Programme Specification

ASC-EN-2024: Applied Science (Environmental Science)

LU Certificate of Higher Education awarded by Lancaster University (FHEQ Level 4)

LU Foundation Degree in Science awarded by Lancaster University (FHEQ Level 5)

LU Bachelor of Science with Honours (Top-up) awarded by Lancaster University (FHEQ Level 6)

Programme Status: Draft | Version: 1

Introduction

This programme specification provides a summary of the main features of the Applied Science (Environmental Science) programme and includes the learning outcomes that you as a student are expected to have achieved on successful completion of the programme.

Further detailed information related to this programme and the College can be found in the following resources:

- Programme Handbook
- B&FC Admissions Policy
- Work based and placement learning handbook (for foundation degrees)
- Student guide to assessment and feedback

When undertaken as part of a Degree Apprenticeship additional information is available in the following resources:

- The Programme Delivery Plan
- The End Point Assessment Guide
- B&FC Mentor Guide
- B&FC Apprenticeship Strategy

Key Programme Information

Programme Code	ASC-EN-2024
Programme Title	Applied Science (Environmental Science)
Teaching Institution	Blackpool and The Fylde College
Professional, Statutory and Regulatory Body (PSRB) Accreditation	None
UCAS Code	TBC
Language of Study	English
Version	1
Approval Status	Draft
Approval Date	Not yet approved
JACS Code	Other: Other
Programme Leader	Linda Martin

Programme Awards			
Award	**Award Type**	**Level**	**Awarding Body**
LU Certificate of Higher Education	Level 4 Target Award (120 credits)	Level 4	Lancaster University
LU Foundation Degree in Science	Foundation Degree (240 credits)	Level 5	Lancaster University
LU Bachelor of Science with Honours (Top-up)	Honours Top-up Degree (120 credits)	Level 6	Lancaster University

Programme Overview

Uncover the Science Behind a Sustainable Future

Are you passionate about the environment and eager to make a positive impact on our planet's future? Our Applied Science programme with a specialisation in Environmental Science offers a

captivating journey into the world of scientific exploration and environmental stewardship.

Program Highlights:

1. Advanced Environmental Understanding

Explore the intricate web of environmental interactions, from chemical processes to ecological systems.

Investigate pollution sources, analyse environmental data, and devise innovative solutions.

2. Cutting-edge Facilities and Fieldwork

Immerse yourself in real-world scenarios through field studies, where you'll collect data and conduct assessments.

Collaborate with teachers on research projects addressing today's most pressing environmental challenges.

3. Climate Change and Sustainability

Unravel the complexities of climate change science, greenhouse gases, and adaptation strategies.

Learn to drive sustainable practices through resource management, conservation, and policy.

4. Environmental Policy and Impact

Gain insight into environmental laws and regulations, and explore the role of policy in shaping a greener future.

Assess the environmental impact of projects and develop skills to drive sustainable development.

5. Expert Teachers and Industry Connections

Learn from accomplished teachers who are experts in the field of environmental science and sustainability.

Build your professional network through industry partnerships and guest lectures.

6. Career Readiness and Opportunities

Prepare for a dynamic career as an environmental scientist, sustainability analyst, consultant, or researcher.

Acquire essential skills in communication, analysis, and problem-solving to excel in the rapidly evolving environmental sector.

Why Choose Our Program?

Our Applied Science (Environmental Science) programme goes beyond the classroom, providing hands-on experiences that empower you to create meaningful change. With a focus on practical skills, cutting-edge research, and a deep understanding of environmental dynamics, you'll graduate ready to contribute to a more sustainable world.

Admission Criteria

- 5 GCSEs at grade C/4 or above, including English, maths and science

- relevant Level 3 qualification in science, providing 80 UCAS points as a minimum which could include Access to HE Science, BTEC Applied Science, BTEC Animal Management, T levels, A levels
- other relevant or prior experience may also be considered as an alternative following information and guidance from expert tutors

Career Options and Progression Opportunities

Environmental Scientist: Conduct research and analysis to address environmental challenges, assess pollution levels, and develop strategies for sustainable resource management.

