

PROGRAMME SPECIFICATION

Master of Science in Sustainability and Ecology

Programme Codes: 36188 (FT) & 36189 (PT)

Awarding institution Liverpool John Moores University (LJMU)

Teaching institution Centre for Alternative Technology (CAT)

JACS Code D447, C150, C185 **HECOS Codes** 100469, 100348, 101457, 100347, 100381, 100864

Programme Duration Full-Time: 1.5 Year; Part-time: 2.5 Year.

Language of Programme Delivered and assessed in English

Subject benchmark statement Whilst no QAA Subject Benchmark Statements are directly applicable, the programme has taken account of the QAA's Masters degree characteristics documents (2010). At an undergraduate level, some subject scoping can be taken from Agriculture, horticulture, forestry, food and consumer services (2016), Biosciences (2015), Earth sciences, environmental sciences and environmental studies (2014) and Geography (2014)

Programme accredited by N/A

Description of accreditation N/A

Validated target and alternative exit awards

Master of Science in Sustainability and Ecology

Postgraduate Diploma in Sustainability and Ecology

Postgraduate Certificate in Sustainability and Ecology

Programme Leader Jane Fisher, via link tutor Colm Bowe.

Educational aims of the programme

The overall aim of the programme is to train postgraduate students so they are able to play a significant role in the development of approaches to the study and application of knowledge in Sustainability and Ecology; in particular to the management of land and natural resources within the context of wider sustainability and adaption to global environmental issues. By their very nature these global environmental issues are complex, and require a holistic awareness of scientific, social, cultural and economic concepts, issues, and theories. Therefore, an interdisciplinary approach is taken throughout the programme and is implicit in the programme aims and learning outcomes.

This programme will offer appropriate support to students, so they can continue to build their knowledge, understanding and skills to become independent learners for the future.

The specific aims of the programme are:

- To critically reflect upon the consequences, seriousness, and urgency of environmental and climatic change with respect to how these multidisciplinary factors influence the assessment, conservation and management of ecological systems
- To hone the ability to identify and appraise the complex influences that technical, political, legal, social, cultural and non-cultural factors have on the provision, supply, demand and use of biodiversity and natural resources;
- To develop critical, practical and analytical problem-based learning and transferable skills to in order to make informed decisions in the fields of sustainability and ecology

- To enable students to extend their capacity for independent study and to make an original contribution to research within the fields of sustainability and ecology; eg, biodiversity ecosystem services, restoration ecology, ecological assessment, or the social, political or economic contexts of managing land sustainably.
- To develop the self-confidence and ability to act on initiative, to prepare for the rigours and demands of employment or further professional development or postgraduate study in areas related to ecology, environmental management, or sustainability.
- Provide students with a well-developed academic base for further learning /research/ personal and professional development and employment within the fields of ecology and sustainability.
- To develop transferable skills including written and verbal communication, IT, problem-solving, teamwork and time management skills, to prepare the students for leadership in the workplace.

Alternative Exit/ Interim Award Learning Outcomes - Postgraduate Certificate

A student who is eligible for this award will be able to:

Understand the broad concepts of sustainability and adaptation in the context of sustainability and ecology. They will be able to engage with and take an informed position on theories and practice in relation to the fields of sustainability and ecology.

Alternative Exit/ Interim Award Learning Outcomes - Postgraduate Diploma

A student who is eligible for this award will be able to:

Engage with and take an informed position on advanced levels of theories and practice in relation to the fields of sustainability and ecology. Students will be able to explore, test, identify and apply appropriate research methods and be able to demonstrate appropriate levels of critical analysis, reflection and contextual awareness in a range of modules associated with the field of study.

Target award Learning Outcomes - Master of Science

A student successfully completing the programme of study will have acquired subject knowledge and understanding as well as skills and other attributes listed above, and will have demonstrated the ability to undertake independent research.

Knowledge and understanding

A student who is eligible for this award will be able to:

A1. Demonstrate a holistic, systematic and sophisticated understanding of the concepts, issues, and theories of sustainability and ecology within the context of environmental, social and economic sustainability (e.g. Consequences and urgency of environmental change on the equilibrium of ecosystems, trade-off between human activities and conservation, ecosystem services, adaptation capacity to anthropogenic or natural disturbances and management of natural resources);

A2. Present a sophisticated and integrative appreciation of the influence that technical, engineering, legal, political, social and cultural perspectives can have on the functioning of ecosystems and the management of natural resources;

A3. Gain specialist knowledge of sustainability and ecology, including that of behavioural issues surrounding anthropogenic attitudes to biodiversity and conservation;

A4. Gain experience in techniques to assess, measure and monitor natural resource use and the impacts on dynamics and functions of ecosystems.

