Programme Specification

Programme Title and Name of Award	BSc (Hons) Environmental Science with Integrated Foundation Year		
Academic Level	6	**Total Credits**	480
Professional Body Accreditation / Qualification	Not applicable currently but the Level 4 – 6 programme has been designed to enable us to seek the following accreditations in future: Institute of Environmental Science (IES). This provides a mark of quality and indicates that career pathways for students have been considered. Students enrolled on an IES accredited programme will get free student membership. Institute of Environmental Management and Assessment (IEMA). Allows students completing certain modules to use GradIEMA suffix on graduation and exempts them from the knowledge based requirements of the next level of membership (Practitioner).		
Date of Professional Body Accreditation	Not applicable	**Accreditation Period**	Not applicable
UCAS Code	D400		
HECoS Code	100381		
Criteria for Admission to the Programme	The University's standard criteria for admissions apply. Please refer to the Applicant Information pages of the University website for more information. For APL, please refer to the University website. Detailed criteria for admission to this programme can be found on the programme webpage: https://www.cumbria.ac.uk/study/courses/undergraduate/environmental-science/environmental-science-ify Please note that APL will not be permitted at Level 3 on this programme. Students who have studied and passed an alternative Level 3 FdCert in IoSE may be considered for transfer onto Level 4 of this programme. In these circumstances, normal university procedures apply and, provided that you meet the entry requirements and any pre-requisites for the alternative programme, then a transfer may be considered subject to space being available on that programme. Please visit: https://www.cumbria.ac.uk/study/courses/foundation-courses/		
Teaching Institution	University of Cumbria		
Owning Institute	Institute of Science and Environment (IoSE)		

Programme delivered in conjunction with	The level 3 modules are shared with:- • BSc (Hons) Biomedical Sciences with IFY • BSc (Hons) Forensic Science with IFY • BSc (Hons) Zoology with IFY	
Principal Mode of Delivery	Face to face	
Pattern of Delivery	Full-time	
	Total weeks of study: Delivery pattern: Standard semester dates:	24 Weeks 2x 12-week semesters Yes
Delivery Site(s)	Carlisle Fusehill Street	
Programme Length	Standard duration: 4 years, Full Time, maximum programme length 8 years	
Exit Awards	You may be awarded one of the following Exit Awards if you fail to achieve the requirements of the full programme: BSc Environmental Science (420 credits) DipHE Environmental Science (360 credits) CertHE Environmental Science (240 credits) FdCert Science (120 credits)	
Period of Approval	August 2022 for continuous approval, subject to Periodic Review which takes place every six years.	
This programme has been approved (validated) by the University of Cumbria as suitable for a range of delivery modes, delivery patterns, and delivery sites. This level of potential flexibility does not reflect a commitment on behalf of the University to offer the programme by all modes/patterns and at all locations in every academic cycle. The details of the programme offered for a particular intake year will be as detailed on the programme webpage: https://www.cumbria.ac.uk/study/courses/undergraduate/environmental-science/environmental-science-ify		

Cumbria Graduate Attributes

Throughout your studies, you will be provided with the skills and knowledge relevant to the global workplace. All successful graduates of the University of Cumbria will be:

- Enquiring and open to change
- Self-reliant, adaptable and flexible
- Confident in your discipline as it develops and changes over time
- Capable of working across disciplines and working well with others
- Confident in your digital capabilities
- Able to manage your own professional and personal development
- A global citizen, socially responsible and aware of the potential contribution of your work to the cultural and economic wellbeing of the community and its impact on the environment
- A leader of people and of places
- Ambitious and proud

Programme Features

If you do not have a scientific background but a strong interest in environmental issues or do not meet standard entry requirements, this integrated foundation year (4 year programme) provides you with the basic science and academic skills needed to work in environmental science.

During the foundation year you will study six modules that will provide a good grounding for you to develop your academic and study skills to progress onto higher levels of study at Levels 4-6. This route offers a unique opportunity for developing your problem-solving skills, intellectual, key scientific, practical and investigative skills and techniques that underpin the study of environmental science whilst providing you with a grounding in essential university skills and nurturing your career aspirations. You will develop your knowledge and understanding of the key scientific and social science principles of Biology, Chemistry, Human Ecology to Toxicology, Public Health, Epidemiology and Parasitology. You will gain a solid foundation in laboratory and field skills in all four of your subject specific modules, Essential Biology, Essential Chemistry, Environmental Sciences and Scientific Investigation.

