits.

### 3. Programme structure and learning outcomes

An overview of module semester structure for the programme is shown in Appendix 1.

Programme Structure - LEVEL 6					
Compulsory modules	Credit points	Optional modules	Credit points	Is module compensatable?	Semester runs in
AMEC301 Dissertation	40			No	1&2
AMEC302 Animal Cognition and Consciousness	20			Yes	1
AMEC303 Ecological Monitoring and Habitat Management	20			Yes	1
AMEC304 Current Affairs in Animal Conservation	20			Yes	2
AMEC305 Animal Behavioural Management	20			Yes	2

Intended learning outcomes at Level 6 are listed below:

Learning Outcomes – LEVEL 6	
3A. Knowledge and understanding	
Learning outcomes:	Learning and teaching strategy/ assessment methods
<p><i>By the end of the programme learners will be able to:</i>  <b>A5:</b> Review and critically evaluate current theories, methodologies, factors, paradigms, concepts, or principles that can be applied to the management, ecology and conservation of animals and habitats as part of industry practice and/or management plans.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Discussion/debates</li> <li>• 1:1 tutorials</li> <li>• Case studies</li> <li>• Seminars</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> <li>• Reflective practice/Interaction with industry professionals</li> <li>• Practical work/Media output</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Time Constrained Essay</li> <li>• Thought Paper on Industry Case Study</li> <li>• Potfolio onWritten Media Types</li> <li>• Group Case Study Presentation</li> </ul>

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i>  <b>B3:</b> Propose and critically appraise subject-specific evidence in relation to the behavioural, legislative, moral, and ethical aspects in relation to advances in animal management, ecology, and conservation.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• 1:1 tutorials/Seminars</li> <li>• Case studies</li> <li>• Problem based learning</li> <li>• Peer and collaborative learning</li> <li>• Reflective practice</li> <li>• Practical research</li> <li>• Discussion/debate</li> <li>• Self-directed study and research</li> <li>• Interaction with industry professionals</li> <li>• Practical work/Media output</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Oral presentation</li> <li>• Time Constrained Essays</li> <li>• Poster and Viva</li> <li>• Portfolio of Written Media Types</li> <li>• Case Study Report</li> </ul>

<b>3C. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i></p> <p><b>C4:</b> Generate independent thought to create methodologies and critically evaluate practical data, in order to propose solutions and make recommendations to solve research hypotheses in relation to, animal management, ecological and/or conservation problems in a safe, timely and ethical manner.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• 1:1 tutorials</li> <li>• Case studies</li> <li>• Seminars</li> <li>• Self directed study and research</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• Data analysis</li> <li>• Interaction with industry professionals</li> <li>• Practical work</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Poster and Viva</li> <li>• Case Study Report</li> </ul>

<b>3D. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><i>By the end of the programme learners will be able to:</i>  <b>D4:</b> Review, debate and critically evaluate subject specific information from research using appropriate language to specialist and non-specialist audiences using a variety of media communication types.</p>	<p><b>LTS:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• 1:1 tutorials</li> <li>• Case studies</li> <li>• Self directed study and research</li> <li>• Data analysis</li> <li>• Problem based learning</li> <li>• Reflective practice</li> <li>• Practical work</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>• Dissertation/Oral Presentation of Research Findings</li> <li>• Oral Presentation</li> <li>• Poster and viva</li> <li>• Portfolio of Written Media Types/ Radio Interview</li> <li>• Group Case Study Presentation</li> <li>• Case Study Report</li> </ul>

**Level 6 Exit Qualification:**

**BSc (Ordinary) Animal Management, Ecology and Wildlife Conservation Top-up (Entry with 120 level 4 and 120 level 5 credits and 60 level 6 credits)**

#### 4. Distinctive features of the programme structure

- Where applicable, this section provides details on distinctive features such as:
- where in the structure above a professional/placement year fits in and how it may affect progression
- any restrictions regarding the availability of elective modules where in the programme structure students must make a choice of pathway/route

#### ***General Distinctive Features.***

The programme provides:

- graduates equipped with a range of skills securely underpinned by analysis and evaluation of theories related to animal management, ecology, and conservation with a clear application to industry and research, in order that they can progress to the workplace and/or higher study.
- access to an excellent range of facilities to support their practical learning and progression to the workplace and/or higher-level studies/research. This includes an extensive animal collection at Bridgwater and Taunton College's Cannington Campus and external environments in the locality such as Steart Wetlands.
- a strong teaching team with lifelong industry related experience and academic qualifications.
- links in the locality and nationally to zoological, environmental and wildlife organisations/industries which provide opportunities for field trips and research.
- support networks that include 1:1 and group tutorials for personal progress and an academic development programme for transferable skills.
- level induction programme and introductory coursework that will provide up-skilling and initial 1:1 formative feedback on learner academic standards reached.

#### **Restrictions regarding the availability of optional modules**

n/a

## 5. Support for students and their learning

During induction week all learners are provided with a personal tutor. Formal meetings with the personal tutor are scheduled for a minimum of four times per year (two per semester). Additional pastoral tutorials can be requested by either the learner or tutor to review academic and personal progress.

Learners with diagnosed learning disabilities on the programme will have their support reviewed by the Additional Learning Support (ALS) team. Introduction coursework also reviews learner skills and could identify individuals that need to be referred to the ALS team for further screening. DSA applications for support will be supported.

Support for mental health issues is also available via the college wellbeing or counselling team. Learners will be supported in accessing this service if required or details are available on the college VLE.

The Colleges HEADStart programme (level 6) and departmental academic development sessions (level 6) support learners, especially those joining UCS from other organisations (*Appendix 2*). These sessions develop higher level skills such as:

- identification of suitable resources through relevant database searches
- communication skills (presentations/viva's)
- data analysis
- dissertation topic research and discussion
- critical analysis and evaluative skills

Accompanying advice leaflets/booklets are provided on the college programme VLE.

At Bridgwater and Taunton Colleges' Cannington Campus, the HE Learning Resource Centre is also available to learners for self-study or further resource assistance which is provided by LRC staff.

Other resources are available and the Bridgwater Campus and Taunton Campus (University Centre Somerset). Information about these facilities will be disseminated at induction.



## 6. Criteria for admission

To gain entry onto the BSc (Hons) Top Up candidates must have:

A completed and passed level 5 qualification e.g., FD, FdSc or HND in a relevant topic.

**AND**

5 GCSE's including English language, mathematics, and science to a minimum of GCSE Grade between 9 to 4 (GCSE A\* to C) are required.

The nature of this study requires GCSE Grade between 9 to 4 (GCSE A\* to C) in English language, mathematics, and science or equivalent qualification(s).

Under exceptional circumstances, a conditional offer may be made to a prospective student to include an expectation of working towards GCSE mathematics Grade C or level 2 numeracy alongside completing a degree programme.

Applicants with English as their second language must have a minimum IELTS level 6 or equivalent.

## 7. Language of study

All classes are conducted in English. If English is not your first language you will be asked to provide evidence of your English language ability to apply and start the course. The standard English language requirement for entry is IELTS 6.0 or equivalent.

**8. Information about non-OU standard assessment regulations (including PSRB requirements)**

n/a

**9 For apprenticeships in England End Point Assessment (EPA)**

(Summary of the approved assessment plan and how the academic award fits within this and the EPA)

n/a

**10. Methods for evaluating and improving the quality and standards of teaching and learning.**

The quality of the learning programmes is reviewed via the following processes throughout the academic year:

- *Student Feedback through Programme Meetings held once a semester*
- *Teaching/Peer observations and staff development reviews*
- *Statistical information considering issues such as pass rate and module grades*
- *Student Feedback (Student Voice) including UCS student evaluation questionnaires (SPQ) and National Student Survey results (NSS: if student numbers >10)*
- *Self-Evaluation Reports reflecting on the previous academic year and evaluated by the College's academic boards*
- *External Examiner reports (considering quality and standards)*
- *Academic reviewer feedback*

**10. Changes made to the programme since last (re)validation**

*November 2022: Approval of changing Examinations to Time Constraint Essays.*

## Annex 1. Curriculum Map.

The table indicates which study modules assume responsibility for delivering (shaded) and assessing (✓) particular programme learning outcomes.

Level	Study module	A5	B3	C4	D4
6	AMEC301 Dissertation	✓	✓	✓	✓
	AMEC302 Animal Cognition and Consciousness	✓	✓		
	AMEC303 Ecological Monitoring and Habitat Management		✓	✓	✓
	AMEC304 Current Affairs in Animal Conservation		✓		✓
	AMEC305 Animal Behavioural Management	✓	✓		

Appendix 1.

BSc (Hons) Animal Management, Ecology and Conservation Top-Up Full Time: *Module Semester Map.*

<b>Level 6</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMEC301 Dissertation (40)</b>	
<b>AMEC302 Animal Cognition and Consciousness (20)</b>	<b>AMEC305 Animal Behavioural Management (20)</b>
<b>AMEC303 Ecological Monitoring and Habitat Management (20)</b>	<b>AMEC304 Current Affairs in Animal Conservation (20)</b>
<b>Total 120 level 6 credits</b>	

**BSc (Hons) Animal Management, Ecology and Conservation Top-Up Part Time: *Module Semester Map.***

<b>Level 6 Year 1</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMEC301 Dissertation (40)</b>	
<b>AMEC302 Animal Cognition and Consciousness (20)</b>	<b>AMEC305 Animal Behavioural Management (20)</b>
<b>Total 40 level 6 credits</b>	

<b>Level 6 Year 2</b>	
<b>Semester 1</b>	<b>Semester 2</b>
<b>AMEC301 Dissertation (40)</b>	
<b>AMEC303 Ecological Monitoring and Habitat Management (20)</b>	<b>AMEC304 Current Affairs in Animal Conservation (20)</b>
<b>Total 80 level 6 credits</b>	

**Appendix 2. Academic Development Programme.**

<p><b>Level 6 Topics</b></p>	<ul style="list-style-type: none"> <li>• Review and update on Literary searches</li> <li>• Review of level 5 feedback: Looking forward to improving academic achievement.</li> <li>• Introduction assignment on critical review of dissertation topic (1:1 feedback)</li> <li>• Critical Thinking</li> <li>• Review of statistical analysis</li> <li>• Personal and career planning at level 6</li> <li>• Higher study: MSc's and PhD's</li> <li>• Sources of higher funding</li> <li>• Communicating appropriate to audience and purpose</li> <li>• Job hunting, recruitment agencies, self-employment</li> <li>• Volunteering, memberships and professional bodies.</li> </ul> <p><i>Plus review of skills from level 4 and 5 as requested by learners (especially for external Top-up candidates)</i></p>
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## Module specifications

1. Factual information		
<b>Module code and title</b>	<b>AMEC101. Employability and Communication</b>	
<b>Module tutor</b>	Rachel Legg-Wilde <b>Level</b> 4	
<b>Module type</b>	Taught <b>Credit value</b> 20	
<b>Mode of delivery</b>	Theory: 100% face-to-face <i>Industry:</i> WBL placement (70 hours minimum) and Networking (30 hours minimum)	
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>	
	Lectures	20
	Seminars	4
	Practical	0
	Tutorial	1
	<b><i>Independent guided study</i></b>	
	Directed/independent study	70 hours WBL placement 30 hours: Networking
	Preparation for assessments	75
<b><i>Total hours</i></b>	<b>200 hours</b>	

## 2. Rationale for the module and its links with other modules

Employability and communication skills are essential elements of the programme. Learners will explore vocational directions through researching a variety career opportunities. The work placement and its associated skills is a key component enabling learners to develop connections and gain industry experience early in their studies. Learners must complete a minimum of 70 hours within a work placement setting relevant to the programme and network through external experiences/organisations for a further 30 hours. This aims to develop their own interests and review gaps in their skill set in relation to future careers. In addition, gaining skills in CV writing and interview techniques develops key employability skills.

Skills necessary for communicating in the animal management, ecology and conservation industries is a critical part of gaining employment in this sector. Alongside the conventional knowledge of team management and recruitment, learners will need to develop a range of transferable skills involving communication with the public or media. In addition, marketing and organisation of events are a critical

## 2. Rationale for the module and its links with other modules

part of any involvement in the industry. The key concepts of working safely and risk assessing vocational activities will also be explored.

This module develops key employability skills, such as teamwork, reflection on professional development and communication. Employability skills are also embedded across all modules and learning outcome assessment. Further details are provided in the *Work-Based Learning Handbook*.

## 3. Aims of the module

The aims of this module are to develop, review and reflect on individual skill sets with relation to industry requirements and future career pathways. Learners are expected to develop employability by finding an industrial placement and actively network via attending organisational talks/conferences. Industry transferable skills such as working safely, team management, customer relations, social network use, marketing, CV/interview processes and managing organisational events will be learnt to develop personal and communication abilities.

## 4. Pre-requisite modules or specified entry requirements

None.