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

Teaching and learning will be via interactive lectures, workshops, discussion groups, seminars, oral presentations, and practical work.

Assessment

Assessments will be written, oral and practical assignments such as essays, project reports and presentations.

Skills and other attributes

Intellectual Skills

A student who is eligible for this award will be able to:

- B1. Develop and sustain arguments in a variety of written and numerical forms, formulating appropriate questions and using primary and secondary evidence;
- B2. Critically evaluate methods, analyses, conclusions and relevance from interdisciplinary sources, and where appropriate, propose new hypotheses from congruent argument, of current research and advanced scholarship;
- B3. Synthesise a clear understanding of the various attitudinal, legal, institutional and ethical considerations and developments associated with sustainability and adaptation in an area of practice;
- B4. Display a holistic and sophisticated understanding of how knowledge is advanced through research, and produce clear, logically argued and original written work.

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

Intellectual skills are developed through the teaching and learning programme.

Critical analysis and problem-solving skills are embedded in all modules and are taught, developed and practised through debate, workshops, seminars and practical work.

Experimental, research and design skills are further developed and practised through a broad range of coursework activities and project work. Written or verbal individual feedback is given on all work submitted.

Assessment

Critical thinking and problem-solving skills are assessed through written and oral assignments.

Experimental research and design skills are assessed in the dissertation.

Professional practical skills

A student who is eligible for this award will be able to:

- C1. Analyse biodiversity and ecological restoration practices, in a variety of environments;

C2. Demonstrate a thorough understanding of the logistical issues involved in planning and conducting scientific research and study;

C3. Collate and handle data, carry out statistical analyses and modelling where appropriate.

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

Practical skills are taught during workshop and practical sessions.

Experimental design is taught in the Dissertation module and is embedded throughout the taught modules via lectures and workshops, and practical work.

Assessment

Practical skills are assessed via the dissertation and in core modules 'Ecological Assessment' and 'Ecosystem services: Land use and Waste Management' as well as in some of the optional modules.

Transferable / key skills

A student who is eligible for this award will be able to:

D1. Communicate effectively in written and oral forms to a wider audience;

D2. Make effective use of communication and IT to gather and use evidence and data to find, retrieve, organise and exchange new information;

D3. Demonstrate clarity, fluency, and coherence in a variety of written forms and expression;

D4. Organise tasks and manage time effectively;

D5. Design, investigate, and present an extended and independently-conceived piece of research;

D6. Work in a team, identifying individual and collective goals; exercising initiative and personal responsibility when performing roles in a manner appropriate to achieving team goals.

Teaching, learning and assessment methods used to enable outcomes to be achieved and demonstrated

Transferable skills are taught, developed and practised through the teaching and learning programme.

Numerical and statistical problem-solving skills are taught on dissertation and in core modules 'Ecosystem services; Land use and Waste Management,' 'Restoration Ecology' and 'Ecological Assessment' as well as in some of the optional modules.

Assessment

Assessed through written and oral assessments.

Programme structure - programme rules and modules

Programme rules

The MSc (180 credits) Sustainability and Ecology is achieved via completion of the 30-credit introductory core module, the three 15-credit cores modules, three optional 15-credit modules and the 60-credit dissertation module.

The PgDip (120 credits) Sustainability and Ecology exit award is achieved via completion of the 30-credit introductory core module, the three 15-credit cores modules plus three other 15-credit modules.

The PgCert (60 credits) Sustainability and Ecology exit award is achieved via completion of the 30-credit introductory core module and two of the following 15-credit modules, Ecological Assessment, Restoration Ecology and Ecosystem Services, Land-Use and Waste Management.

Level 7 Potential Awards on completion of Master of Science

Core and Option Award Requirements

Module	Module code	Level	Credits	Core/option
Sustainability and Adaption: concepts & planning	7501CATSCI	7	30	Core
Ecological Assessment	7514CATSCI	7	15	Core
Environmental politics and economics	7502CATSCI	7	15	Option
Food production and consumption	7503CATSCI	7	15	Option
Cities and Communities	7504CATSCI	7	15	Option
Restoration Ecology	7513CATSCI	7	15	Core
Ecosystem services, land-use and waste management	7506CATSCI	7	15	Core
Sustainable materials in the Built Environment	7507CATSCI	7	15	Option
Applied Project *	7508CATSCI	7	15	Option
Work-Based Project *	7509CATSCI	7	15	Option
The science of sustainable food production	7510CATSCI	7	15	Option
Dissertation	7500CATSCI	7	60	Core

* Students pick either of these two modules, not both.

135 (Inc. dissertation) core credits at level 7

105 option credits at level 7

Information about assessment regulations

All programmes leading to LJMU awards operate within the University's Academic Framework (<https://www.ljmu.ac.uk/about-us/public-information/academic-quality-and-regulations/academic-framework>)

This programme has the following variances to the Academic Framework, approved by Education Committee on 12th December 2018.