Throughout the integrated foundation year you will have the opportunity to develop your professional skills by developing key soft skills such as communication, team working, self-management and organisation. During the generic university wide modules, you will make links with the careers team to discuss your skill development and to help you reflect on how these link to your employability and graduateness. This will be accompanied by working on your digital skills profile, ensuring you have access to the universities VLE and 'Linked in Learning' to help build upon your current level of IT literacy.

We only have one planet. The key challenge of the Anthropocene is to work out how we live within the boundaries this presents to ensure the health and wellbeing not only of the current human population and that of generations to come, but also that of the 8.7 million species that cohabit it with us. We cannot underestimate the enormity and urgency of this challenge which requires holistic, multidisciplinary, systems level solutions. BSc Environmental Science is designed to equip you with the knowledge and skills needed and to develop the personal attributes required to take on this challenge.

Our programme has been designed by environmental practitioners and researchers to align with the national subject benchmark statement for environmental science, professional body requirements, Education for Sustainable Development Guidelines and future skills demand analysis. The programme is purpose built for the modern environmental scientist and centred around the learner as the 'environmental practitioner'. It draws upon up to date professional, scientific, and vocational aspects embedded in the programme and aligned with feedback direct from industry. Learners and employers benefit from a skills focused developmental perspective, using current societal and professional skills requirements.

The degree programme is designed to build your knowledge and skills progressively with a focus at Level 4 on scientific concepts and theory alongside the full suite of skills required to study at HE level. Laboratory and fieldwork form key components of the programme at this level. At level 5 we continue to build your skills with increasingly complex and diverse challenges while you develop the knowledge to identify and assess contemporary environmental challenges. Learning at this level is again supported with practical and fieldwork activities, including a weeklong residential fieldtrip. By the time you have completed Level 6 you will be equipped with the skills and knowledge needed to act as a career ready independent environmental practitioner able to evaluate complex environmental scenarios and offer sustainable solutions.

Assessments in some modules can be tailored to your areas of interest and at Level 6 you are encouraged to select a dissertation research topic that supports your personal career development and interests.

The strength or our programme is the multidisciplinary team of staff who contribute to its delivery; geographers, ecologist, zoologists and conservationists, chemists, forensic scientists, biologists and environmental mangers. Key / unique features of the programme include:

- Core environmental science modules designed especially for the programme to equip you with the knowledge and skills needed to understand the environment around you, contemporary environmental problems and the technological and socio-economic solutions to these problems and allowing you to choose areas of specialism that interest you;
- A focus on the learner as an 'environmental practitioner' with environmental practitioner modules in each level of the programme designed to equip you with the employment skills needed for environmental careers and academic study;
- Field and laboratory practical work embedded throughout much of the programme (around 45% of the face-to-face learning hours on the programme) blending theory with practice to develop the applied knowledge and understanding needed by environmental practitioners;
- Easy access to the local environs of Carlisle and Cumbria providing a unique blend of urban, rural, protected and designated sites so that you can experience a diversity of environmental challenges first-hand;
- An inter-year large-scale problem based practical monitoring project that facilitates peer learning and development of project management and leadership skills, as well as synthesising knowledge, practical skills and data skills developed throughout other modules into a specific real-world applied environmental scenario.
- A residential field course in the second year which provides an intensive period of emersion in environmental study as well as the opportunity for you to explore different cultural and contextual perspectives on environmental challenges with fellow students.

The programme is designed so that at Level 4 you develop the underpinning scientific knowledge and skills needed to understand environmental concepts and collect and analyse environmental data. Later years of the programme will build on these skills and provide increasing opportunities to apply them to real and increasingly complex environmental scenarios, culminating with the opportunity in the final year to design and undertake your own environmental research project. Authentic

assessment is used throughout the programme enabling you to apply knowledge and develop skills to deal with the type of environmental challenge you may face in your future career.