## 5. Is the module compensatable?

No

## 6. Are there any PSRB requirements regarding the module?

None



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<i>At the end of the module, learners will be expected to:</i> n/a		

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<i>At the end of the module, learners will be expected to:</i> n/a		

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> To gain and reflect upon vocationally relevant professional experience within an animal, ecological and/or conservation organisation(s) through industry practice and networking opportunities.</p> <p><b>C2:</b> Outline how to work safely and effectively by assessing a work environment and producing a risk assessment on an industry related activity</p>	<p>C2</p> <p>C1</p>	<p>Work-Based Learning experience Networking opportunities Practical Reflective Practice Problem-solving Peer and collaborative working</p> <p>Lectures Tutorial Practical Health and safety/risk assessment Case study</p>

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Communicate personal, academic, and practical skills in a covering letter, CV, and interview in relation to a career opportunity</p>	<p>D1</p>	<p>Lectures Seminars Self-directed study and research Reflective practice Career research Work-based learning experience</p>

## 8. Indicative content.

### **Investigating career pathways**

- Personal career planning
- Self-management and motivation
- Review of personal, academic, and practical skills
- Career goal setting

### **Preparation for employment / industry skills**

- Job hunting strategies/ recruitment agencies
- Applications
- CV's & Interviews
- Self-employment
- Maintaining morale / coping with rejection
- Using social media platforms effectively for employability skills and graduate opportunities

### **Postgraduate study (MSc, PhD)**

- Location of study
- Sources of funding
- Applications

### **Volunteering options, membership and professional bodies**

### ***Creating a business: self-employment and business plans***

### ***Occupational Skills***

- Working safely and creating risk assessments in industry
- Customer care
- Staff recruitment and appraisal
- Managing a team
- Maintaining motivation and morale in a team
- Working in research and publication
- Personal mindset

## 8. Indicative content.

### **Communication Skills and Event Management**

- Effective public communication
- Team working
- Problem-solving
- Marketing
- Project management
- Networking effectively in social world
- Communication in a digital world (e.g., Zoom, Teams)

### **Industry Work-Based Learning Element (Pass/Fail)**

Within the **100 hours, full and part-time** learners will be expected to:

- Gain a placement within an animal, ecological and/or conservation-based organisation completing **a minimum of 70 hours** work-based learning to gain practical experience. The hours may be completed at one or more placement(s).
- Seek and attend external industry/organisational talks and/or conferences related to an animal, ecological and/or conservational nature, completing **a minimum of 30 hours**. This develops networking and personal interests within the industry.

The work-based learning placement will be health and safety checked by a LBSF work-based learning co-ordinator *before* it commences.

For further information on work-based learning refer to the '**Work-based Learning Handbook**' issued as part of this module.

**9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes**

**Assessment Strategy:** 100% Coursework

**To pass this module a student must** produce an industry standard covering letter, CV and interview in relation to an employment opportunity. Key to this module is completing a minimum of 70 hours Work-Based Learning (WBL) and 30 hours '*networking*' in a relevant animal, ecological and/or conservation organisation. Within the industry experience they must be able to competently risk assess an industry activity and self-reflect upon WBL placement providers feedback on their practical, teamwork and communication skills.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Covering Letter, CV and Interview. (1500-word equivalent)	50%	TBC	%	D1
<b>Coursework 2:</b> Workplace Activity Task ( <i>Risk assessment and feedback self-reflection</i> ) (1500-word count)	50%	TBC	%	C1, C2
<b>Industry Work-Based Learning (70 hours) and Networking (30 hours)</b>	n/a	TBC	Pass/Fail	C1, C2

**10. Teaching staff associated with the module**

**Name and contact details**

Rachel Legg-Wilde: [leggwilder@btc.ac.uk](mailto:leggwilder@btc.ac.uk)

Adam George: [georgea@btc.ac.uk](mailto:georgea@btc.ac.uk)

11. Key reading list				
Author	Year	Title	Publisher	Location
Cottrell, S	2021	Skills for success, personal development and employability	Macmillan/Red Globe Press: London	LRC
Williams, S	2021	FT guide to Business start-up 2021-23. The most comprehensive guide for entrepreneurs (32 <sup>nd</sup> edn.)	Pearson Business: Harlow	LRC
Heppell, M	2014	How to be brilliant. Change your ways in 90 days.	Pearson: Harlow	LRC

12. Other indicative text (e.g., websites)
<p><b>General Business Skills:</b></p> <ul style="list-style-type: none"> <li>Gov. UK: <a href="https://www.gov.uk/set-up-business">https://www.gov.uk/set-up-business</a></li> </ul> <p><b>Job Applications and CV's:</b></p> <ul style="list-style-type: none"> <li>Open University Guide: <a href="https://help.open.ac.uk/cvs-an-overview">https://help.open.ac.uk/cvs-an-overview</a></li> <li>Prospects UK: <a href="https://www.prospects.ac.uk/careers-advice/cvs-and-cover-letters/how-to-write-a-cv">https://www.prospects.ac.uk/careers-advice/cvs-and-cover-letters/how-to-write-a-cv</a></li> <li>Students Job: <a href="https://www.studentjob.co.uk/application-tips/cv-example">https://www.studentjob.co.uk/application-tips/cv-example</a></li> </ul> <p><b>Writing a Business Plan:</b></p> <ul style="list-style-type: none"> <li>Gov. UK (2018) <a href="https://www.gov.uk/write-business-plan">https://www.gov.uk/write-business-plan</a></li> </ul>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Module learning outcomes, content, resources and WBL hours reviewed	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC102. Management of Captive Animals</b>		
<b>Module tutor</b>	Rachel Legg-Wide/Lizzie Jones (Practical)	<b>Level</b>	4
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b>Scheduled learning and teaching activities:</b>		
	Lectures	20 hours	
	Seminars	5 hours	
	Practical	45 hours	
	Tutorial	0 hours	
	<b>Independent guided study</b>		
	Directed/independent study	30 hours	
	Preparation for assessments	100 hours	
	<b>Total hours</b>	200 hours	

### 2. Rationale for the module and its links with other modules

This module will enable the student to develop their practical competence in the handling and husbandry of a range of captive animal species. Working safely as part of a team will be key skills practiced. Investigations into the management of species with regards to natural history and captive behaviour will be undertaken alongside the ability to communicate this information to diverse audiences. External trips to zoological collections will expand species and husbandry knowledge.

#### Links to Modules:

- Employability and Communication (Level 4)
- Enclosure and Enrichment Design (Level 4)

**3. Aims of the module**

The aims of this module are to develop handling and husbandry practices used with captive animal collections in order to acquire or improve practical competency in preparation for industry and develop personal interests. The skills developed will be able to be applied to industry captive animal management and work placements/volunteering.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes

**6. Are there any PSRB requirements regarding the module?**

No



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Research, describe and justify husbandry approaches used in captive animal management in relation to a species natural history</p>	A2	Lectures Practical Debate Oral communication Work-based learning experience Personal experience

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
n/a		

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>C1:</b> Working safely, organise and demonstrate a captive animal husbandry practical skill</p> <p><b>C2:</b> Work effectively as part of an animal husbandry team and reflect on practical skills feedback to create a personal plan for improvement and/or development</p>	<p>C1</p> <p>C2</p>	<p>Practical Seminars Work-Based Learning experience Personal experience Health and Safety/Risk Assessment</p> <p>Practical Seminars Teamwork Personal experience Reflective practice</p>

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Communicate species specific information to an audience using appropriate scientific language</p>	<p>D1</p>	<p>Lectures Practical Case study Oral communication Work-based learning experience</p>

## 8. Indicative content.

**Range:** Mammals, avians, aquatics, reptiles, amphibians and invertebrates. Zoological animals.

### **Management of Animals**

- **Handling, restraint and transporting techniques across a range of captive animals.**
  - Health and safety considerations when handling
  - Handling techniques: general, health checks, sexing
  - Physical/chemical restraint
  - Resistance behaviours: aggression
  - Predator/prey behaviours: moving groups/individuals
  - Transport methods and associated legislation
  
- **Husbandry in captive animals**
  - Health and safety / Risk assessments
  - Welfare and other legislation
  - Enclosure structure and maintenance
  - Selection of equipment and furnishings (enrichment)
  - Feeding/Watering
  - Record keeping
  
- **Animal health assessment**
  - Normal/abnormal signs of health
  - General first aid procedures
  - Hygiene protocols: sterilisation/disinfection
  - Medication of animals
  
- **Biosecurity methods applied in animal collections (Legislation)**

## 8. Indicative content.

- **Captive animal behaviour**

- Animal biology in relation to mammal tissues, organs and physiological effects in relation to locomotion, nutrition and reproductive processes
- Animal senses and behaviour
- Torpor requirements; dormancy, hibernation, migration, dispersal
- Social structure: hierarchy and animal communication
- Breeding: justification/condition/incubation

### 9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes

**Assessment Strategy:** 100% Coursework

**To pass this module a student must** research and justify a captive animal husbandry technique using appropriate communication to an audience. In addition, they must demonstrate, working safely and within a team, a practical skill with reflection on their performance with a view to improvement and/or development of their personal animal husbandry skills.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Oral Presentation (Group Showcase) (1500-word equivalent)	50%	TBC	%	A1, D1
<b>Coursework 2:</b> Personal Development in Practical Skills ( <i>Self-Reflection</i> ) (1500-word equivalent)	50%	TBC	%	C1, C2

### 10. Teaching staff associated with the module

#### Name and contact details

Rachel Legg-Wilde (Theory) [leggwilder@btc.ac.uk](mailto:leggwilder@btc.ac.uk)

Lizzie Jones (Practical) [jonesl@btc.ac.uk](mailto:jonesl@btc.ac.uk)

### 11. Key reading list

Author	Year	Title	Publisher	Location
Rose, P	2022	The Behavioural Biology of Zoo Animals	CRC Press: London	LRC
BSAVA	2016	BSAVA Manual of Practical Animal Care	BSAVA: Gloucester	LRC
Hosey, G., Melfi, V. and Pankhurst, S.	2013	Zoo Animals: Behaviour, Management and Welfare	Oxford University Press: Oxford	LRC

**12. Other indicative text (e.g., websites)****Other textbook(s):**

BSAVA (2010) BSAVA Manual of Exotic Pets. BSAVA: Gloucester

Kleiman, D.G. (ed), Thompson, K.V. (ed) and Kirk Baer, C.(ed) (2012) *Wild mammals in captivity: Principles and Techniques for Zoo Management*. Chicago Press; Chicago.

Young, R. (2003) *Environmental enrichment for captive animals*. Blackwell Scientific; Oxford. (eBook)

**13. List of amendments since last (re)validation**

Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Module learning outcomes, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

# Module specification



1. Factual information			
<b>Module code and title</b>	<b>AMEC103. Animal Health Diagnostics</b>		
<b>Module tutor</b>	Rachel Legg-Wilde	<b>Level</b>	4
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	20	
	Seminars	0	
	Practical	23	
	Tutorial	2	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55	
	Preparation for assessments	100	
<b><i>Total hours</i></b>	200 hours		

## 2. Rationale for the module and its links with other modules

The module introduces the nature of animal health in a range of situations and types of animal collections through the investigation of disease-causing organisms and control. Practical sessions are core to this module. Laboratory facilities will be used to enable learners to develop basic practical skills in analysing veterinary and biochemical samples. Following the sample from collection to analysis and finally interpretation, aims to develop laboratory practical and analytical skills. Safe laboratory working practice will be established. Skills learnt in the laboratory could be applied to research or industry facing positions. Practical skills such as animal health monitoring and first aid will take place in the Management of Captive Animals module.