Sustainability Analyst: Evaluate organisations' environmental practices, recommend improvements, and contribute to the development of sustainable policies and initiatives.

Environmental Consultant: Offer expertise to businesses and governments on environmental impact assessments, regulatory compliance, and sustainability strategies.

Climate Change Specialist: Study the effects of climate change, design adaptation strategies, and contribute to global efforts to mitigate its impacts

Ecological Researcher: Explore ecosystems, biodiversity, and the interactions between species, and contribute to conservation and habitat restoration efforts.

Environmental Policy Advisor: Shape environmental policies at various levels of government, advocating for regulations that promote sustainable practices and protect natural resources.

Conservation Officer: Monitor and manage protected areas, implement conservation plans, and educate the public about environmental preservation.

Environmental Educator: Inspire the next generation by teaching environmental science in schools, museums, nature centres, and educational organisations.

Waste Management Specialist: Develop strategies for efficient waste disposal, recycling, and waste reduction, contributing to a cleaner and more sustainable environment.

Renewable Energy Analyst: Evaluate the feasibility and impact of renewable energy technologies, such as solar, wind, and hydroelectric power.

Programme Aims

** Certificate of HE (Level 4)

-Aim 1 Develop skills, knowledge and behaviours in applied science

-Aim 2 Provide an alternative route into HE for those who wish to pursue education in applied science relevant to the level of study, which serves as a foundation for further study and/or the workplace

-Aim 3 Encourage a self-reflective approach to practice, professional development, research, analysis and presentation

-Aim 4 Develop a range of transferable skills which can be applied in employment in other sectors and in further study

** FdSc Applied Science (Level 5)

-Aim 1 Provide graduates with the opportunity to develop the knowledge, skills and behaviours required for a career in the applied sciences and an understanding of the contribution these can make to a sustainable future

-Aim 2 Develop graduates with knowledge and critical understanding of methods of enquiry and the practical skills used in applied sciences and the ability to apply these in an industry related context

-Aim 3 Offer the opportunity to evaluate data from a range of sources and be able to propose alternative methodologies or solutions in complex and unpredictable circumstances

-Aim 4 Practice graduate skills such as communication, group working, project planning and project management

-Aim 5 Provide an insight into the multidisciplinary nature of the applied sciences and to encourage a professional, independent approach to challenges

** BSc Applied Sciences (Level 6)

-Aim 1 Encourage critical engagement with the published academic literature in the field of applied sciences with a view to producing original and creative ideas including the justification of approaches taken

-Aim 2 Develop an awareness of limitations in personal skills and attributes becoming independent in identifying appropriate steps for improvement which will contribute to lifelong learning

-Aim 3 Encourage the development of criticality, contestability and uncertainty, in tandem with practical technical skills which enhance employability

-Aim 4 Develop awareness of the complexity and rapidly evolving nature of the applied sciences

Programme Learning Outcomes

Level 4

Upon successful completion of this level, students will be able to:

1. Describe and explain the key scientific principles of applied sciences using appropriate terminology, accessing suitable academic texts
2. Perform a range of laboratory practical and field work techniques to a high degree of accuracy
3. Collect, manipulate and analyse datasets to present findings from investigations
4. Communicate complex information to a range of audiences using suitable media
5. Reflect on personal and professional development
6. Consider regulation in the science sector

Level 5

Upon successful completion of this level, students will be able to:

7. Describe, explain and discuss the key scientific principles of applied sciences in detail and with accuracy, using appropriate terminology
8. Review and apply scientific literature to extend knowledge in the applied sciences