Opportunities will be provided throughout for you to meet and interact with environmental scientists working in a range of settings either via guest lectures, site visits, research talks, extracurricular activities or student society activities. In addition, career skills development is woven throughout the programme with support from the University Careers Service so that you are able for example, to reflect upon your personal development, evidence your skills and achievements, produce a professional CV or prepare for interview.

The programme will help you to develop broad scientific understanding and skills set alongside specialist environmental knowledge and skills. This alongside a practitioner focus throughout means that on successful completion of the programme, you will be able to pursue a range of further study and career options (see Graduate Prospects below). Level 6 modules are designed to allow students to focus on specific subject areas of interest thus enabling you to develop greater experience and skills in a particular area of environmental science should you wish.

The field of Environmental Science is fast moving. Staff will draw upon current research, external networks and guest lectures from industry professionals to ensure the programme remains current and you are exposed to the latest thinking in the discipline. This means that specific topics covered in modules may change and field and visit sites may be adapted. An up-to-date schedule of activities will be published on each module Blackboard site at the start of the module so that you know what to expect. Additionally, you will be encouraged and supported to explore current and emerging environmental issues within your own work, particularly at level 6.

Fieldwork is a key component of the programme with a number of modules including half/full day local trips and visits. You will be expected to have appropriate outdoor clothing to participate in these activities (warm and waterproof clothing, small ruck sack, sturdy and waterproof footwear). Any specialist equipment required will be provided. In addition, the programme will include a residential fieldtrip in the second year for which you may need to make a small additional contribution to costs of travel depending upon the field location and you may need to pay for your own food where catering is not provided. The University will usually pay all costs associated with other field trips.

The programme has been designed with a theme for each level relating to Environmental Science from a foundation at Level 3, to understanding the science of the environment at Level 4. At Level 5 the modules build on the knowledge gained across all Level 4 modules to understanding environmental issues and how these are assessed. Specific environmental case studies will be introduced at Level 5 to allow understanding of the environmental legislative and regulatory framework which is important in considering solutions to environmental issues. At Level 6 the focus is on sustainable solutions to the issues studied in the Level 5 modules and future potential environmental issues. There are various links between the Level 5 and 6 modules, to provide consistent pathways.

Programme Learning Outcomes

By the end of this Programme learners will be able to:

This programme aims to:

1. To provide a supportive transitional route into higher education equipping students with the skills essential for successful participation in academic study.

2. To develop an inter-disciplinary knowledge and understanding of theoretical concepts in a range of contexts applicable to studying environmental science.
3. To develop the academic personal and professional skills required to work in the context of environmental science.
4. Equip graduates with a critical and holistic understanding of the science underpinning key contemporary environmental challenges and solutions
5. Develop the field, laboratory and research skills that enable graduates to gather, analyse and interpret environmental data
6. Develop an appreciation of our ethical responsibilities for the environment and the contribution of environmental science to sustainable development
7. Prepare graduates to work as environmental scientists in a range of professional settings, to pursue further study and/or to act as environmental advocates
8. Develop future environmental champions equipped to support holistic, systemic environmental protection
9. Foster the development of graduates as independent, lifelong learners able to maintain their own subject currency after graduation.

Level Descriptors

Level Descriptors describe in general terms the expected outcomes you will achieve at each level of study as you progress through your programmes. They describe the relative demand, complexity, depth of learning and learner autonomy associated with a particular level of learning and achievement. The University's Level Descriptors are aligned to the national Framework for Higher Education Qualifications (FHEQ) and are a key mechanism for ensuring the academic standards of the University's provision.

At Level 3: (Usually Year 0 undergraduate), you will be able to:

- Recognise the breadth of the field of study and apply the skills of manipulation of knowledge to make informed judgements within routine contexts and with guidance.
- Begin to work beyond defined contexts
- Apply established approaches to solving well defined problems, showing emerging recognition of the complexity of associated issues and communicate outcomes effectively in an appropriate format
- Within a defined context and under guidance, evaluate personal and workplace experience and manage information and data from a range of sources appropriate to the field of study.

At Level 4: (Usually Year 1 undergraduate), you will be able to demonstrate that you have the ability:

- To apply a systematic approach to the acquisition of knowledge, underpinning concepts and principles and deploy a range of subject specific, cognitive and transferable skills.
- Evaluate the appropriateness of different approaches to solving well defined problems and communicate outcomes in a structured and clear manner.
- Identify and discuss the relationship between personal and workplace experience and findings from books and journals and other data drawn from the field of study.