### Links to Modules:

- Management of Captive Animals (Level 4)
- Research Project (Level 5)
- Dissertation (Level 6)

**3. Aims of the module**

The aims of this module are to outline veterinary pathogens involved in poor health and discuss plans to control them. Practical work will develop knowledge of Health and Safety legislation and safe working practice to demonstrate practical competence in a range of veterinary and biochemical analytical techniques. Practical data recording and interpretation will be undertaken alongside report production in a scientifically acceptable format.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes

**6. Are there any PSRB requirements regarding the module?**

No



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Outline a veterinary disease that may contribute to poor animal health and discuss measures used to prevent, treat, and control it.</p>	A1	Lectures Discussion Case study Problem based learning Peer to peer learning
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Analyse a veterinary sample and interpret the findings</p>	B1	Lectures Discussion Practical: laboratory Case study Problem-based learning
C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> Present a laboratory risk and COSHH assessment</p>	C1	Lectures Practical: laboratory Problem based learning Case study Work-Based Learning experience

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Undertake, interpret, and present practical work in a scientific format</p>	D1	Lectures Problem-based learning Practical: laboratory Case study Work-Based Learning experience

8. Indicative content.
<p><b>General animal health monitoring will be undertaken in the Management of Captive Animals module.</b></p> <p><b>Veterinary pathogens</b></p> <ul style="list-style-type: none"> <li>• Microbes: Bacteria/Viruses/Fungi/Protozoa/Others: cellular structure, function, reproduction (growth)</li> <li>• Endo- and Exotoxins their effects on cells</li> <li>• Endo- and Ectoparasites</li> <li>• Zoonotic /Notifiable diseases</li> </ul> <p><b>Disease Control</b></p> <ul style="list-style-type: none"> <li>• Vertebrate immune systems: Immunisation/vaccination</li> <li>• Disinfection/sterilisation</li> <li>• Antibiotics</li> <li>• Vector control</li> <li>• Other parasitic treatments</li> <li>• Legislative control of animal disease</li> </ul>

## 8. Indicative content.

### **Genetic, Pathological and Toxicological Samples**

- Sample collection and storage
- Dispatch of samples by post to external laboratories

### **Laboratory health and safety**

- Laboratory health and safety
- Risk / COSHH assessments

### **Laboratory Analytical Techniques.**

#### **Microscopy**

- Light microscopy
- Introduction to Electron microscopy techniques
- Cell biology

#### **Biochemical**

- Basic spectroscopy techniques
- Enzyme-linked immunosorbent assays (ELISA)
- Protein analysis

#### **Molecular Biology: theory and practical**

- Genetics overview: cellular, DNA, RNA, replication
- Basic techniques for DNA extraction and quantification
- Introduction to the Polymerase Chain Reaction (PCR): principles and techniques
- Cloning theory and principles

## 8. Indicative content.

### **Veterinary Analytical Techniques.**

- Animal biology in relation to animal tissues, organs, and physiological effects in relation to urinary, blood and digestive systems

### **Urine**

- Sample collection and preparation
- Microscopic analysis (crystals, casts and cells)
- Refractometry (specific gravity)
- Biochemical tests (pH, Glucose, Protein, Blood)

### **Blood**

- Types of blood cells
- Sample collection and storage
- Haematology: blood smears, stains, WBC count
- Biochemistry: biochemical tests (enzymes, electrolytes, proteins)

### **Faeces**

- Sample collection and storage
- Detection of parasitic ova

### **Microbiology**

- Sample collection and storage
- Bacteriology: Culture, isolation, and identification of veterinary microbes/ antimicrobial testing
- Virology: analysis of sera for veterinary viral diseases

### **Producing a scientific laboratory report**

### **Use of laboratory notebooks**

### 9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes

**Assessment Strategy:** 100% Coursework

**To pass this module a student must** be able to communicate knowledge of animal disease e.g., causative organisms, signs/symptoms and treatment/prevention/control. Working as a group a portfolio of public information will be created. In addition, they must analyse a veterinary sample safely and produce a scientifically acceptable laboratory report of their findings.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Group Portfolio (1000 words)	30%	TBC	%	A1
<b>Coursework 2:</b> Laboratory Report and Risk/COSHH assessment (2000-word equivalent)	70%	TBC	%	B1, C1, D1

### 10. Teaching staff associated with the module

#### Name and contact details

Rachel Legg-Wilde      leggwilder@btc.ac.uk

### 11. Key reading list

Author	Year	Title	Publisher	Location
Andrasik-Catton, M. and Bellwood, B.	2023	Veterinary Technicians Handbook of Laboratory Procedures (2 <sup>nd</sup> edn.)	Wiley Blackwell: New Jersey	LRC
BSAVA	2020	Complete Textbook of Veterinary Nursing	BSAVA: Gloucester	LRC
Sirois, M	2019	Laboratory Procedures for Veterinary Technicians (7 <sup>th</sup> edn.)	Mosby: London	LRC

### 12. Other indicative text (e.g., websites)

**Other Textbook(s):**

Aspinall, V. (2016). The Complete Textbook of Veterinary Nursing. Butterworth-Heinemann: Edinburgh

Aspinall, V. (2019) Clinical Procedures in Veterinary Nursing. Elsevier: London.

Quinn, P.J., Markey, B.K., Leonard, F.C., Fitzpatrick, E.S. and Fanning, S. (2015). *Concise Review of Veterinary Microbiology*. Chichester: John Wiley & Sons

Reed, R., Weyers, J. and Jones, A. (2016). Practical Skills in Biological Sciences. Pearson Education: Harlow

**Journals:**

- Veterinary Nursing Journal
- The Veterinary Times

**Websites:**

World Organisation for Animal Health: <https://www.woah.org/en/home/>

DEFRA <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>

**13. List of amendments since last (re)validation**

Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Module learning outcomes, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information		
<b>Module code and title</b>	<b>AMEC104. Introduction to Ecological Principles and Habitats</b>	
<b>Module tutor</b>	Adam George	<b>Level</b> 4
<b>Module type</b>	Taught	<b>Credit value</b> 20
<b>Mode of delivery</b>	100% face-to-face	
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>	
	Lectures	35
	Seminars	0
	Practical	8
	Tutorial	2
	<b><i>Independent guided study</i></b>	
	Directed/independent study	55
	Preparation for assessments	100
	<b><i>Total hours</i></b>	200 hours

### 2. Rationale for the module and its links with other modules

Knowledge of ecological principles and types of habitats are key study areas within the animal management, ecology and conservation sectors. It is important that learners can identify a range of habitats, and explore the relationships that occur between flora, fauna, and the environment. Historical and current perspectives in environmental patterns, population structures and communities will be investigated in relation to wildlife, and learners will assess the most appropriate methods and techniques to maintain and enhance populations and habitats. The module offers learners the background and basis to build knowledge related to key ecological principles and habitats from micro to macro scale, and debate ideas related to current issues.

#### Links to Modules:

- Field and Behavioural Monitoring Techniques (Level 4),

**3. Aims of the module**

The aims of this module are to promote knowledge, understanding and theoretical perspectives of ecological principles and habitat types. This is undertaken by developing research and communication skills in the design and delivery of subject-specific information (food web poster). Learners will also recognise the role of habitats in the distribution and dispersal of flora / fauna.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<i>At the end of the module, learners will be expected to:</i>		
<b>A1:</b> Outline and discuss the structure and importance of food webs.	A1	Lectures Practical: fieldwork Workshops Case studies Tutorial
<b>A2:</b> Describe trophic levels and flow of energy between organisms	A1	Lectures Practical: fieldwork Workshops Case studies
<b>A3:</b> Identify a range of habitats and explain factors that affect communities, ecosystems, and the distribution of species within environments.	A2	Lectures Practical: fieldwork Workshops Case studies

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<i>At the end of the module, learners will be expected to:</i>		
<b>B1:</b> Explore and explain appropriate site requirements for habitats and species	B1	Lectures Practical fieldwork Case studies Tutorial

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p>n/a</p>		

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p>n/a</p>		

## 8. Indicative content.

### **Adaption to the Environment**

- The ecological niche
- Dispersal and distribution
- Dispersion
- CSR triangle theory

### **Life History Strategies**

#### **Population ecology**

- Natality/mortality/immigration/emigration
- Population growth
- Population structures
- Managing populations

#### **Species interactions**

- Competition
- Predation
- Parasitism
- Mutualism

#### **Communities**

- Succession

#### **Food webs and productivity**

- Food chains, food webs, keystone species and trophic levels
- Keystone species
- Nutrient cycling, energy, and productivity

## 8. Indicative content.

### Habitat Identification

- Introduction and definition of habitats
- Habitat identification, groupings, and biomes
- Habitat legislation
- Habitat health and status, priority habitats and indicator species
- Biodiversity plans
- Designations and protected habitats
- Global habitats and status
- Landscape scale initiatives and ecosystem services
- Nature-based solutions

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<b>Assessment Strategy: 100% Coursework</b>				
<i>To pass this module a student must</i> produce a poster relating to ecological principles and disseminate the information accurately and confidently within a viva. They must also undertake an environmental site visit then create a technical report on features of a selected habitat and outline management strategies.				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Poster and Viva (1500-word equivalent)	50%	TBC	%	A1, A2
<b>Coursework 2: Technical Report</b> (1500-words)	50%	TBC	%	A3, B1

10. Teaching staff associated with the module
<b>Name and contact details</b>
Adam George <a href="mailto:georgea@btc.ac.uk">georgea@btc.ac.uk</a>

11. Key reading list				
Author	Year	Title	Publisher	Location
Begon, M. and Townsend, C.R.	2021	Ecology: From Individuals to Ecosystems (5 <sup>th</sup> edition)	Wiley: Chichester	LRC
Beeby, A. and Brennan, A.	2008	First ecology: ecological principles and environmental issues.	Oxford University Press: Oxford	LRC
Ausden, M.	2007	Habitat management for conservation: a handbook of techniques	Oxford University Press: Oxford	LRC

## 12. Other indicative text (e.g. websites)

### Journals:

- Journal of Applied Ecology
- Journal of Animal Ecology
- Journal of Ecology
- British Wildlife

### Websites:

Joint Nature Conservation Committee: [www.jncc.gov.uk](http://www.jncc.gov.uk)

Natural England: [www.naturalengland.org.uk](http://www.naturalengland.org.uk)

Environment Agency: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

## 13. List of amendments since last (re)validation

Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Module learning outcomes, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information		
<b>Module code and title</b>	<b>AMEC105. Enclosure and Enrichment Design</b>	
<b>Module tutor</b>	Adam George	<b>Level</b> 4
<b>Module type</b>	Taught	<b>Credit value</b> 20
<b>Mode of delivery</b>	100% face-to-face	
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>	
	Lectures	15 hours
	Seminars	5 hours
	Practical	25 hours
	Tutorial	0 hours
	<b><i>Independent guided study</i></b>	
	Directed/independent study	55 hours
	Preparation for assessments	100 hours
<b><i>Total hours</i></b>	200 hours	

## 2. Rationale for the module and its links with other modules

In this module learners will gain a broad understanding of environmental enrichment and enclosure design, which is an essential component of captive animal management and husbandry. Learners will gain a valuable insight into the significance of enclosure design and enrichment in safeguarding, animal welfare and increasing success of conservation strategies. Learners will be able to categorize different types of enclosure design to the ecology/natural behaviour of a range of animals. In addition, learners will be able to assess enrichment designs and techniques to construct programmes for animals, which provides analytical and practical skills relating to industry.

### Links to Modules:

- Management of Captive Animals (Level 4)
- Field and Behavioural and Monitoring Techniques (Level 4)
- Research Project (Level 5)
- Dissertation (Level 6)

**3. Aims of the module**

The aims of the module are to increase opportunities for learners recognise, plan, practice and evaluate the design of animal enclosures and implementation of animal enrichment strategies. Practical monitoring techniques such as examination of behaviour using technology in the form of recording and editing will be developed.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Outline and appraise an industry enclosure design for a named animal species in relation to its ability to improve animal welfare.</p>	A2	Lectures Seminars Practical: Animal Management Case studies Problem-based learning
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Explain and review the success of an enrichment programme in relation to meeting the needs of a named animal species</p>	B1	Lectures Seminars Self-directed research Peer and collaborative work Problem-based learning

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> Design, implement, monitor, and critique an enrichment programme for a named animal species</p>	C1	Lectures Seminars Practical: Animal Management Self-directed research Use of electronic recording Peer and collaborative learning Problem-based learning Data interpretation

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Use recording equipment and editing software construct an electronic diary of animal behaviour in response to enrichment as part of collaborative working.</p>	D1	Practical: Animal Management Self-directed research Use of electronic recording Peer and collaborative learning Problem-based learning

## **8. Indicative content.**

### **Designing enclosures**

- Materials/Designing the 3D space
- Safety considerations: Keeping keepers/animals/public safe
- Single and mixed species exhibits
- Cosmetic considerations
- Enclosures for wild animal conservation purposes
- Legislation, welfare, and animal 'needs'
- Mellor's Five Domains of Welfare (2020)

### **An overview of enrichment**

- Theory and history behind environmental enrichment
- Different types of normal/abnormal behaviour seen in animals kept in captivity
- The psychology behind enrichment
- Animal welfare and enrichment
- Ethics of enrichment; cost, media, public pressure, legal aspects
- The significance of ecology with regards to enrichment
- Physical, cognitive, food-based, sensory, social enrichment
- Novel enrichment

### **Analysing enrichment**

- Use in captive animal collections
- Use in training programmes
- Use in release programmes to aid conservation

**Monitoring Behaviour: delivered in conjunction with Field and Behavioural Monitoring Techniques module**

### **Enrichment for different types of animals**

<b>8. Indicative content.</b>
<ul style="list-style-type: none"> <li>Companion, zoological, farm., wildlife, laboratory animals</li> </ul>

