Programme Specification Document

Approved, 2022.03

Overview

Programme Code	40990
Programme Title	Zoology
Awarding Institution	Liverpool John Moores University
Programme Type	Degree with Foundation
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	Penny Oakland
Link Tutor(s)	

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Bachelor of Science with Honours (Fnd) - BSHF	See Learning Outcomes Below
Recruitable Target	Bachelor of Science with Honours (SW) (Fnd) - SBSHF	See Learning Outcomes Below
Alternative Exit	Certificate of Higher Education (Fnd) - CHEF	Recall acquired knowledge, facts and procedures of basic concepts and principles relating to zoology. Explain key zoological concepts and processes and interpret scientific data. Operate in a range of scientific contexts related to zoology and take responsibility for their contributions and outputs.
Alternative Exit	Bachelor of Science (SW) (Fnd) - SBSF	Demonstrate a broad and comparative knowledge of the general scope of the subject, its different areas and applications, and its interactions with related subjects. A detailed knowledge of a defined subject or a more limited coverage of a specialist area balanced by a wider range of study. In each case, specialised study will be informed by current developments in the subject. Demonstrate a critical understanding of the essential theories, principles and concepts of the subject(s) and of the ways in which these are developed through the main methods of enquiry in the subject. Demonstrate the professional and personal skills necessary for effective employment within a professional environment.
Alternative Exit	Diploma of Higher Education (Fnd) - DHEF	Apply a broad knowledge base, both theoretical and practical, to determine solutions to a range of scientific problems relating to zoology. Critically analyse information, demonstrating significant judgement across a range of zoological areas. Accept responsibility for determining and achieving personal and/or group outcomes.
Alternative Exit	Bachelor of Science (Fnd) - BSF	Demonstrate a broad and comparative knowledge of the general scope of the subject, its different areas and applications, and its interactions with related subjects. A detailed knowledge of a defined subject or a more limited coverage of a specialist area balanced by a wider range of study. In each case, specialised study will be informed by current developments in the subject. Demonstrate a critical understanding of the essential theories, principles and concepts of the subject(s) and of the ways in which these are developed through the main methods of enquiry in the subject.
Alternative Exit	Diploma in Higher Education (SW) (Fnd) - SDHEF	Apply a broad knowledge base, both theoretical and practical, to determine solutions to a range of scientific problems relating to zoology. Critically analyse information, demonstrating significant judgement across a range of zoological areas. Accept responsibility for determining and achieving personal and/or group outcomes. Demonstrate the professional and personal skills necessary for effective employment within a professional environment.

Alternate Award Names	

External Benchmarks

Subject Benchmark Statement	UG-Biosciences (2019)

Accreditation

Programme Accredited by

PSRB Name	Type of Accreditation	Valid From Date	Valid To Date	Additional Notes
Royal Society of Biology	Accredited by the Royal Society of Biology for the purpose of meeting, in part, the academic and experience requirement of membership and Chartered Biologist (CBiol).			

Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Full-Time, Face to Face	September	LJMU Taught	4 Years
Sandwich Year Out, Face to Face	September	LJMU Taught	5 Years

Aims and Outcomes

Educational Aims of the Programme

The aims of the Zoology Programme with Foundation are to: Provide a defined academic programme with clear learning outcomes which allows students to develop their knowledge and understanding of the fundamental principles of zoology by means of diverse learning and teaching methods and assessment strategies. Develop effective laboratory and field skills appropriate to the study of zoology and an understanding of how they can be applied to research. Enhance graduate employability by producing graduates with the knowledge, skills and confidence required to gain careers in the biosciences or other areas that demand well developed critical thinking, professional practical, analytical and transferable skills. Encourage students to engage with the development of employability skills (e.g. information and communication technology, team working, written and oral communication, time management, planning, data collection and presentation) and develop a career plan. Provide opportunities for development of creativity and innovation with reference to aspects of Zoology. Promote an ethos of continuing professional development, lifelong learning and an appreciation of how science impacts on society. In addition to the aims for the main target award, the sandwich programme aims to provide students with an extended period of work experience at an approved partner that will complement their programme of study at LJMU. This will give the students the opportunity to develop professional skills relevant to their programme of study, as well as attitude and behaviours necessary for employment in a diverse and changing environment.