(a) A variance to include 15-credit modules

(b) A variance to permit a teaching balance that weights the delivery of content to the first semester (up to 105 credits) and to reduce the delivery in semester two (up to 45 credits). The dissertation

can be taken in semester 1 or 2. Student individual credit balance will vary between semesters 1 and 2 depending on whether a student studies full-time or part-time, and their choice of optional modules.

Opportunities for work-related learning (location and nature of activities)

The programme offers a specific period of work-related skills in the Dissertation module (7500CATSCI) such as planning, and managing and completing an independent piece of research. Students have the option of completing a module 'Work-Based Project' which is an individual project based within the work-place (7509CATSCI). The use of practitioners from industries in areas such as forestry, or ecosystem services within module teaching will also enable students to learn first-hand about the industry and meet professionals.

Criteria for admission

Graduates: Normally entrants to the programme will have at least a second-class degree in a subject appropriate to or compatible with Ecology such as physical geography, environmental science, biology or related topic areas.

Students may be admitted with advanced standing through the recognition of credit or the accreditation of experiential or certificated learning within 5 years of the start of study according to the LJMU Recognition of Prior (Experiential) Learning (RP(E)L) policy, document 188 (www.ljmu.ac.uk/about-us/public-information/academic-quality-and-regulations/academic-framework). RE(P)L will be considered in accordance with University regulations.

Non-graduates: For applicants not in possession of a good honours degree, the programme leader will take into account relevant professional qualifications and experience. Any participant who does not have a first degree must satisfy the programme team of their ability to study at Master's level (eg. presentation of a strong portfolio to demonstrate appropriate equivalent skills). For these applicants, individual assessments of their suitability for post graduate level study will be arranged and conducted by the programme team. The team may require evidence to be submitted as part of the assessment process e.g. a portfolio of written and other work; papers presented at conferences, publications; reports and research proposals

Overseas qualifications

Normally a good degree (2ii equivalent) in a subject appropriate to or compatible with Ecology such as physical geography, environmental science, biology or related topic areas preferred alongside a recognised English language qualification (IELTS score of 6.5 with a minimum of 6 in each category) or Pearson score of 58-64 within 2 years prior to the programme start date (minimum score of 51 in each component for UKVI Purposes).

External Quality Benchmarks

All programmes leading to LJMU awards have been designed and approved in accordance with the UK Quality Code for Higher Education, including the Framework for Higher Education Qualifications in the UK (FHEQ) and subject benchmark statements where applicable.

Both the University and CAT are subject to periodic review of quality and standards by the Quality Assurance Agency (QAA).

Published review reports are available on the QAA website at www.qaa.ac.uk.

Programmes that are professionally accredited are reviewed by professional, statutory and regulatory bodies (PSRBs) and such programmes must meet the competencies and standards of those PSRBs.

Support for students and their learning

Both the University and CAT aim to provide students with access to appropriate and timely information, support and guidance to ensure that they are able to benefit fully from their time at CAT. All students are assigned a personal tutor to provide academic support and when necessary direct students to the appropriate University support services.

Students are able to gain access to a range of professional services including:

- Advice on practical aspects of study and how to use these opportunities to support and enhance their personal and academic development via Personal Development Planning sessions with their personal tutor.
- CAT's Special Education Needs and Disability co-ordinator, Student Finance Administrator, Pastoral Care Counsellor and individual personal tutors are able to provide students with advice, support and information, particularly in the areas of student funding and financial matters, disability, study support, advice and support to international students.

Methods for evaluating and improving the quality and standards of teaching and learning

Student Feedback and Evaluation

Graduate School of the Environment (GSE) staff use the results of student feedback from internal and external student surveys, module feedback and meetings with student representatives to improve the quality of programmes.

Staff development

The quality of teaching is assured through staff review and staff development in learning, teaching and assessment.

Internal Review

All programmes are reviewed annually and periodically, informed by a range of data and feedback, to ensure quality and standards of programmes and to make improvements to programmes.

External Examining

External examiners are appointed to programmes to assess whether:

- the GSE is maintaining the threshold academic standards set for awards in accordance with the FHEQ and applicable subject benchmark statements;
- the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with LMJU policies and regulations;
- the academic standards are comparable with those in other UK higher education institutions of which external examiners have experience;
- the achievements of students are comparable with those in other UK higher education institutions of which the external examiners have experience

External examiners also provide informative comment and recommendations on:

- good practice and innovation relating to learning, teaching and assessment observed by external examiners;
- Opportunities to enhance the quality of the learning opportunities provided to students.

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 s/he takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content, teaching, learning and assessment methods of each module can be found in module and programme guides.