<b>9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes</b>				
<b>Assessment Strategy: 50% Coursework and 50% Time Constrained Essay</b>				
<i>To pass this module a student must</i> be able to design and test the effectiveness of enrichment to specific species through behavioural monitoring (recordings) and analysis as part of a team. In addition, they must be able to communicate the importance of the type and effectiveness of enclosure design to the welfare of animals.				
<b>Assessment Task</b>	<b>Weighting</b>	<b>Week submitted</b>	<b>Grading (Pass / Fail / %)</b>	<b>Module Learning Outcome(s) the assessment task maps to</b>
<b>Coursework.</b> Group electronic diary and data interpretation (2000-word equivalent)	70%	TBC	%	B1, C1, D1
<b>Time Constrained Essay</b> (1000 words)	30%	TBC	%	A1

<b>10. Teaching staff associated with the module</b>
<b>Name and contact details</b>
Adam George <a href="mailto:georgea@btc.ac.uk">georgea@btc.ac.uk</a>

11. Key reading list				
Author	Year	Title	Publisher	Location
Young, R.	2003	Environmental enrichment for captive animals	Blackwell Publishing: Oxford	LRC (eBook)
Hosey, G., Melfi, V and Pankhurst, S.	2013	Zoo animals: behaviour, management, and welfare (2 <sup>nd</sup> edition)	Oxford University Press: Oxford	LRC
Rose, P	2022	The Behavioural Biology of Zoo Animals	CRC Press: London	LRC

12. Other indicative text (e.g. websites)
<p>Kleiman, D.G. (ed), Thompson, K.V. (ed) and Kirk Baer, C.(ed) (2012) <i>Wild mammals in captivity: Principles and Techniques for Zoo Management</i>. Chicago Press; Chicago.</p> <p><b>Journals:</b></p> <ul style="list-style-type: none"> <li>• Zoo Biology</li> <li>• UFAW Animal Welfare</li> <li>• The Shape of Enrichment</li> <li>• Applied Animal Behaviour Science</li> </ul> <p><b>Website:</b> Shape of enrichment: <a href="http://www.enrichment.org">www.enrichment.org</a></p>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Module learning outcomes, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC106. Field and Behavioural Monitoring Techniques</b>		
<b>Module tutor</b>	Adam George	<b>Level</b>	4
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	20	
	Seminars	3	
	Practical	20	
	Tutorial	2	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55	
	Preparation for assessments	100	
	<b><i>Total hours</i></b>	200 hours	

### 2. Rationale for the module and its links with other modules

This module introduces learners to the key practical techniques used when undertaking field studies on species and habitats, and the skills used when monitoring the behaviour of captive animals and wildlife. The module will also serve as a route by which the student can develop analytical abilities, use of equipment, and techniques related to data collection and presentation of results. Furthermore, the learners will be equipped with skills appropriate for their research project/dissertation and industry.

#### Links to Modules:

- Management of Captive Animals (Level 4)
- Enclosure and Enrichment Design (Level 4)
- Research Project (Level 5)
- Dissertation (Level 6)

**3. Aims of the module**

The aims of this module are to develop knowledge, understanding and theoretical perspectives of field studies and animal behaviour through the selection of appropriate techniques for monitoring captive animals and wildlife.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
At the end of the module, learners will be expected to: n/a		

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
At the end of the module learners will be expected to: <b>B1:</b> Outline recommendations as to the management of an animal population in a specific habitat based on monitoring outcomes.	B1	Lectures Tutorials Case studies

C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
At the end of the module, learners will be expected to: <b>C1:</b> Describe specific field techniques to survey species in a natural habitat.	C1	Lectures Practical: Fieldwork Case studies Peer and collaborative work
<b>C2:</b> Identify appropriate methods to monitor and analyse the behaviour of animals.	C1	Lectures Practical: Animal management Case studies



D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Present, analyse and discuss behavioural data.</p>	D1	Lectures Seminars Practical: Animal management Case studies Data analysis

8. Indicative content.
<p><b>Health, Safety and Ethics</b></p> <ul style="list-style-type: none"> <li>• Planning field studies and behavioural monitoring</li> <li>• Risk assessments</li> </ul> <p><b>Field studies</b></p> <ul style="list-style-type: none"> <li>• Reasoning behind the purpose of field studies</li> <li>• Hypothesis testing</li> <li>• Models and predictions</li> <li>• Estimation of population size</li> <li>• Monitoring changes/decline of species</li> <li>• Habitat requirements of species</li> <li>• Population dynamics</li> <li>• Data display and interpretation</li> </ul>

## 8. Indicative content.

### Monitoring wildlife and the environment in the field

- Considerations when monitoring
- Recording techniques
- Electronic tagging and tracking
- Direct Counts
- Hand Capture
- Mark-recapture
- Trapping (pooting, pitfall, Sticky, light)
- Netting (sweeping, kick net)
- Breeding sites
- Monitoring calls/ counting dung/ feeding signs/ footprints /runways
- Monitoring environmental variables

### Monitoring animal behaviour

- Ethograms
- Sampling rules
- Scan/Focal/Ad Libitum sampling
- Recording rules
- Continuous recording
- Time /Instantaneous /One-zero sampling
- Designing data recording sheets
- Choosing time intervals
- Monitoring wildlife
- Using technology to monitor behaviour: cameras / apps

## 8. Indicative content.

### **Analysing behaviour**

- Assessing behaviour
- Captive animal behaviour / Wildlife behaviour (movement patterns)
- Abnormal behaviours
- Social, feeding, breeding behaviour
- Agonistic behaviour
- Active and inactive behaviours
- Event behaviours / State behaviours

### **Statistical analysis**

- Social Network Analysis
- Descriptive statistics
- Inferential statistics
- Data display and interpretation

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<b>Assessment Strategy:</b> 100% Coursework				
<b>To pass this module a student must</b> identify and describe the use of field and behavioural monitoring techniques to monitor animal populations. Data gathered and its interpretation needs to be analysed to outline recommendations in species management.				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Data Analysis (Behavioural Monitoring:1500 words)	50%	TBC	%	C2, D1
<b>Coursework 2:</b> Case Study Presentation (Field Studies: 1500 words)	50%	TBC	%	B1, C1

10. Teaching staff associated with the module	
Name and contact details	
Adam George	<a href="mailto:georgea@btc.ac.uk">georgea@btc.ac.uk</a>

11. Key reading list				
Author	Year	Title	Publisher	Location
Bateson, M. and Martin, P.	2021	Measuring Behaviour: An Introductory Guide	Cambridge University Press: Cambridge	LRC
Wheater, C.P., Cook, P. and Bell, J.	2020	Practical Field Ecology: A Project Guide	Wiley-Blackwell: London	LRC
Pellis, S. and Pellis, V.	2021	Understanding Animal Behaviour: What to measure and why.	Cambridge University Press: Cambridge	LRC

12. Other indicative text (e.g., websites)
<p><b>Other Books:</b> Sutherland, W.J. (2006) Ecological Census Techniques (2<sup>nd</sup> Edn.) Cambridge University Press: Cambridge.</p> <p><b>Journals:</b></p> <ul style="list-style-type: none"> <li>• Animal Behaviour</li> <li>• Applied Animal Behaviour Science</li> <li>• Journal of Applied Ecology</li> </ul> <p><b>Website:</b> Joint Nature Conservation Committee <a href="http://www.jncc.defra.gov.uk">www.jncc.defra.gov.uk</a></p>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Module learning outcomes, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC201. Research Project</b>		
<b>Module tutor</b>	Rachel Legg-Wilde	<b>Level</b>	5
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	13 hours	
	Seminars	0 hours	
	Practical Research	17 hours	
	Tutorial	15 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
	<b><i>Total hours</i></b>	200 hours	

## 2. Rationale for the module and its links with other modules

In this module, learners will design and conduct an independent research project, which may be a field or laboratory-based study, a data analysis project or a piece of qualitative research (e.g., questionnaires). Learners will critically analyse data and research produced. The resulting information will be communicated in a research paper format. Theoretically, taught sessions will prepare learners for assimilating and writing the assessment. This module provides the foundation skills base for progression onto a level 6 dissertation or research in industry.

Topics are developed by the learner with their supervisor and this process is supported in AMEC202 Experimental Design and Analysis. Proposed research, risk assessments and ethical permissions will need to be approved prior to commencement of the research and forms part of the Experimental Design and Analysis module assessment.

This module offers the opportunity to collaborate with organisations locally, nationally, and globally to meet industry trends, needs and areas of interest. The learner will also need to develop a project of interest that meets their constraints in terms of time, location, and funding. Each learner is assigned a tutor who will supervise and offer guidance on the chosen topic of research.

Learners should discuss their progress with the allocated supervisor at regular intervals and will be expected to undertake a significant amount of independent research on their chosen topic of research, therefore time management is key and forms part of the research project grading criteria.

A *Research Project Handbook* accompanies the module and provides guidance for learners.

## 2. Rationale for the module and its links with other modules

### Links to Modules:

- Employability and Communication (Level 4)
- Management of Captive Animals (Level 4)
- Field and Behavioural Monitoring Techniques (Level 4)
- Experimental Design and Analysis (Level 5)
- Dissertation (Level 6)

## 3. Aims of the module

The aims of this module are to widen primary research skills in an independent, organised, and timely manner. Learners will investigate the background and collect data in an area of research within animal management, ecology and/or conservation. Analytical and evaluative data analysis skills will be developed in association with communicating research findings in an appropriate scientific format.

## 4. Pre-requisite modules or specified entry requirements

None.

## 5. Is the module compensatable?

Yes

## 6. Are there any PSRB requirements regarding the module?

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
At the end of the module, learners will be expected to: n/a		

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
At the end of the module learners will be expected to: <b>B1:</b> Identify, apply, and evaluate conclusions and recommendations produced in relation to a research topic	B2	Lecture Tutorial Discussion Problem-based learning Self-directed study and research

C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
At the end of the module learners will be expected to: <b>C1:</b> Operate independent study to research, gather data and analyse findings in a timely manner to produce a logical, coherent, ethical, well-reasoned and referenced written scientific investigation.	C3	Lecture Tutorial Practical research Data analysis Problem-based learning Self-directed study and research Interaction with industry professionals



D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Select and evaluate literary sources in relation to a research topic</p> <p><b>D2:</b> Apply, present, and interpret correctly simple statistical analyses on a set of vocational data.</p>	<p>D3</p>      <p>D2</p>	<p>Lecture Tutorial Discussion Problem-based learning Reflective practice Self-directed study and research</p> <p>Lecture Tutorial Data Analysis Problem-based learning Reflective practice Self-directed study and research</p>

## **8. Indicative content.**

### **Research**

- Identification of a vocational area of interest
- Time management
- Experimental procedures (methodologies)
- Sourcing materials required
- Health and Safety/Risk assessment
- Keeping a laboratory notebook for research
- Intellectual property rights
- Developing questionnaires
- Aims and objectives
- Literature searches and writing
- Discussions
- Recommendations
- Journal article production styles
- Evaluation and critical evaluation of scientific sources

**1:1 tutor support tracking progress**

### 9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes

**Assessment Strategy:** 100% Coursework

**To pass this module a student must** undertake literary research and data gathering/analysis to produce a timely, referenced, scientifically written piece of science. The research report produced will take the form a scientific paper.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
Coursework: Research Report (3000 words)	100%	TBC	%	B1, C1, D1, D2

### 10. Teaching staff associated with the module

#### Name and contact details

Rachel Legg-Wilde leggwild@btc.ac.uk

Adam George georgea@btc.ac.uk

### 11. Key reading list

Author	Year	Title	Publisher	Location
Cottrell, S	2014	Dissertation and project reports, a step-by-step guide	Palgrave Macmillan: Basingstoke.	LRC
McMillan, V.E.	2020	Writing papers in the biological sciences. (7 <sup>th</sup> edn.)	Bedford: St Martins	LRC
Bateson, M. and Martin, P.	2021	Measuring Behaviour: An Introductory Guide	Cambridge University Press: Cambridge	LRC
Wheater, C.P., Cook, P. and Bell, J.	2020	Practical Field Ecology: A Project Guide	Wiley-Blackwell: London	LRC

**12. Other indicative text (e.g., websites)****Other textbooks:**

Cottrell, S. (2011) *Critical Thinking Skills: Developing effective analysis and argument*. Palgrave Macmillan: Basingstoke.

**Other Sources:**

*UCS/BTC Research Project Handbook*

**13. List of amendments since last (re)validation**

<b>Area amended</b>	<b>Details</b>	<b>Date Central Quality informed</b>
Module Review (Revalidation)	Module content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC202. Experimental Design and Analysis</b>		
<b>Module tutor</b>	Adam George	<b>Level</b>	5
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	15 hours	
	Seminars	0 hours	
	Practical	15 hours	
	Tutorial	15 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
	<b><i>Total hours</i></b>	200 hours	

### 2. Rationale for the module and its links with other modules

In this module learners will be introduced to the principles of experimental design. This enables them to produce a topic to be investigated in their programme of study which will form a basis for the AMEC201 Research Project module. Risk assessments and ethical reviews will also be produced on the topic area. A range of data analysis techniques will be learned and alongside ways of presenting and evaluating data. Learners will be guided as to how to acquire data and be familiarized with how to correctly present data and calculate statistics. Furthermore, learners will be able to evaluate data and post-statistical analysis.