At Level 5: (Usually Year 2 undergraduate), you will be able to demonstrate that you have the ability:

- To apply and evaluate key concepts and theories within and outside the context in which they were first studied.
- Select appropriately from and deploy a range of subject-specific, cognitive and transferable skills and problem-solving strategies to problems in the field of study and in the generation of ideas effectively communicate information and arguments in a variety of forms.
- Accept responsibility for determining and achieving personal outcomes.
- Reflect on personal and workplace experience in the light of recent scholarship and current statutory regulations.

At Level 6: (Usually Year 3 undergraduate), you will be able to demonstrate that you have the ability:

- To critically review, consolidate and extend a systematic and coherent body of knowledge.
- Critically evaluate concepts and evidence from a range of resources.
- Transfer and apply subject-specific, cognitive and transferable skills and problem-solving strategies to a range of situations and to solve complex problems.
- Communicate solutions, arguments and ideas clearly and in a variety of forms.
- Exercise considerable judgement in a range of situations.
- Accept accountability for determining and achieving personal and group outcomes.
- Reflect critically and analytically on personal and workplace experience in the light of recent scholarship and current statutory regulations.

Programme Outcomes – Knowledge and Understanding

The programme provides opportunities for you to develop and demonstrate the following:

After 120 credits of study (FdCert) you will be able to demonstrate:

Ka A knowledge and understanding of a range of data collection and handling techniques applied within the context of environmental science.

Kb The ability to apply and explain theories, models, concepts and principles that underpin the study of environmental science.

After 240 credits of study (CertHE) you will be able to:

K1. Describe the biological, chemical and physical processes that support and regulate Earth systems and ecosystems

K2. Understand the interconnectedness of humans and the environment and appreciate the ethical arguments for environmental protection

K3. Explain key concepts, including sustainability, natural capital, ecosystem services, net zero environmental limits, environmental risk, hazard, uncertainty and precaution.

After 360 credits of study (DipHE) you will be able to:

K4. Evaluate anthropogenic influences on the environment and explain the risks and opportunities these pose to future sustainability

K5. Discuss the ways in which we can regulate, manage, mitigate and adapt to human-induced and natural environmental change

K6. Appraise approaches to exploring environmental questions and determine appropriate research methods

After 480 credits of study (BSc Hons) you will be able to:

K7. Demonstrate critical awareness of the complex nature of environmental problems at a range of scales (global to local) and the need for holistic, systemic, multi-agency solutions

K8. Evaluate, select and apply a range of professional environmental assessment tools

K9. Critically evaluate technological and management solutions to a range of complex environmental problems

K10. Act as a professional advocate for sustainable environmental change.

Programme Outcomes – Skills and other Attributes (including Employability Skills)

The programme provides opportunities for you to develop and demonstrate the following:

After 120 credits of study (FdCert) you will be able to demonstrate:

Sa. Academic, personal and professional skills needed to succeed in higher education.

Sb. The ability to apply a range of mathematical tools in the context of environmental science.

Sc. Demonstrate specific skills, techniques and competencies needed to study and work in environmental science.

After 240 credits of study (CertHE) you will be able to:

S1. Gather data safely and ethically using a range of techniques in the laboratory and field, keeping accurate records in an appropriate format

S2. Present information clearly and concisely using appropriate academic conventions

S3. Articulate personal environmental values

After 360 credits of study (DipHE) you will be able to:

S4. Evaluate and apply a range of qualitative and quantitative techniques in laboratory and field settings to draw appropriate conclusions

S5. Manage complex scientific data sets and use them to inform decision making

S6. Work collaboratively recognising and respecting the alternative perspectives and viewpoints of other whilst appropriately challenge to influence behaviour, reach participatory solutions and initiate change

After 480 credits of study (BSc Hons) you will be able to:

S7. Synthesise and apply multi and transdisciplinary knowledge to a range of current environmental challenges and future scenarios in order to identify appropriate solutions

S8. Present complex information to a range of technical and non-technical audiences in a balanced and authoritative manner using appropriate oral, written and visual techniques.