9. Select appropriate theoretical concepts and practical, computational and fieldwork techniques to solve problems and identify the most appropriate solution, recognising the limitations of these methods
10. Apply a range of analytical techniques with due regard to accuracy, precision and traceability, using safe working practices and appropriate waste reduction and safe disposal practices
11. Generate primary data and use suitable mathematical concepts and data analysis to interpret and present primary, secondary and simulated data sets
12. Communicate complex information in the detail required by the audience using a range of suitable media
13. Reflect on and evaluate personal performance and identify realistic improvements to develop skills and behaviours

Level 6

Upon successful completion of this level, students will be able to:

14. Critically evaluate scientific data, methodologies, analyses and outcomes
15. Construct coherent arguments using information from a variety of sources and produce work which has a creative, independent and individual element
16. Communicate complex information about applied sciences to a range of intended audiences in a range of media
17. Critically analyse scientific data from both primary and secondary sources
18. Reflect on personal and professional development and explore opportunities for career progression and/ or further study
19. Critically evaluate regulation in the science sector, including health and safety, ethics and legislation

Programme Structure

Module	Level	Credits	%	Category	Description	Length/Word Count	Grading Method
Stage 1							
ASC401: Scientific Research Skills (Mandatory)	4	20	60%	Coursework: Essay	n/a	2000	Letter Grade
			40%	Practical: Presentation	n/a	10	Letter Grade
ASC402 : Essential Bioscience (Mandatory)	4	20	100%	Coursework: Portfolio / e-Portfolio	n/a	3000	Percentage Grade
ASC403 : Essential Chemistry (Mandatory)	4	20	60%	Coursework: Report	n/a	2500	Letter Grade
			40%	Practical: Presentation	n/a	10	Letter Grade
ASC404: Laboratory and Field Skills (Mandatory)	4	20	100%	Practical: Practical Skills Assessment	Observation record.	240	Percentage Grade
ASC405: Project (Mandatory)	4	20	20%	Coursework: Evaluative/ Reflective Report	n/a	800	Letter Grade
			80%	Practical: Presentation	n/a	20	Letter Grade
ASC406: Regulation in the Science Sector (Mandatory)	4	20	100%	Coursework: Case Study	Industry analysis	2000	Letter Grade
Stage 2							
ASC501: Specialist Scientific Techniques (Mandatory)	5	20	70%	Coursework: Portfolio / e-Portfolio	n/a	2500	Percentage Grade
			30%	Practical: Film	Video	10	Letter Grade
ASC504 : Environmental Analysis (Mandatory)	5	20	60%	Practical: Timed Assessment	Observation	240	Percentage Grade
			40%	Practical: Other	Professional Discussion	15	Percentage Grade
ASC505: Analysis of Scientific Data (Mandatory)	5	20	100%	Coursework: Portfolio / e-Portfolio	n/a	2500	Percentage Grade
ASC508 : Conservation and Biodiversity (Mandatory)	5	20	40%	Practical: Other	Professional discussion and lab book	15	Percentage Grade
			60%	Practical: Timed Assessment	Observation	240	Percentage Grade
ASC509 : Advanced Project (Mandatory)	5	20	30%	Coursework: Plan	Project Proposal	1000	Letter Grade
			70%	Coursework: Report	Individual Report	2500	Percentage Grade
ASC510 : Work Based Learning (Mandatory)	5	20	50%	Practical: Presentation	Industry Experience	15	Letter Grade
			50%	Coursework: Portfolio / e-Portfolio	Professional Portfolio	1800	Percentage Grade