This module and its assessment will require the purchase of a statistical analysis package that the learner will need to download onto their own computer device.

#### Links to Modules:

- Research Project (Level 5)
- Dissertation (Level 6)

**3. Aims of the module**

In this module learners will be introduced to the principles of experimental design. This enables them to produce a topic to be investigated in AMEC201 Research Project. In addition, learners will be guided as to how to acquire data and be familiarized with how to correctly present data and calculate statistics. Furthermore, learners will be able to evaluate data and post-statistical analysis.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Produce an ethical review and risk assessment related to a research topic methodology</p>	A3	Lectures Tutorials Reflective practice Case study Problem-based learning

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Identify and analyse research to create an experimental proposal designed in relation to a vocational subject</p>	B2	Lectures Tutorials Reflective practice Case study Problem-based learning Interaction with industry professionals

C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p>n/a</p>		

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Correctly present, interpret and critique scientific data gathered in graphical formats</p> <p><b>D2:</b> Apply statistical analyses to a set of vocational data and analyse the output</p>	<p>D2</p> <p>D2</p>	<p>Lectures Tutorials Problem-based learning Self-directed study Case studies Data analysis</p> <p>Lectures Tutorials Problem-based learning Self-directed study Case studies Data analysis</p>



## 8. Indicative content.

### Experimental design

- Identification of a vocational area of interest
- Design of experimental protocol
- Experimental procedures and sourcing materials required
- Producing a project proposal
- Timelines for completion
- Risk assessments/Ethical review

### Nature and quality of data

- Type of data: Qualitative, quantitative (continuous / discrete)
- Awareness of the possibility of error during observation / experiments
- Accuracy and precision

### Sampling

- Sampling methods
- What is data, scales, and measurement
- Data collection
- Presentation of data: tables, charts, and graphs

### Statistical Analysis

- Calculation of descriptive statistics: mean and standard deviation, mode, median and interquartile range
- Standard deviation and Standard Error of the Mean
- Normal distribution:
- Appropriate statistical tests: Linear regression and correlation, 't' statistics, ANOVA, Chi squared test for association
- Parametric/non-parametric
- Use of a statistical programme to process data
- Interpretation of results obtained via statistical analysis (probability)

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<b>Assessment Strategy:</b> 100% Coursework <b>To pass this module a student must</b> complete a research proposal and risk/ethically assess the proposed research. In addition, they will need to learn how to analyse, present and interpret statistical data.				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Research project proposal and risk/ethical assessment (1500 words)	50%	TBC	%	A1, B1
<b>Coursework 2:</b> Data Analysis Portfolio (1500-word equivalents)	50%	TBC	%	D1, D2

10. Teaching staff associated with the module
Name and contact details
Adam George <a href="mailto:georgea@btc.ac.uk">georgea@btc.ac.uk</a>
Rachel Legg-Wilde <a href="mailto:leggwilder@btc.ac.uk">leggwilder@btc.ac.uk</a>

11. Key reading list				
Author	Year	Title	Publisher	Location
Hosey, G., Melfi, V. and Pankhurst, S.	2013	Zoo Animals: Behaviour, Management and Welfare	Oxford University Press: Oxford	LRC
BIAZA	2019	Handbook of Zoo and Aquarium Research	BIAZA Download	BIAZA site
Bateson, M. and Martin, P.	2021	Measuring Behaviour: An Introductory Guide	Cambridge University Press: Cambridge	LRC
Wheater, C.P., Cook, P. and Bell, J.	2020	Practical Field Ecology: A Project Guide	Wiley-Blackwell: London	LRC
Dytham, C.	2010	Choosing and using statistics: a biologist's guide	Blackwell Publishing: Oxford	LRC

12. Other indicative text (e.g., websites)
<b>Website:</b> Minitab (Help) <a href="https://www.minitab.com/en-us/academic/teaching-resources/lessons-from-minitab-help">https://www.minitab.com/en-us/academic/teaching-resources/lessons-from-minitab-help</a>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
New module	n/a	n/a

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC203. Applied Animal Welfare and Ethics</b>		
<b>Module tutor</b>	Nikki Routledge	<b>Level</b>	5
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	30	
	Seminars	15	
	Practical	0	
	Tutorial	0	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55	
	Preparation for assessments	100	
	<b><i>Total hours</i></b>	200 hours	

### 2. Rationale for the module and its links with other modules

This module will enable learners to evaluate the historical development of animal welfare and concomitant legislation. In addition, learners will practically assess and justify the welfare of animals in a variety of industrial contexts, including captive zoological, wild animal, captive animal testing, farming, and companion animal environments. In addition, they will develop their evaluation of ethical issues, animal welfare legislation and codes of conduct, with the ability to assess their utility and propose recommendations.

Learners will be able to offer reasoned, evidence-based discussion of how legislation and ethics influence welfare standards which are relevant to the workplace. This module enhances understanding of animal welfare for continuing BSc learners studying animal psychology, and behavioural management.

#### Links to Modules:

- Enclosure and Enrichment Design (Level 4)
- Animal Cognition and Consciousness (Level 6)
- Animal Behavioural Management (Level 6)

**3. Aims of the module**

The aims of this module are to develop an understanding of the historical development of animal welfare by analysis of current legislations and codes of practice. Learners will be prepared to develop recommendations and strategies to enhance animal welfare in chosen examples across farm, captive zoological, captive, wild, animal testing and companion animal industries.

**4. Pre-requisite modules or specified entry requirements**

None

**5. Is the module compensatable?**

Yes

**6. Are there any PSRB requirements regarding the module?**

None

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Examine and critique the historical and current legislation and codes of practice in farm, captive, research, wildlife, and/or companion animal industries.</p> <p><b>A2:</b> Outline how animal management conditions influence welfare and analyse evidence-based recommendations for improvement.</p>	<p>A3</p> <p>A3</p>	<p>Lectures Case studies Seminars Debate Peer and collaborative learning</p> <p>Lectures Case studies Seminars Peer and collaborative learning</p>

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Evaluate ethics in relation to animal welfare and outline how ethical considerations drive changes in legislation in farm, captive zoological, captive animal testing, wildlife, and companion animal industries</p>	<p>B2</p>	<p>Lectures Case studies Seminars Peer and collaborative learning Debate</p>

C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p>n/a</p>		

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Communicate research findings and arguments in a professional manner to others</p>	D3	<p>Oral presentations Peer and collaborative learning</p>

8. Indicative content.
<p><b>Animals to be covered:</b> Farm, Captive, Laboratory/Research, Wild and Companion</p> <p><b>Definitions of animal welfare</b>  <b>The history of animal welfare</b>  <b>Farm Animal Welfare Council and the 5 freedoms</b>  <b>Animal welfare assessments</b></p> <ul style="list-style-type: none"> <li>• Animal Health assessments</li> <li>• Mellor's Five Domains of Welfare (2020)</li> <li>• Behaviour responses to the environment</li> <li>• Stress and behavioural responses to stress</li> <li>• Animal sentience</li> </ul>

## 8. Indicative content.

### **Ethics**

- Theories
- Capacities: pain, emotion, consciousness
- Ethics associated with industry: food, biotechnology, environmental, zoological research
- Ethical legislation
- Activism

### **Aspects where animal welfare may be compromised**

- The physical environment: housing and environments
- Nutrition
- Performance and husbandry
- Slaughter
- Transport and Markets
- Testing facilities
- Introduction and mixing of animal groups
- Within the family environment
- Animal welfare and wildlife management compromises: e.g., elephant culling, translocations, 'wild' fences, veterinary/reserve fences leading to mass die-offs of wildlife

### **Legislation/Guidelines**

- The historical development of welfare including the Brambell Report (1965)
- Animal Welfare Act 2006
- Wildlife and Countryside Act 1981
- Animal Scientific Procedures Act 1986
- Welfare Codes of Practice
- Welfare in wild managed populations and translocations (IUCN Guidelines on Reintroductions and Other Conservation Translocations)



9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<b>Assessment Strategy:</b> 50% Coursework and 50% Time Constrained Essay				
<i>To pass this module a student must</i> examine ethics, legislation, and codes of practice in relation to animal welfare. They will develop oral communications of topics and develop reflective critique of case studies.				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework.</b> Group Oral Presentation. (1500-word equivalent)	50%	TBC	%	B1, D1
<b>Time Constrained Essay.</b> (1500-word equivalent)	50%	TBC	%	A1, A2

10. Teaching staff associated with the module	
Name and contact details	
Nikki Routledge <a href="mailto:routledgen@btc.ac.uk">routledgen@btc.ac.uk</a>	

11. Key reading list				
Author	Year	Title	Publisher	Location
Appleby, M.C., Hughes, B.O., Mench, J.A. and Olsson, A.	2018	Animal Welfare. (3 <sup>rd</sup> edn.).	CABI: Wallingford	LRC
Sommerville, R.	2021	Challenging Human behaviour to Enhance Animal Welfare	CABI: Wallingford	LRC
Broom, D.M. and Fraser, A. F	2007	Domestic Animal Behaviour and Welfare (4 <sup>th</sup> edn.).	CABI: Wallingford	LRC

## 12. Other indicative text (e.g., websites)

### Other Books:

Armstrong, S.J. (ed) and Botzler, R.G. (ed) (2016) *The animal ethics reader*. 3<sup>rd</sup> edn. London: Routledge  
Grandin, T. (2009) *Improving Animal Welfare: A Practical Approach*. CABI: Wallingford  
Rose, P. (2022). *The Behavioural Biology of Zoo Animals*. CRC Press: London

### Journals:

- Animal Welfare
- Journal of Applied Animal Welfare
- Applied Animal Behaviour Science
- Journal of Animal Science
- British Poultry Science

### Websites:

- [www.IFAW.org](http://www.IFAW.org)
- [www.UFAW.org](http://www.UFAW.org)
- [www.defra.gov.uk](http://www.defra.gov.uk)
- [www.RSPCA.org.uk](http://www.RSPCA.org.uk)
- [www.wildlifewelfare.org.uk](http://www.wildlifewelfare.org.uk)
- [www.wcl.org.uk/animal-welfare.asp](http://www.wcl.org.uk/animal-welfare.asp)

### Guidelines:

IUCN Guidelines for Reintroductions and Other Conservation Translocations  
<https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf>

<b>13. List of amendments since last (re)validation</b>		
<b>Area amended</b>	<b>Details</b>	<b>Date Central Quality informed</b>
Module Review (Revalidation)	Content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC204. British Wildlife</b>		
<b>Module tutor</b>	Rachel Legg-Wilde	<b>Level</b>	5
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities</i></b>		
	Lectures	25 hours	
	Seminars	10 hours	
	Practical	10 hours	
	Tutorial	0 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
	<b><i>Total hours</i></b>	<b>200 hours</b>	

### 2. Rationale for the module and its links with other modules

This module reviews the natural history of a variety of wildlife groups across the United Kingdom. The habitat, biodiversity and protection of UK wildlife will be investigated alongside monitoring/conservation techniques. Impacts of invasive species on indigenous populations will be explored. In addition, wildlife rehabilitation techniques for wildlife species are debated alongside the ethics of rehabilitation.

#### Module Links to:

- Introduction to Ecological Principles and Habitats (Level 4)
- Current Affairs in Animal Conservation (Level 6)

**3. Aims of the module**

The aims of this module are for learners to assess and critique the biodiversity and conservation associated with a variety of British wildlife species. A review of the wildlife rescue, rehabilitation and release will be also explored, and ethics debated. Legislation associated with wildlife will be evaluated.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Identify and evaluate the <i>in-situ</i> and <i>ex-situ</i> conservation strategies used in relation to a threatened British wildlife species.</p>	A4	Lectures Seminars Case studies Peer and collaborative learning
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Evaluate the ethics of rehabilitating indigenous and non-indigenous UK wildlife for release</p>	B2	Lectures Seminars Case studies Problem based learning Peer and collaborative learning

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> Investigate and analyse evidence in a timely manner to produce coherent reporting of a problematic topic to diverse audiences</p>	C3	Lectures Seminars Case studies Problem based learning

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Use a form of media technology to critique conservation research to a diverse audience</p>	D3	Lectures Seminars Case studies Problem based learning

## 8. Indicative content.

### **British Wildlife Groups Covered:**

- Mammals e.g., badgers, foxes', rabbits, hares, hedgehogs, bats, small mammals
- Marine mammals
- Birds
- Reptiles and amphibians
- Invertebrates

### **Natural history of wildlife**

- Legislation
- Habitat
- Biodiversity
- Interactions
- Capture and handling
- Control
- Disease

### **Deliberate hurt: Prosecution and evidence collection**

### **Invasive species and their effects on indigenous species**



## 8. Indicative content.

### **Rescue, Rehabilitation and Release**

- Rehabilitation organisations and societies
- Legislation and ethics of treatment
- Rescue and assessing for injuries
- Types of injury or conditions
- Common first aid treatment
- Convalescence
- Rehabilitation methods
- Keeping records
- Release

### **Conservation**

- Global biodiversity of species in comparison to UK
- Conservation organisations and conservation strategies in UK
- Legislation and species protection
- Captive and wild breeding programmes
- *In-situ* and *ex-situ* conservation
- Re-introductions
- Threats to conservation e.g., habitat fragmentation, climate change
- Conservation translocations

### ***IUCN Training courses recommended.***

- ***IUCN Red List Introduction and Training course*** ‘Assessing species extinction risk using IUCN red list methodology’.
- ***IUCN Green Status of Species*** Training course is also highly recommended for this module.