S9. Plan, execute and present an independent piece of research work, in which qualities such as time management, problem solving, and independence are evident

External and Internal Reference Points

The following Subject Benchmark Statements and other external and internal reference points have been used to inform the Programme Outcomes:

QAA Subject Benchmark Statement: Earth Science, Environmental Science and Environmental Studies 2019

Also consulted:

QAA Subject Benchmark Statement: Earth Science, Environmental Science and Environmental Studies (5th edn) Draft for Consultation, Nov 2021

IEMA Skills Map – Graduate Member

QAA Education for Sustainable Development Guidance 2021

UoC Strategic Plan

UoC Learning, Teaching and Assessment Strategy

IoSE Business Plans

UoC Academic Regulations and Academic Procedures and Processes

Towards 2030

Graduate Prospects

The Government 10 Point Plan for a Green Economy identifies the need for 250,000 jobs in the green economy by 2030 in order to support economic revival with skills gaps in addressing environmental challenges identified across many sectors. The Government's report "Skills for a Green Economy" (2011) states "The transition to a green economy requires a workforce with the right skills. This includes not only skills in the low carbon and environmental goods and services sector, but also those needed to help all businesses use natural resources efficiently and sustainably and to be resilient to climate change." thus the range of careers that graduates from this programme may enter is broad and multisectoral. These can be broadly summarised as:

Environment Science specific roles include:

- Environmental/Sustainability Manager in public and private sector organisations
- Environmental analyst in a specialist environmental laboratory
- Enforcement officer with e.g. Environment Agency, water companies
- Environmental consultant/specialist/adviser:
    - environmental auditor,
    - environmental impact assessor,
    - waste management,
    - contaminated land investigation and remediation,

    - carbon/climate change advisor,
    - energy management
    - water quality management,
    - air quality management,
    - general environmental consultant
    - environmental trainer
    - Policy/legislation advisor
    - natural resource use management
- Environmental campaigner e.g. for an NGO or charity

In addition, the broad scientific underpinning provided by the programme enables graduates to enter general scientific roles such as laboratory technician, laboratory scientist, research scientist and with further training, science teacher. Students will be strongly equipped with many key transferrable skills such and numeracy, problem solving, communication and technology skills of value to a wide range of employers outside the scientific discipline.

Although a range of discrete job roles can be identified, sustainable environmental solutions require a holistic and integrated understanding. The programme has therefore been designed to ensure that students have a broad scientific base from which they can develop specialist interests. Taking guidance from UNESCO competencies for Sustainable Development (See QAA (2001) Education for Sustainable Development Guidance) the programme uses pedagogies that develop strategic, and critical thinking, self-awareness, problem-based learning, and anticipatory and systems thinking. Assessments will integrate skills and knowledge and use authentic tasks that mirror the kinds of activity students may encounter in their future careers.

Learning, Teaching and Assessment Strategies employed to enable the Programme Outcomes to be Achieved and Demonstrated

As a student at the University of Cumbria, you are part of an inclusive learning community that recognises diversity. You will have opportunities to learn by interacting with others in a collegiate, facilitative, and dynamic learning environment. Teaching, assessment, and student support will allow equal and equitable opportunities for you to optimise your potential and develop autonomy as a learner. We seek to create a stimulating and innovative community of learning, whether encountered on campus or at a distance. Facilitated by our expert practitioner staff, you will experience a learning environment that is well equipped, flexible, and stimulating.

Foundation Year

The Institute of Science and the Environment want to motivate you in your foundation year studies through a variety of teaching and learning approaches that support different learners' needs and help to integrate you into university life. Transferable skills are central to learning opportunities and assessment. Students are encouraged to reflect on their skills development in learning and personal contexts so they develop their ability to make appropriate choices and decisions. Challenging and authentic tasks will be used to stretch your capabilities in real world learning and assessment resulting in a deeper approach to learning. The mode of assessment introduces you to the type of assessments you will encounter as you progress through your degree. Assessment load has been set in line with comparative level 3 assessments such as at A-level. You will undertake a range of assessments including written assignments, reports and essays, oral presentations and poster presentations, portfolios and set exercises such as undertaking individual research. There is a strong emphasis on formative assessment in all modules to assist with the learning process.