Stage 3							
ASC601: Project Management (Mandatory)	6	20	25%	Coursework: Plan	Proposal	1000	Letter Grade
			75%	Coursework: Plan	Project Management Plan	2000	Letter Grade
ASC602: Materials Life Cycle (Mandatory)	6	20	70%	Practical: Timed Assessment	Timed assessment	240	Percentage Grade
			30%	Practical: Presentation	Poster/presentation	15	Percentage Grade
ASC604: Dissertation (Mandatory)	6	40	80%	Coursework: Report	Scientific Report	8000	Letter Grade
			20%	Practical: Presentation	Conference Style	15	Letter Grade
ASC606: Environmental Management (Mandatory)	6	20	70%	Coursework: Case Study	Case Study	2500	Letter Grade
			30%	Practical: Other	Professional Discussion	30	Percentage Grade
ASC607 : Managing Personal and Professional Development (Mandatory)	6	20	100%	Coursework: Portfolio / e-Portfolio	Career development	3000	Percentage Grade

Study Workload

Each module of this programme includes 200hrs of study. This is broken down between lectures, investigations, seminars and presentations, as well as including your own study time as a minimum number of hours expected. You may wish to undertake wider reading to develop your understanding of the subjects further.

Programme Delivery: Learning and Teaching

Blended Learning Approach:

Benefit from a balanced blend of in-person and online learning experiences. Our online resources, including lecture materials, discussion forums, and supplementary materials, provide flexibility and support for your learning journey.

Industry Engagement:

Connect with industry professionals through guest lectures, workshops, and site visits. You'll have the opportunity to learn directly from experts, understand current industry practices, and build a network that extends beyond the classroom.

Personalised Support:

Receive individualised support from academic advisors who are dedicated to your success. Whether you need guidance on course selection, academic progress, or career planning, our advisors are here to assist you.

Critical Thinking and Problem-Solving:

Develop your critical thinking skills by analysing complex environmental issues from multiple angles. Engage in problem-solving exercises that mirror real-world scenarios, preparing you to tackle challenges in your future career.

Communication and Presentation Skills:

Hone your ability to communicate complex scientific concepts effectively. Through presentations, reports, and group projects, you'll gain skills that are essential for sharing your insights with diverse audiences.

Career Readiness:

From day one, our program is designed to prepare you for a successful career in environmental science. You'll develop not only subject-specific knowledge but also essential skills that employers seek, such as teamwork, adaptability, and a commitment to sustainability.

Programme Delivery: Assessment

Assessment across this programme is carried out via a range of pratical assessments, presentations, posters, reports and discussions.

Programme Delivery: Work Based and Placement Learning

Live Briefs and Real-World Case Studies:

We recognize the importance of practical experiences in developing valuable skills. Throughout the program, you will engage with live briefs and real-world case studies that simulate actual industry scenarios. These exercises challenge you to apply your theoretical knowledge to solve authentic challenges, enhancing your problem solving abilities and critical thinking skills.

Work Placements:

To further solidify your understanding and gain hands-on experience, our programme includes 30 hours of mandatory work placement. These placements provide you with invaluable exposure to professional environments, allowing you to witness the day-to-day operations of your chosen field. This is a crucial element of your journey towards becoming a skilled professional.

Programme Delivery: Graduate Skill Development

Our Applied Science Degree Programme is designed to nurture well-rounded professionals who possess not only technical prowess but also a diverse set of graduate attributes that empower them to excel in a rapidly evolving world. Throughout your journey, we are dedicated to fostering the development of the following key graduate skills:

- A commitment to lifelong learning and career development
- Collaborative teamwork and leadership skills
- Personal and intellectual autonomy
- Ethical, social and professional understanding
- Communication, information and digital literacies
- Global citizenship
- Research, scholarship and enquiry skills
- Enterprise and entrepreneurial awareness and capabilities
- The ability to solve complex and unforeseen problems with creativity and imagination

Study Costs: Equipment Requirements

You may wish to consider purchasing the following equipment as part of this programme:

- personal computer to acces the virtual learning environment and resources

- personal lab coat, although you will have access to one as part of your programme

- all PPE will be provided thorughout the programme

- standard stationary

- all recommended texts/reading are available in our LRC, although you may wish to purchase your own

Study Costs: Additional Costs

All required visits as part of the programme are included

The programme is enhanced by visits to local employers and institutions, which may incur a small fee