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<p><b>Assessment Strategy:</b> 100% Coursework.  <b>To pass this module a student must</b> review the <i>in-situ</i> and <i>ex-situ</i> conservation of a British wildlife species to a diverse audience using a blog format. In addition, they must explore the ethics associated with rehabilitating indigenous and non-indigenous UK wildlife and report findings in a newspaper article.</p>				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
Coursework 1. Conservation Blog (1500-word equivalents)	50%	TBC	%	A1, D1
Coursework 2. Newspaper Article (1500-word equivalents)	50%	TBC	%	B1, C1

10. Teaching staff associated with the module
<b>Name and contact details</b>
Rachel Legg-Wilde: leggwilder@btc.ac.uk

11. Key reading list				
Author	Year	Title	Publisher	Location
Mullineaux, E. and Keeble, E.	2016	BSAVA Manual of Wildlife Casualties.	BSAVA: Gloucester	LRC
Meredith, A.L and Keeble, E.	2011	Wildlife Medicine and Rehabilitation	Manson Publishing: London	LRC
Huffman, J.E. and Wallace, J.R.	2011	Wildlife Forensics: Methods and Applications	Wiley Blackwell: Chichester	LRC

## 12. Other indicative text (e.g. websites)

### Other textbooks:

Stocker, L. (2005) *Practical Wildlife Care*. Blackwell Publishing: Oxford.

Varga, M. And Lumbis, R. (2012) *BSAVA Manual of Exotic Pets and Wildlife Nursing*, BSAVA: Gloucester.

### Journals:

- British Wildlife
- Journal of Wildlife Management
- Wildlife Biology

### Websites:

- <https://www.britishwildlife.com/>
- <http://www.wildlifebiology.org/>
- <http://naturenet.net/orgs/uknatureorgs.html>
- [www.wildlifetrusts.org/](http://www.wildlifetrusts.org/)
- <https://www.nationaltrust.org.uk/nature-and-wildlife>
- [www.rspb.org.uk](http://www.rspb.org.uk)
- <https://www.secretworld.org/>
- <https://www.mammal.org.uk/>
- <https://www.arc-trust.org/>

### IUCN Training Courses:

IUCN: <https://www.iucnredlist.org/resources/online>

IUCN Training course 'Assessing species extinction risk using IUCN red list methodology'

<https://www.conservationtraining.org/course/index.php?categoryid=23>

IUCN Green Status of Species

<https://www.conservationtraining.org/enrol/index.php?id=1302>

IUCN Guidelines for Reintroductions and Other Conservation Translocations

<https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf>

<b>13. List of amendments since last (re)validation</b>		
<b>Area amended</b>	<b>Details</b>	<b>Date Central Quality informed</b>
Module Review (Revalidation)	Module moved from level 6 to level 5. Module outcomes, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC205. Evolution and Adaptation</b>		
<b>Module tutor</b>	Adam George	<b>Level</b>	5
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	30 hours	
	Seminars	10 hours	
	Practical	5 hours	
	Tutorial	0 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
	<b><i>Total hours</i></b>	200 hours	

### 2. Rationale for the module and its links with other modules

The module introduces learners to evolution in the plant and animal kingdoms, with the aim of providing them with a basis in the concept of evolutionary processes. Learners will discover about the evolution of animals and plants throughout earth history, which will provide them with sound academic literacy in their subject area. Learners will also explore evolutionary factors by identifying current theoretical models that can be used to explain specific scenarios in behavioural ecology. The module will provide learners with the opportunity to discover the ecological and evolutionary significance amongst a variety of animals with reference to structural, behavioural and functional adaptations. Learners will gain a thorough understanding of evolutionary development, ontogeny, and biotic and environmental factors that have driven changes in animal morphology and behaviour.

#### **Link to Modules:**

- Management of Captive Animals (Level 4)
- Introduction to Ecological Principles and Habitats (Level 4)
- British Wildlife (Level 5)

**3. Aims of the module**

The aims of the module are for learners to develop theoretical perspectives of evolution and animal adaption to their environment/lifestyle. In addition, explore the ecological and evolutionary significance of a range of adaptations amongst a variety of species.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.

<b>7. Intended learning outcomes</b>		
<b>A. Knowledge and understanding</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Critically examine the theory of natural selection based on social and cultural opinions</p> <p><b>A2:</b> Evaluate how knowledge of evolution has influenced anthrozoological relationships</p>	<p>A4</p> <p>A3</p>	<p>Lectures Seminars Peer and collaborative learning Debates</p> <p>Lectures Seminars Peer and collaborative learning Debate Problem based learning</p>
<b>B. Cognitive skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Explain and analyse specific animal adaptations in relation to abiotic and biotic factors</p>	<p>B2</p>	<p>Lectures Seminars Debates Problem based learning</p>

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module learners will be expected to:</i></p> <p>n/a</p>		

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Interpret and analyse data using visual representations</p>	<p>D2</p>	<p>Lectures Case studies Data analysis</p>



## 8. Indicative content.

### Evolution

- Definition and theory of evolution
- Origins and evolution of life through Earth history
- Mechanisms (e.g., natural selection, genetic drift)
- Adaptation
- Classification and phylogeny
- Co-evolution / Convergent evolution
- Speciation
- Extinction
- Abiotic and biotic influences on evolution
- Social and cultural responses to evolution
- Population genetics, dynamics, interactions, and theoretic models

### Adaptations

- **Structural adaptations**, e.g., morphology
- **Functional adaptations**, e.g., ectothermic, endothermic
- **Behavioural adaptations**
  - Economic decisions (e.g., prey choice, migration, starvation)
  - Predators' verses prey (Evolutionary Arms Race)
  - Competing for resources
  - Living in groups
  - Sexual Selection
  - Conflict
  - Mating systems

**9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes****Assessment Strategy:** 100% Coursework

**To pass this module a student must** be able to evaluate evolutionary mechanisms in relation to society viewpoints. In addition, be able to interpret and analyse animal adaptations to relate findings to abiotic/biotic factors.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1: Essay</b> (1500 words)	50%	TBC	%	A1, A2
<b>Coursework 2: Data Interpretation</b> (1500 words)	50%	TBC	%	B1, D1

**10. Teaching staff associated with the module****Name and contact details**

Adam George georgea@btc.ac.uk

**11. Key reading list**

Author	Year	Title	Publisher	Location
Parker, S.	2015	Evolution: the whole story.	Thames and Hudson: London	LRC
Davies, N.B., Krebs, J.R. and West, S.A.	2012	An Introduction to Behavioural Ecology (4 <sup>th</sup> edn)	Wiley-Blackwell: Hoboken	LRC
Kappeler, P.	2010	Animal behaviour: evolution and mechanisms	Springer: London	LRC

**12. Other indicative text (e.g., websites)****Journals:**

- Evolution
- Ecology and Evolution
- Behavioural Ecology

**13. List of amendments since last (re)validation**

<b>Area amended</b>	<b>Details</b>	<b>Date Central Quality informed</b>
Module Review (Revalidation)	Content and resources reviewed. Amended where relevant.	Revalidation (2022/23)

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC206. Human Impacts on Animals and the Environment</b>		
<b>Module tutor</b>	Rachel Legg-Wilde	<b>Level</b>	5
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	30 hours	
	Seminars	15 hours	
	Practical	0 hours	
	Tutorial	0 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
	<b><i>Total hours</i></b>	200 hours	

### 2. Rationale for the module and its links with other modules

This module widens learners understanding of how anthropogenic activity affects the environment and animal biodiversity locally, nationally and globally. Impacts such as pollution, tourism and climate change will be investigated. Monitoring and control strategies will be examined in relation to legislation and government agendas.

#### Module Links to:

- British Wildlife (Level 5)
- Current Affairs in Animal Conservation (Level 6)

**3. Aims of the module**

The aims of this module are for learners to develop an understanding of the diversity and complexity of issues that man generates in relation to the ecology of local, national and global environments. Learners will investigate and appraise how legislation and policy can affect the impacts of such anthropogenic activities.

**4. Pre-requisite modules or specified entry requirements**

None

**5. Is the module compensatable?**

Yes

**6. Are there any PSRB requirements regarding the module?**

None

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Examine causes of biodiversity loss</p>	A4	Lectures Seminars Debate Peer and collaborative learning
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Identify and analyse the impact of a pollutant on the environment</p>	B2	Lectures Peer and collaborative learning Debate Reflective research
C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> Analyse strategies to control a pollutant</p>	C3	Lectures Peer and collaborative learning Seminars Case study Reflective practice

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Evaluate governmental/organisational local, national, and global policy that is working towards an environmentally sustainable future</p>	D3	Lectures Peer and collaborative learning Seminars Case study Reflective practice

## 8. Indicative content.

### Human-Animal Interactions

#### Pollution and environmental impact on Air, Land, Water

- Types of pollution e.g., noise, light, industrial, plastic, sewage
- Monitoring
- Control
- Legislation

#### Climate change

**Habitat destruction** e.g., deforestation, urbanisation,

**Threats of tourism** on habitats and animals e.g., wildlife tourism, ecotourism, cruise ships

#### Food production

#### Renewables

#### Sustainability

**Government policy** (local, national and global) to protect habitats and biodiversity

**Environmental Organisations and their actions** e.g., Greenpeace



9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<b>Assessment Strategy:</b> 100% Coursework.				
<i>To pass this module a student must</i> examine anthropogenic activity on animal biodiversity and evaluate how the effects can be controlled considering environmental policy. In addition, causes of man-made pollution are evaluated in relation to their impacts and control.				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
Coursework 1. Thought Paper (1500 words)	50%	TBC	%	A1, D1
Coursework 2. Oral Presentation (1500-word equivalent)	50%	TBC	%	B1, C1

10. Teaching staff associated with the module
<b>Name and contact details</b>
Rachel Legg-Wilde <a href="mailto:leggwilder@btc.ac.uk">leggwilder@btc.ac.uk</a>

11. Key reading list				
Author	Year	Title	Publisher	Location
Attenborough, D	2022	A life on our planet: My witness statement and a vision for the future	Penguin: London	LRC
Carson, R	2020	Silent Spring (re-printed from 1962)	Penguin Classic: London	LRC
Juniper, T	2012	The science of our changing planet: From global warning to sustainable development	DK: London	LRC

## 12. Other indicative text (e.g., websites)

### Journals:

- Frontiers in Environmental Science
- Environmental Science and Policy
- Journal of Applied Ecology
- The Journal of Wildlife Management
- Journal for Nature Conservation

### Websites:

Greenpeace: <https://www.greenpeace.org.uk/>

WWF: <https://www.worldwildlife.org/>

COP: Conference <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop>

Government Environmental Policy: <https://www.gov.uk/environment>

## 13. List of amendments since last (re)validation

Area amended	Details	Date Central Quality informed
New module	n/a	n/a

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC301. Dissertation</b>		
<b>Module tutor</b>	Rachel Legg-Wilde	<b>Level</b>	6
<b>Module type</b>	Taught	<b>Credit value</b>	40
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	20 hours	
	Seminars	0 hours	
	Practical	40 hours	
	Tutorial	30 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	110 hours	
	Preparation for assessments	200 hours	
	<b><i>Total hours</i></b>	400 hours	

## 2. Rationale for the module and its links with other modules

In this module learners will undertake a piece of academic independent research that involves the collection, analysis, presentation, and evaluation of data. The dissertation will develop the learners' analytical and investigative problem-solving abilities. In addition, a critical attitude to background research and experimental data is expected.

Topics are developed by the learner, and the module offers the opportunity to collaborate on larger pieces of research with organisations locally, nationally, and globally to meet industry trends, needs and areas of interest. The learner will also need to develop a dissertation of interest that meets their constraints in terms of time, location, and funding.

Each learner is assigned a supervisor who will provide guidance on the chosen topic of research. Learners will be encouraged to propose their own area of investigation although this will need approval from the supervisor. Learners should discuss their progress with the allocated supervisor at regular intervals and will be expected to undertake a significant amount of independent research on their chosen topic of research, therefore time management is key. In addition, risk assessments and ethical permissions will need to be addressed prior to commencement of the research.