The foundation year modules utilise a full range of UoC digital resources and learning technology where suitable; for example, through the University's virtual learning environment (Blackboard). Vocational practice opportunities form an essential part of the programme and encourages you to make meaningful links between the underpinning theoretical concepts within the subject area.

During the integrated foundation year you will be taught with students on a range of Science programmes, you will be working in groups and teams to achieve solutions to set problems, researching case studies and delivering events. Each module is led by a module leader which is the lead tutor with over-arching responsibility for that module. However, one of the strengths of this programme is our team-taught approach to delivery, you may be taught on a module by more than one tutor. This ensures you are taught topics by subject specialists, experience the different delivery styles you will encounter as you progress through your programme and on modules that you share with other programmes ensures you will meet staff from your degree programme

Levels 4-6

Learning and teaching approaches are designed to enable you to attain the stated learning outcomes of the programme, with assessment strategies designed to align with these outcomes. You will be supported in your studies so that you learn progressively with skills and knowledge carefully scaffolded throughout modules and years of study. Classroom based learning is the predominant learning experience, with attendance at lectures and seminars accounting for around 55% of your formal learning hours. We will also make extensive use of laboratory sessions and workshops, particularly in the first year of study where this will make up approximately a quarter of your contact hours. Field and site visits are also used extensively throughout the programme to support learning and to provide you with the opportunity to translate theory into practice (approximately 25% of the total contact hours in the programme). Learning is supported and enhanced by use of an online virtual learning environment so that information and activities can be accessed at your convenience. Study resources at other campuses and learning gateways of the University are available to all students.

Our learning and teaching strategy has been developed in line with the University's Learning, Teaching and Assessment Strategy 2017-2022 and the Curriculum Design Framework. Encapsulated within the first aim of the programme is a drive to engage all our students in learning experiences that are enriching, enjoyable and intellectually stimulating. We view you as a partner in learning and all modules include opportunities for your engagement and participation. Some modules are shared with other programmes so that you will benefit from a range of perspectives and approaches, as well as access to a broader expertise base. A variety of learning and teaching methods are used to reflect the variety of individual learning styles that inevitably exist within a group, so that you will experience teaching methods best suited to your own preferred learning style.

These will include:

- Lectures which provide you with the theory and underpinning knowledge of environmental science. For example, at level 4, you will learn the principles behind the origins of materials, chemicals and energy on planet Earth, how these parameters relate to major systems on the planet (land, air and water), and how life on Earth is interrelated with the environment. At Level 5 the underpinning scientific fundamentals are used to inform understanding of environmental challenges, sustainable resource use, legislation and research-based skills; while at Level 6 you can expect fewer lectures, as you explore solutions, strategy and management principles related to environmental issues in seminars and practical activities shaped around your specific environmental interests.
- Laboratory classes will give you the hands-on practical skills required of an Environmental Scientist and a deep understanding of the relevant laboratory standards required for you to work within the sector. In particular, understanding of physical, chemical and biological

parameters are explored in depth to develop essential skills in monitoring and identification of solutions to environmental issues.

- Fieldwork is an important component of the programme allowing you to experience first-hand the theory learned in class and again allowing you to develop the practical skills vital for a career in environmental science. Both half day, day and residential trips are included in the programme. Field visits are used to learn about specific sites, exploring issues and management of particular land uses, pollution and waste management considerations, while applied field trips will enable you to develop hands-on experience with current monitoring and surveying methods and techniques.
- Tutorials allow you to consolidate the knowledge you have gained throughout your studies. Module specific tutorials help you embed and explore a deeper understanding of the taught content.
- Theoretical and practical work will be supplemented with simulated learning tasks and activities, for example virtual learning activities or field excursions.
- Case studies are an ideal tool for teaching you how environmental practices are applied in the real world and allow a global perspective to be explored. We use industry related materials to demonstrate the importance of quality, maintaining standards and the potential effects of poor practice and procedures. Case studies will be used throughout theoretical and applied studies in this degree programme
- Seminars and workshops will support your skills development. For example, the ability to communicate effectively is key to the success of an Environmental Scientist. Your chosen career requires you to be confident in your findings and to impart your knowledge in a clear and concise manner such as communicating survey results and findings, providing guidance from complex environmental reports, or when you are required to present your evidence in court or inspire others to take action. These activities are scaffolded throughout your programme and allow you to gain confidence.
- Directed and independent study involves engaging with electronic resources on Blackboard (virtual learning environment), textbooks and other self-study material. It is highly important that you engage with the additional resources and materials available to you. Lectures and practical sessions will give you the foundations required however, to embed deeper learning and ensure currency you will be required to undertake further reading either directed by your lecturer or independently.
- Environmental Scientists are problem solvers, identifying where problems or issues exist, understanding which methods are needed (or who to delegate to) in order to explore these issues, and using findings to make informed and reasoned decisions for selecting appropriate solutions and/or management. This problem-based learning approach is embedded throughout your degree programme, with many practical tasks using this process; this is also a key component of the concluding activities in the central 'environmental practitioner' modules.
- Research informed teaching. The programme will draw upon current research, including that undertaken by your lecturers, to ensure it is current. However, we will also develop your own research skills so that you are equipped to actively contribute to the field of environmental science when you graduate. You will experience various forms of research informed teaching:
  - Research-led – you will be given examples of current research in your field where you will learn to critique the content, processes employed, and the data generated.