Learning Outcomes

Code	Description
PLO1	Evaluate, utilise and present fundamental facts, concepts, principles and theories of zoology through the study of molecular, cellular and physiological processes, genetics, evolution, behaviour and ecology of animals.
PLO2	Demonstrate competence and progressive development in the basic and core experimental skills appropriate to the study of zoology.
PLO3	Design, plan, conduct and report on investigations, which may involve primary or secondary data.
PLO4	Obtain, record, collate and analyse data using appropriate techniques in the field and/or laboratory, working individually or in a group, as is most appropriate for the subject under study.
PLO5	Undertake field and/or laboratory investigations of animals in a responsible, safe and ethical manner.
PLO6	Demonstrate an understanding of the ethical and other issues relating to animal welfare.
PLO7	Use and interpret a variety of sources of scientific information: textual, numerical, verbal and graphical.
PLO8	Prepare, process, interpret and present scientific data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programmes for presenting data visually.
PLO9	Communicate scientific information effectively in written, verbal and visual forms to a variety of audiences.
PLO10	Cite and reference work in an appropriate manner, ensuring academic integrity and the avoidance of plagiarism whether intentional or not.
PLO11	Use the internet and other electronic sources critically as a means of communication and a source of information.
PLO12	Recognise and discuss the complexity and diversity of animal form and function.
PLO13	Develop the skills necessary for independent lifelong learning e.g. working independently, time management, organisational and team working skills.
PLO14	Identify and work towards targets for personal, academic, professional and career development.
PLO15	Identify individual and collective goals and responsibilities during teamwork and be able to evaluate their own performance and performance of others.
PLO16	Demonstrate an understanding of and apply, a decolonial perspective to zoological knowledge and research.
PLO17	Demonstrate detailed knowledge and advanced understanding of a selected range of specialised options in zoology.
PLO18	Discuss the interdisciplinary nature and professional application of zoology.
PLO19	Recognise and apply zoological theories, paradigms, concepts or principles.
PLO20	Analyse, synthesise and summarise information critically, including published research or reports.
PLO21	Obtain and integrate several lines of zoological evidence to formulate and test hypotheses.

Code	Description
PLO22	Apply zoological knowledge and understanding to address familiar and unfamiliar problems.
PLO23	Recognise the moral and ethical issues of investigations and the need for ethical standards and professional codes of conduct.

Programme Structure

Programme Structure Description

Study Abroad Students will be offered the opportunity of study abroad at Level 5. Students can choose either Option A or Option B unless they undertake the Sandwich Year, in which case Option B is not available: Option A: replacement of 60 credits of Level 5 with appropriate study abroad. The programme will offer the opportunity of 60 credits of study at Level 5. Students will be enrolled on a 480 credit honours with study abroad programme. A 60 credit Level 5 study abroad module (5255NATSCI) will normally replace the semester 2 modules on the standard programme. This study abroad should cover the same learning outcomes as the modules being replaced. The modules to be studied in the host institution must be agreed in advance. The Level 5 mean for the final award mark will be calculated based upon the 120 credits at Level 5. Option B: additional study year abroad following Level 5 The programme will offer the opportunity of an additional study year abroad following Level 5. Students will be enrolled on a 600 credit honours with study abroad programme. Of those 600 credits, 120 will be taken via a Level 5 study abroad module (5251NATSCI). The modules to be studied in the host institution must be agreed in advance. The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5. Sandwich Year The placement year will follow Level 5 and students will be enrolled on a 600 credit honours sandwich programme and the Sandwich Year Zoology module (5220NATSCI). The Level 5 mean for the final award mark will be calculated based upon the 240 credits at Level 5. Students wishing to select 6203NATSCI are advised to also study 5205NATSCI.