### Links to other Modules:

- Research Project (Level 5)
- Experimental Design and Analysis (Level 5)

**3. Aims of the module**

The aims of this module are for learners to plan and critically evaluate primary or secondary research in an independent, organised, and timely manner. Analysis of data, recommendations, recognition of limitations and proposals of further research based on research conclusions will be expected. Development of communicating research findings in an appropriate format will be undertaken by learners.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

No

**6. Are there any PSRB requirements regarding the module?**

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Develop investigative research by drawing reference to existing current topical published materials, critically evaluating and analysing this information to present it as a literature review.</p>	A5	Lectures 1:1 tutorial Self-directed study and research Problem based learning Interaction with science professionals

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Formulate and apply risk assessed and ethically approved methods to the research question</p>	B3	Lectures 1:1 tutorial Self-directed study and research Problem based learning Interaction with science professionals Practical research

<b>C. Practical and professional skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>C1:</b> Review and make recommendations from the research findings</p> <p><b>C2:</b> Analyse and interpret research data using appropriate statistics and formulate suitable critically evaluative conclusions from correctly presented results.</p>	<p>C4</p> <p>C4</p>	<p>Lectures 1:1 tutorial Self-directed study and research Problem based learning</p> <p>Lectures 1:1 tutorial Data analysis Self-directed study and research Problem based learning Practical research</p>

<b>D Key transferable skills</b>	<b>Programme Learning Outcome(s) this maps against</b>	<b>Learning and teaching strategy</b>
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Devise and report a scientific investigation in an appropriate format based upon independent, analytical, and evaluative research within a specified time frame and communicate it to a diverse audience.</p>	<p>D4</p>	<p>Lectures 1:1 tutorial Self-directed study and research</p>

## 8. Indicative content.

*A Dissertation Handbook supports the indicative content of this module.*

Workshops on the following topics based on the writing of the dissertation report and research presentation are delivered.

- Overview and expectations in the dissertation,
- Presentation of the dissertation handbook information
- Planning and time management
- Health and Safety, Risk Assessment and Ethical permissions (professional integrity)
- Intellectual property rights
- Keeping a research notebook
- Writing a literature review: critical evaluation
- Writing a methodology
- Presentation of results
- Evaluation of results
- Discussion/Critical evaluations

Additional support sessions are provided for data analysis and regular appointments with the dissertation supervisor are planned.

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<p><b>Assessment Strategy: 100% Coursework</b>  <b>To pass this module a student must</b> produce a dissertation report on an animal management, ecology, or conservation topic within a specified timeframe. The dissertation is to include clear aims/objectives, critical analysis of literary research, scientific methodology, data analysis, an evaluative discussion, recommendations, and conclusions. The research will be disseminated to an audience</p>				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Dissertation (6000 words maximum)	75%	TBC	%	A1, B1 C1, C2, D1
<b>Coursework 2.</b> Oral Presentation of Research Findings. (2000-word equivalents)	25%	TBC	%	D1

10. Teaching staff associated with the module
Name and contact details
Rachel Legg-Wilde leggwilder@btc.ac.uk
Adam George georgea@btc.ac.uk

11. Key reading list				
Author	Year	Title	Publisher	Location
Cottrell, S	2014	Dissertation and project reports, a step-by-step guide	Palgrave Macmillan: Basingstoke.	LRC
McMillan, V.E.	2020	Writing papers in the biological sciences. (7 <sup>th</sup> edn.)	Bedford: St Martins	LRC
Bateson, M. and Martin, P.	2021	Measuring Behaviour: An Introductory Guide	Cambridge University Press: Cambridge	LRC



11. Key reading list				
Author	Year	Title	Publisher	Location
Wheater, C.P., Cook, P. and Bell, J.	2020	Practical Field Ecology: A Project Guide	Wiley-Blackwell: London	LRC

12. Other indicative text (e.g. websites)
<p><b>Other textbooks:</b>  Cottrell, S. (2011) <i>Critical Thinking Skills: Developing effective analysis and argument</i>. Palgrave Macmillan: Basingstoke.  Hawkins, D., (2014) <i>Bio measurement: a student's guide to biological statistics</i>. 3rd ed. Oxford University Press: Oxford.</p>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Content and resources reviewed. Amended where relevant. MLO moved C3 to B1	Revalidation (2022/23)

## Module specification

1. Factual information		
<b>Module code and title</b>	<b>AMEC302. Animal Cognition and Consciousness</b>	
<b>Module tutor</b>	Nikki Routledge <b>Level</b> 6	
<b>Module type</b>	Taught <b>Credit value</b> 20	
<b>Mode of delivery</b>	100% Face-to-face	
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>	
	Lectures	20 hours
	Seminars	15 hours
	Practical	10 hours
	Tutorial	0 hours
	<b><i>Independent guided study</i></b>	
	Directed/independent study	55 hours
	Preparation for assessments	100 hours
<b><i>Total hours</i></b>	<b>200 hours</b>	

### 2. Rationale for the module and its links with other modules

This module provides learners theory and evaluative skills to formulate their own judgements on how wild, captive and companion animals may view their physical and social environments. Learning behaviours, memory, motivation, and consciousness are key topics associated with non-human animal health and welfare.

This topic area complements other modules focussing on welfare issues, enrichment provision, behavioural management, and rehabilitation, and enhances the learner's depth of theory and ability to propose an informed research-based analysis to others upon completion of the course and continuation into the workplace.

#### **Links to other Modules:**

- Animal Behavioural Management (Level 6)

**3. Aims of the module**

The aims of this module are to develop the ability within learners to explain and evaluate the learning behaviours that are displayed by non-human animals, including the functions of memory and assessment of whether behaviours performed by non-human animals are due to cognition, simple stimulus response learning or associative conditioning. Learners will develop critical evaluation of the role of emotions and consciousness in animals, including representational and relational theories and the complexities of measuring consciousness.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Propose and appraise how motivational models and theories influence non-human animal behaviours in the captive and/or companion environments.</p>	A5	Lectures Problem based learning Peer and collaborative learning Reflective practice Case study

B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Review the seven key learning behaviours and evaluate their contribution to stimulus response, associative learning, or cognition.</p> <p><b>B2:</b> Critically evaluate representational and relational consciousness evidence in non-human animal species in captive and/or companion environments</p>	<p>B3</p> <p>B3</p>	<p>Lectures            Seminars            Problem based learning            Peer and collaborative learning</p> <p>Lectures            Problem based learning            Peer and collaborative learning            Case study</p>

C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p>n/a</p>		

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Debate and critically evaluate subject specific information and disseminate to peers</p>	D4	Lectures Problem based learning Peer and collaborative learning Case study

8. Indicative content.
<p><b>Animal Groups: Companion, Zoological</b></p> <p><b>Learning theories</b></p> <ul style="list-style-type: none"> <li>• Imprinting</li> <li>• Classical conditioning</li> <li>• Habituation</li> <li>• Instrumental learning</li> <li>• Latent learning</li> <li>• Insight learning</li> <li>• Social and observational learning</li> </ul>

## 8. Indicative content.

### **Cognition and behaviourism**

- Characteristics of behaviourism – stimulus-response and associative learning
- Cognitive skills
- Instrumental learning and cognition
- Pavlovian condition and cognition
- Cognitive behaviours

### **Memory**

- Working memory
- Long-term memory
- Implicit and explicit memory

### **Motivation to perform behaviours**

- Historical overview of motivation
- Drives
- Psychohydraulic model
- Feedback models of motivation
- Incentives of motivation
- Measuring motivation
- Preference testing
- Consumer demand model
- Interaction between motivational states

### **Consciousness**

- Emotion
- Gray's model of emotion
- The psycho-evolutionary theory of emotion
- Definitions of consciousness
- Measuring consciousness
- Conscious behaviours

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<b>Assessment Strategy:</b> 50% Coursework and 50% Time Constrained Essays ( <i>Essay 1: Motivation/Essay 2: Consciousness</i> ) <b>To pass this module a student must</b> critically evaluate motivational models, consciousness, cognition and learning in animals.				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework.</b> Oral Presentation (2000-word equivalent)	50%	TBC	%	B1, D1
<b>Time Constrained Essays</b> (2000-words each)	50%	TBC	%	A1, B2,

10. Teaching staff associated with the module	
Name and contact details	
Nikki Routledge	routledgen@btc.ac.uk

11. Key reading list				
Author	Year	Title	Publisher	Location
Wynne, C.D.L., and Udell, M.A.R.	2013	Animal Cognition: Evolution, Behaviour and Cognition.	Palgrave Macmillan: London	LRC
Stamp Dawkins, M.	1998	Through our eyes only: the search for animal consciousness.	Oxford University Press: Oxford	LRC
Pearce, J.M.	2008	Animal learning and Cognition: an introduction.	Psychology Press: London	LRC

12. Other indicative text (e.g., websites)
<p><b>Journals:</b></p> <ul style="list-style-type: none"> <li>• Animal Behaviour Science</li> <li>• Animal Welfare</li> </ul> <p><b>Websites:</b></p> <ul style="list-style-type: none"> <li>• <a href="http://www.bps.org.uk">www.bps.org.uk</a></li> </ul>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	MLOs, content and resources reviewed. Amended where relevant.	Revalidation (2022/23)



## Module specification

1. Factual information			
<b>Module title</b>	<b>AMEC303. Ecological Monitoring and Habitat Management</b>		
<b>Module tutor</b>	Adam George	<b>Level</b>	6
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% Face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	20 hours	
	Seminars	5 hours	
	Practical	20 hours	
	Tutorial	0 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
<b><i>Total hours</i></b>	200 hours		

## 2. Rationale for the module and its links with other modules

This module will enable learners to evaluate information related to techniques and assessment methods used within the field of ecological monitoring and habitat management. Learners will be encouraged to consider all the aspects influencing an ecosystem to efficiently select appropriate techniques for habitat management and surveying. This module will advance learners ecological surveying skills and analytical abilities. Theoretical aspects of population sampling and ecological monitoring will be covered in detail and learners will be expected to evaluate data gathered in the context of ecological issues.

### Links to Modules:

- Current Affairs in Animal Conservation (Level 6)
- Dissertation (Level 6)

**3. Aims of the module**

The aims of this module are to enable learners to expand advanced theoretical perspectives of ecological monitoring relating to habitat management. In addition, transferable skills will be developed regarding an industry-facing case study (thought paper) and communitive research via designing a conference poster.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.

7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Propose and critically appraise methods used for abiotic and biotic surveys in industry</p>	A5	Lectures Seminars Case studies Discussion
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Explain factors that are affecting the ecology of a habitat and critically evaluate proposed management actions</p>	B3	Lectures Seminars Discussion
C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> Conduct an ecological field survey and analyse data gathered</p>	C4	Lectures Practical fieldwork Data analysis Problem based learning

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Present evaluative academic communication using appropriate professional language to disseminate subject specific information to a specialist audience</p>	D4	Lecture Communication Data Analysis Design

8. Indicative content.
<p><b>Biotic and abiotic surveying techniques and analysis</b></p> <ul style="list-style-type: none"> <li>• Phase 1 surveys</li> <li>• NVC</li> <li>• Cluster analysis/ Ordination</li> <li>• Diversity indices</li> <li>• Multivariate methods</li> <li>• Monitoring species: insects, birds, reptiles, mammals</li> </ul> <p><b>Laboratory techniques in soil and invertebrate analysis</b></p> <p><b>Habitat restoration and management</b></p> <p><b>Lidar and levelling</b></p> <p><b>Monitoring climate change in relation to ecological communities</b></p> <p><b>Environmental Impact Surveys</b></p> <p><b>Government policy and legislation</b></p> <p><b>Geographic Information Systems (GIS)</b></p> <p><b>Academic report writing, conference poster design and creation</b></p>

**9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes**

**Assessment Strategy:** 100% Coursework

**To pass this module a student must** propose and evaluate abiotic/biotic survey methodology in relation to an industry facing case study (Thought Paper). In addition, they need to create and present a scientific conference poster of evaluative research, proposing ecological management recommendations.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1.</b> Thought Paper on Industry Scenario (1000-word count)	25%	TBC	%	A1
<b>Coursework 2.</b> Poster and Viva (3000-word equivalent)	75%	TBC	%	B1, C1, D1

**10. Teaching staff associated with the module****Name and contact details**

Adam George [georgea@btc.ac.uk](mailto:georgea@btc.ac.uk)

11. Key reading list				
Author	Year	Title	Publisher	Location
Wheater, C.P., Cook, P. and Bell, J.	2011	Practical field ecology: a project guide.	Wiley-Blackwell: London	LRC
Dytham. C.	2010	Choosing and using statistics: a biologist's guide.	Blackwell Science: Oxford	LRC
Krausman, P.R. and Leopald, B.D.	2013	Essential Readings in Wildlife Management and Conservation.	John Hopkins University Press: London	LRC

12. Other indicative text (e.g., websites)
<p><b>Journals:</b></p> <ul style="list-style-type: none"> <li>• Restoration Ecology</li> <li>• Journal of Applied Ecology</li> <li>• The Journal of Wildlife Management</li> <li>• Journal for Nature Conservation</li> </ul> <p><b>Website:</b> Defra <a href="http://www.defra.gov.uk">www.defra.gov.uk</a></p>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
New module	n/a	

## Module specification

1. Factual information			
<b>Module code and title</b>	<b>AMEC304. Current Affairs in Animal Conservation</b>		
<b>Module tutor</b>	Adam George	<b>Level</b>	6
<b>Module type</b>	Taught	<b>Credit value</b>	20
<b>Mode of delivery</b>	100% face-to-face		
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>		
	Lectures	20 hours	
	Seminars	15 hours	
	Practical	10 hours	
	Tutorial	0 hours	
	<b><i>Independent guided study</i></b>		
	Directed/independent study	55 hours	
	Preparation for assessments	100 hours	
	<b><i>Total hours</i></b>	200 hours	

## 2. Rationale for the module and its links with other modules

Wildlife conservation is the practice of protecting wild species and their habitats globally. Protecting biodiversity loss has never been more important given human impact. This module allows both module leaders and learners to journey, explore and critically evaluate current factors affecting wildlife conservation. It also develops a variety of media delivery techniques to be able to communicate science to the public preparing graduates for industry. This develops best practice for the dissemination of key principles and issues in wildlife conservation in today's society.