- Research orientated – through hands-on practical sessions and student led investigations in the laboratory and field, you will be taught the processes and methodologies required to successfully conduct research in environmental science.
- Research tutored – You will lead discussions between fellow students and staff during group seminars where you will learn through critique and knowledge of current research in environmental related matters.
- Research based learning – You will conduct independent research projects throughout your programme of study culminating in conducting your Dissertation in your final year where you will draw on industry-based problems in a bid to find a resolution and further research in a relevant area.

Enhancing your employability and graduate skills are a core theme throughout the programme. Learning and teaching methods are designed to support the move to autonomy and independent learning. For example, as you progress through the programme, formal contact hours reduce as you are encouraged to explore topics of interest yourself, culminating in a major independent piece of research on a topic of your choice for your dissertation. In addition to the above, you will also take part in the following activities to further enhance your employability in the sector.

- Interactive computer-based learning
- Training and practice in the use of IT and software packages
- Project work, both individual and in teams
- Reading and interpreting research publications

Summative and Formative Assessment

Our assessment strategy has also been developed to be in line with the University's Learning, Teaching and Assessment Strategy 2017-2022 and the Curriculum Design Framework.

Module assessments at level 3 introduce students to the type of assessments that they will encounter as they progress through their degree and there is a strong emphasis on formative assessment in all modules to assist with the learning process. Assessment load has been set in line with comparative level 3 assessments such as at A-level.

The overarching consideration is to provide assessments, which develop your skills and knowledge and equip you for graduate employment. Assessments will therefore often mirror the type of work you will encounter in your future career. As a result of your studies, you will become:

- Enquiring and open to change
- Self-reliant, adaptable, and flexible
- Confident in your discipline as it develops and changes over time
- Capable of working across disciplines and working well with others
- Confident in your digital capabilities
- Able to manage your own professional and personal development
- Global citizens, socially responsible and aware of the potential contribution of you work to the cultural and economic wellbeing of the community and its impact on the environment
- Leaders of people and of places
- Ambitious and proud

Our learning environment is designed to be flexible and 'fit for purpose', led and facilitated by staff who are expert practitioners, engaged in research and scholarly activity and at the forefront of their

discipline. Our curriculum will foster aspiration and career readiness through work-related, experiential, and inter-professional learning and will include content, which is relevant to the world of work, emphasising problem solving and the interaction of theory and practice. Authentic assessment and effective feedback will enable student success and achievement. To further increase the hands-on elements of the programme, the course topics and practical content are aligned with the ES3 QAA Subject Benchmark Statement, as well as accreditation requirements for the Institution of Environmental Sciences and the Institute of Environmental Management and Assessment; as a consequence, the programme is well placed to meet expectations of professional, statutory and regulatory body (PSRB) standards / requirements. Within a balanced scheme, assessment methods will include:

- unseen/open-book examinations and other tests
- laboratory reports
- field projects
- problem solving activities
- critical analysis of case studies
- oral, audio-visual and poster presentations
- dissertation
- peer and self-assessment
- group work

You will receive both a grade and feedback (written or oral) on your summative work against pre-defined grading criteria. You will also receive feedforward designed to help you develop your skills and approach for future submissions. Guidance and support on specific assignments will be provided by your module tutors. Your personal tutor will also be able to give you generic support and signpost you to specialist support services within the University should you need additional help.