Programme Structure - 480 credit points	
Level 3 - 120 credit points	
Level 3 Core - 120 credit points	CORE
[MODULE] 3401FNDSCI Skills and Perspectives in Science 1 Approved 2022.01 - 20 credit points	
[MODULE] 3403FNDSCI Wildlife Studies Approved 2022.03 - 20 credit points	
[MODULE] 3405FNDSCI Skills and Perspectives in Science 2 Approved 2022.01 - 20 credit points	
[MODULE] 3406FNDSCI Anatomy and Physiology Approved 2022.01 - 20 credit points	
[MODULE] 3407FNDSCI Understanding the Environment Approved 2022.02 - 20 credit points	
[MODULE] 3409FNDSCI Building Blocks of Life Approved 2022.02 - 20 credit points	
Level 4 - 120 credit points	
Level 4 Core - 120 credit points	CORE
[MODULE] 4201NATSCI Fundamentals of Scientific Research Approved 2022.01 - 20 credit points	
[MODULE] 4204NATSCI Practical Skills for Zoology Approved 2022.02 - 20 credit points	
[MODULE] 4206NATSCI Genetics and Evolution Approved 2022.01 - 20 credit points	
[MODULE] 4208NATSCI Animal Behaviour Approved 2022.02 - 20 credit points	
[MODULE] 4209NATSCI Ecology Approved 2022.02 - 20 credit points	
[MODULE] 4210NATSCI Animal Physiology Approved 2022.01 - 20 credit points	
Level 5 - 120 credit points	
Level 5 Core - 60 credit points	CORE
[MODULE] 5201NATSCI Research Skills and Employability Approved 2022.03 - 20 credit points	
[MODULE] 5206NATSCI Animal Evolution and Diversity Approved 2022.01 - 20 credit points	
[MODULE] 5215NATSCI Comparative Animal Physiology Approved 2022.01 - 20 credit points	
Level 5 Optional - 140 credit points	OPTIONAL
[MODULE] 5203NATSCI Behavioural Ecology Approved 2022.02 - 20 credit points	
[MODULE] 5205NATSCI Genes and Genomes Approved 2022.01 - 20 credit points	
[MODULE] 5209NATSCI Marine and Freshwater Biology Approved 2022.01 - 20 credit points	

[MODULE] 5213NATSCI Animal Field Skills Approved 2022.03 - 20 credit points	
[MODULE] 5214NATSCI Developmental Biology Approved 2022.03 - 20 credit points	
[MODULE] 5218NATSCI Animals in Motion Approved 2022.02 - 20 credit points	
[MODULE] 5225NATSCI Animal Health and Disease Approved 2022.01 - 20 credit points	
Optional Study Semester - 180 credit points	OPTIONAL
Placement Year - 120 credit points	OPTIONAL
[MODULE] 5220NATSCI Sandwich Year - Zoology Approved 2022.01 - 120 credit points	
OR Study Abroad - 180 credit points	OPTIONAL
[MODULE] 5251NATSCI Study Year Abroad - Zoology Approved 2022.01 - 120 credit points	
[MODULE] 5255NATSCI Study Semester Abroad - Zoology Approved 2022.01 - 60 credit points	
Level 6 - 120 credit points	
Level 6 Core - 60 credit points	CORE
[MODULE] 6201NATSCI Research Project Approved 2022.01 - 40 credit points	
[MODULE] 6207NATSCI Current Topics in Zoology Approved 2022.01 - 20 credit points	
Level 6 Optional - 180 credit points	OPTIONAL
[MODULE] 6203NATSCI Applications of Genetics in Health and Disease Approved 2022.01 - 20 credit points	
[MODULE] 6206NATSCI Advanced Field Skills Expedition Approved 2022.01 - 20 credit points	
[MODULE] 6208NATSCI Animal Learning and Cognition Approved 2022.02 - 20 credit points	
[MODULE] 6210NATSCI Zoo Conservation and Genebanks Approved 2022.02 - 20 credit points	
[MODULE] 6211NATSCI Neurobiology Approved 2022.02 - 20 credit points	
[MODULE] 6212NATSCI Parasitology Approved 2022.01 - 20 credit points	
[MODULE] 6213NATSCI Applied Marine Biology Approved 2022.01 - 20 credit points	
[MODULE] 6215NATSCI Animal Welfare Approved 2022.02 - 20 credit points	
[MODULE] 6300NATSCI Work-Based Learning Approved 2022.01 - 20 credit points	