### Links to Modules:

- British Wildlife (Level 5)
- Ecological Monitoring and Habitat Management (Level 6)
- Dissertation (Level 6)

**3. Aims of the module**

The aims of this module are to enable learners to engage with the reflection and critical evaluation wildlife conservation current topical best practice and issues. Communication of these issues via a variety of media forms will develop industry facing employability skills to create high-quality outputs to educate society.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Propose and critically evaluate the effectiveness of animal conservation methods to educate society via social media</p>	A5	Lectures Seminars Discussion/debates Media output Blogs
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1.</b> Select, investigate, and critically communicate the impact of a current animal conservation topic of personal interest</p>	B3	Lectures Seminars Reflective practice Media output Discussion/debate
C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p>n/a</p>		

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Critically review and verbally communicate a current topic in animal conservation science to non-specialist audiences.</p> <p><b>D2:</b> Present news media to critically explain a current topic in animal conservation</p>	<p>D4</p> <p>D4</p>	<p>Lectures Reflective practice Media output Discussion/debate</p> <p>Lectures Reflective practice Media output Discussion/debate</p>

## 8. Indicative content.

### Local, National and Global

#### Current affairs in animal conservation: any current topics in industry/news/scientific research will be explored

- Biodiversity conservation
- Reasons for population decline/conservation
- Causes of species decline (flora and fauna), extinction of species
- Human impact on species: climate change / pollution / food production
- Human-wildlife conflict
- Types of conservation: preservation, management, reclamation/restoration, creation of new habitats.
- Levels of conservation – local, national, international
- National parks/Reserves and role in conservation
- Legislation
- Ethics of conservation techniques: wildlife harvesting and control
- Managing populations for conservation / Wildlife protection (legislation)
- Conservation genetics
- Evolutionary Biology: adapting to habitats
- Governmental co-operation and policy in conservation e.g., COP

## 8. Indicative content.

### **Dissemination of current wildlife conservation topics to diverse audiences for education and**

- Types of media to generate wildlife conservation interest
- Audience/industry types
- Use of celebrity to disseminate information and generate wildlife conservation interest
- Review wild animal representation in media
- History of film development in animal and wildlife conservation
- Techniques of media production and their impacts in the public domain
- Effectiveness of media campaigns in wildlife conservation
- Community Engagement /Fund-raising strategies for wildlife conservation
- Project management techniques

9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes				
<p><b>Assessment Strategy:</b> 100% Coursework  <b>To pass this module a student must</b> propose, critically evaluate, and clearly communicate to a diversity of audiences, current affairs in animal conservation to educate and further its importance in society. The student will be expected to produce a portfolio of media types to include a news article, press release and blog post.</p>				
Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1:</b> Portfolio of written media types (3000-word equivalent)	75%	TBC	%	A1, B1, D2
<b>Coursework 2:</b> Radio Interview (1000-word equivalent)	25%	TBC	%	D1

10. Teaching staff associated with the module
<b>Name and contact details</b>
Adam George georgea@btc.ac.uk

11. Key reading list				
Author	Year	Title	Publisher	Location
Mills, B.	2017	Animals on television: The cultural making of the non-human	Springer Nature: London	LRC
Hollows, J.	2016	Media studies: A Complete Introduction: Teach yourself	John Murray Learning: London	LRC
Lawrence, M. and McMahon, L.	2015	Animal Life and the Moving Image. British Film Institute	Palgrave: London	LRC

12. Other indicative text (e.g., websites)
<p><b>Other textbooks:</b>  Malamaud, R. (2012). <i>An introduction to animal and visual culture</i>. Palgrave Macmillian: Basingstoke.  Fryxell, J.M., Sinclair, A.R.E., and Caughley, G. (2014). <i>Wildlife Ecology, Conservation and Management</i>. Wiley Blackwell: London.</p> <p>Media/Research on any current wildlife conservation topics selected by learners to investigate with peer-to-peer experiential learning and debate.</p> <p><b>Journals:</b></p> <ul style="list-style-type: none"> <li>• Journal of Wildlife Management</li> <li>• Journal of Wildlife and Biodiversity</li> </ul> <p><b>Website(s):</b>  IUCN Guidelines for Reintroductions and Other Conservation Translocations  <a href="https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf">https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf</a></p>

13. List of amendments since last (re)validation		
Area amended	Details	Date Central Quality informed
New Module	n/a	

## Module specification

1. Factual information		
<b>Module code and title</b>	<b>AMEC305. Animal Behavioural Management</b>	
<b>Module tutor</b>	Nikki Routledge <b>Level</b> 6	
<b>Module type</b>	Taught <b>Credit value</b> 20	
<b>Mode of delivery</b>	100% face-to-face	
<b>Notional learning hours</b>	<b><i>Scheduled learning and teaching activities:</i></b>	
	Lectures	30 hours
	Seminars	5 hours
	Practical	10 hours
	Tutorial	0 hours
	<b><i>Independent guided study</i></b>	
	Directed/independent study	55 hours
	Preparation for assessments	100 hours
<b><i>Total hours</i></b>	<b>200 hours</b>	

### 2. Rationale for the module and its links with other modules

This module provides learners with the theories, principles, and evaluative skills to formulate behavioural management strategies to reduce or eliminate undesirable behaviours displayed by animals in domestic and zoological settings. Skills include gathering behaviour histories, and interpreting information. Learners will also be able to appraise behaviour reports published in journals, books and magazines and analysing how behaviour problems develop.

These complements other modules focussing on welfare issues, enrichment provision, and is supported by the Animal Cognition and Consciousness module, providing an in-depth appreciation of how behavioural issues develop and are maintained. This module enhances learners' critical thinking and ability to propose an informed research-based analysis, including the development of behavioural management programmes in the workplace. This module will prepare the learners for further study and potential qualification as an Animal Behaviourist should they wish to progress to an MSc.

#### Module links to:

- Animal Cognition and Consciousness (Level 6)

**3. Aims of the module**

The aims of this module are for the learners to develop the ability to gather behavioural histories, interpret the information to arrive at the appropriate interpretation through critical evaluation of case studies. Proposal of the use of pharmacological intervention and behavioural modification programmes will also be investigated.

**4. Pre-requisite modules or specified entry requirements**

None.

**5. Is the module compensatable?**

Yes.

**6. Are there any PSRB requirements regarding the module?**

None.



7. Intended learning outcomes		
A. Knowledge and understanding	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>A1:</b> Critically explain the causes of underlying aetiology of undesirable behaviours to outline how they manifest, to review industry medical diagnoses in domestic and zoological animals.</p>	A5	Lectures Seminars Case studies Practical Reflective practice
B. Cognitive skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module learners will be expected to:</i></p> <p><b>B1:</b> Develop, illustrate and appraise the use of appropriate behavioural modifications and strategies offered to achieve desired outcomes</p>	B3	Lectures Seminars Case studies Reflective practice
C. Practical and professional skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>C1:</b> Interpret and critically evaluate behavioural histories using observable and research-based evidence, to synthesize an appropriate interpretation of a behavioural problem</p>	C4	Lectures Seminars Case studies Reflective practice Problem based learning

D Key transferable skills	Programme Learning Outcome(s) this maps against	Learning and teaching strategy
<p><i>At the end of the module, learners will be expected to:</i></p> <p><b>D1:</b> Develop ability to work collaboratively by selecting, summarising, synthesising, and referencing appropriately information from different sources, in a coherently organised form, with arguments and information in logical sequence to communicate effectively</p>	D4	Lectures Seminars Case studies Reflective practice Problem based learning Peer and collaborative learning Self-directed study and research

8. Indicative content.
<p><b>Animal Groups:</b> Companion, Zoological</p> <p><b>Assessing behaviour problems</b></p> <ul style="list-style-type: none"> <li>• Tinbergen's 'Four whys'</li> <li>• Behavioural questionnaires</li> <li>• Taking the history of behaviour problems</li> <li>• Formulating and testing hypothesis</li> </ul> <p><b>The development, causes and maintenance of behaviour problems</b></p> <ul style="list-style-type: none"> <li>• The role of genetics in behaviour problems</li> <li>• Physiological factors including health and hormones</li> <li>• Early learning and the role of early socialisation</li> <li>• Environmental factors</li> <li>• Owner/Captive influences</li> </ul>

## 8. Indicative content.

### Behavioural Problems

- Captive Zoological populations
  - Owner/Keeper Interactions
  - Physical/Social environmental effects in captive wild populations
  - Stereotypies
  - Captive verses wild in zoological species
  - Routine
  
- Companion Animals
  - Anxiety, fear and phobias
  - Coprophagia
  - Aggression
  - Separation problems
  - Obsessive problems
  - Barking/Chasing in canines
  - Elimination problems
  - Aggression
  - Anxiety, fears, and phobias
  - Routine

### Behaviour modification

- Motivation
- Physical/Social environment (enrichment)
- Desensitisation
- Counter conditioning
- Training programmes
- Enrichment
- Drug therapy
- Products on the market

### 9. Assessment strategy, assessment methods, their relative weightings and mapping to module learning outcomes

**Assessment Strategy:** 100% Coursework.

**To pass this module a student must** create a group case study by gathering and critically evaluating animal behavioural histories. Pharmacological interventions/behavioural modification programmes will also be critically evaluated via case studies.

Assessment Task	Weighting	Week submitted	Grading (Pass / Fail / %)	Module Learning Outcome(s) the assessment task maps to
<b>Coursework 1.</b> Group Case Study Presentation (2000-word equivalents)	50%	TBC	%	A1, D1
<b>Coursework 2.</b> Case Study Report (2000 words)	50%	TBC	%	B1, C1

### 10. Teaching staff associated with the module

#### Name and contact details

Nikki Routledge routledgen@btc.ac.uk

### 11. Key reading list

Author	Year	Title	Publisher	Location
Appleby, D. (ed)	2016	The APBC book of Companion Animal Behaviour (3 <sup>rd</sup> edn.)	Souvenir Press Ltd.: London	LRC
Hosey, G., Melfi, V. and Pankhurst, S.	2013	Zoo animals: behaviour, management and welfare	Oxford University Press: Oxford	LRC
Casey, R, Heath, S and Zulch, H (eds)	2022	Companion Animal Behaviour: Prevention and management of Behavioural problems in practice	CABI: Wallingford	LRC

### 12. Other indicative text (e.g., websites)

Bowen, J. and Heath, S. (2006) *Behaviour problems in small animals*. Philadelphia: Elsevier Saunders

Hosey, G and Melfi, M. (2019) *Anthrozoology: Human-Animal interactions in domesticated and wild animals*. Oxford University Press: Oxford.

**Journals:**

- Animal Behaviour Science
- Animal Welfare

**Websites:**

- [www.apbc.org.uk](http://www.apbc.org.uk)
- [www.applied-ethology.org](http://www.applied-ethology.org)
- [www.animalbehaviour.org](http://www.animalbehaviour.org)
- <http://asab.nottingham.ac.uk/>
- [www.biaza.org.uk](http://www.biaza.org.uk)
- [www.enrichment.org](http://www.enrichment.org)

### 13. List of amendments since last (re)validation

Area amended	Details	Date Central Quality informed
Module Review (Revalidation)	Content and resources reviewed. Amended where relevant.	Revalidation (2022/23)