Module specifications may be accessed at https://proformas.ljmu.ac.uk/Default.aspx

Teaching, Learning and Assessment

Knowledge and understanding is promoted through a diversity of learning and teaching methods and assessment strategies. Learning and teaching methods include: lectures; tutorials; laboratory work; fieldwork; workshops; seminars; problem-based learning session; work-related learning and independent study. Knowledge and understanding are assessed in a variety of ways including: written examinations; online tests; laboratory and fieldwork reports; essays and critical reviews; data analysis and interpretation exercises; seminar and poster presentations. Intellectual skills, e.g.: applying theories and concepts; analysing and synthesising information critically; integrating evidence; applying knowledge and recognition of moral and ethical issues are developed in all modules with an increasing emphasis through the levels of the programme and culminate in the level 6 Research Project. A range of examination questions (e.g. essays, interpretative questions) and a wide variety of coursework including: laboratory and fieldwork reports; critical reviews; data analysis and interpretation exercises; seminar and poster presentations, assess ability for these intellectual skills. Practical and professional skills are taught during laboratory sessions, fieldwork and workshops. Core principles and minimum standards of practical work are introduced at level 4, particularly in the Practical Skills for Zoology module which cannot be passed without core practical competencies being met. Practical skills are further developed through levels 5 & 6 where more specialist skills are also introduced. The Research Project and Work-based Learning modules at level 6 are opportunities for students to apply these skills independently and in a workplace setting. Practical and professional skills are assessed through practical tests, skills portfolios, laboratory and fieldwork reports (including the level 6 Research Project report). Transferable and key skills are inherent within the programme, but specifically they are taught in core modules at all levels (Practical Skills for Zoology and Fundamentals of Scientific Research at level 4; Research Skills & Employability at level 5; Research Project at level 6). These transferable and key skills are assessed through coursework at all levels, in all modules.

Opportunities for work related learning

Graduate Skills are taught and practised within a wide range of modules and assessed within the core modules at: Level 4 Fundamentals of Scientific Research and Practical Skills for Zoology; Level 5 Research Skills & Employability and Comparative Animal Physiology; Level 6 Research Project and Current Topics in Zoology. Work-related learning opportunities are also available through the routes of employer seminars, guest lectures/workshops and meeting professionals in animal-related roles during fieldwork. There are options for residential field work at level 5 and 6. The Work-based Learning placement (135 hrs) and the Sandwich placement (12 months) offer the opportunity for students to gain work experience with a relevant professional organisation. Students are supported by the Professional Training Tutor who is responsible for advertising placements and promoting vocational training to students. These opportunities may be in the UK or abroad.

Entry Requirements

Type	Description
A levels	Applicants should have (or expect to obtain) at least two A2 Levels or equivalent, at least one of which should normally be in an appropriate science subject. Our minimum points tariff is 88 points. Our offers may be grade specific e.g. we usually expect at least 24 points in an appropriate science subject.
BTECs	Applicants should be studying an appropriate Diploma and have (or expect to obtain) a pass with at least 3 merit grades at Level 3 in appropriate units.
Other international requirements	Applicants should have acquired passes in appropriate examinations in their country of origin and provide evidence of English language ability equivalent to 6.0 IELTS.
International Baccalaureate	Applicants must have (or expect to obtain) the full award including grade 4 in one appropriate science.

Alternative qualifications considered	Prior to starting the programme applicants must have obtained grade 4 or grade C or above in English Language and Mathematics GCSE or: • Key Skills Level 2 in English/ Maths • NVQ Level 2 Functional skills in Maths and English Writing and or Reading • Skills for Life Level 2 in Numeracy/English • Higher Diploma in Maths/ English • Functional skills level 2 in Maths/English

Extra Entry Requirements