Formative Assessment

Formative elements of assessment will test your knowledge and ability, but the emphasis is on a developmental approach that builds your confidence. Formative assessment will involve you being actively engaged in the assessment to encourage you to think about the learning process, to develop your ability to learn independently and to develop your employability. It will also be used to evaluate teaching. Tasks will often mirror those set for summative assessment giving you the chance to receive feedback or be designed to stretch and challenge you without the needed to worry about the outcome.

Supporting Student Workloads, each year the Environmental team work together to create an "assessment matrix" which is disseminated to students. The idea of this assessment matrix is to ensure that all staff and students are aware well in advance of upcoming deadlines and to ensure there is an appropriate spread of assessment points across the year. The aim being that students in each year group should ideally not have more than one assignment due per week.

Student Support

We provide responsive learner support that promotes student success. Our approach to learner support is designed to support achievement and progression, champion inclusivity and accessibility,

prepare you for opportunities beyond study, and promote independence and resilience, enabling you to achieve your potential.

As a student at the University of Cumbria, you will be taught by academics and expert practitioners who facilitate learning through structured inquiry. You will be provided with access to high quality academic resources through physical and digital libraries and will be supported to develop skills that enable you to become a critical, reflective, discerning and independent learner and researcher.

Induction

The first week the programme operates as a Welcome Week and as an introduction to the programme and to the University. All level 3 students will share a common induction programme to provide the opportunity for you to meet with other students in your subject area and those from other level 3 foundation programs who share common university-wide modules. You will undertake a series of activities designed to form cohesion amongst the student group, to familiarise you with the University and introduce you to a range of support services and staff who are there to help you settle into university life and help you progress through your studies. You will be shown how to use our Virtual Learning Environment (VLE) which is called 'Blackboard' and how to submit assessments using 'Turn it In'. All students will attend centrally organised sessions, Student Life and Help is at Hand

During the induction week you are allocated a Personal Tutor (PT), as are all students at the university, but in addition integrated foundation year students will also be supported by the level 3 subject area lead. You will also meet your dedicated Student Development Co-ordinator who is part of our awarding winning Learning Information and Student Support service (IS). They will run sessions on expectations for studying in higher education and show you around the library and learning resources.

Early in the programme you will be introduced to the laboratory facilities that will be used during the programme and we will explore some of the varied field locations readily accessible from the campus.

Student Development Co-ordinator Support (Level 3)

During the first year of your programme (year 0) you will have access to support from our Student Development Co-ordinator. They will provide you with individual academic and pastoral support alongside the academic team to ensure you reach your full potential whilst you are on this programme. In particular they will help you to adjust to university study, assist you in the navigation of the academic environment, policies, expectations and signposting to a wide range of services, such as the Student Enquiry Point. They also work with you and your personal tutor to help you to develop your own strategies for effective study and provide additional one-to-one and group support in academic writing and numeracy skills.

A key feature of the foundation year programme is the additional student support that has been built into the modules in particular the Essential University Skills 1 and Essential University Skills 2 modules, that have an additional 12 contact hours included to enable staff to provide additional individual and group tutorials.

Personal Tutoring

In induction week you will be allocated a Personal Tutor. Your Personal Tutor will be proactively involved in the delivery of your programme and will have contact with you throughout your time at the University. They will support your learning and development through tutorials, Progress Reviews and other support as outlined in the Personal Tutoring Policy.

Students are entitled to tutorial support for 2hrs a year at level 3 and 4 and 1 hour a year at levels 5 and 6. Personal Tutor contact may take place individually or in groups, and students may request individual contact when needed.

Our personal tutorial programme follows a clear structure that supports both your academic development and offers you a place to reflect on life skills gained throughout your studies including positive behaviours associated with good physical and mental health.

At Level 3, we will introduce you to both the personal tutorial system and university systems such as Blackboard, Turnitin and timetabling. We will also advise on additional support systems such as skills@cumbria, programme administration and support for your wellbeing. We will ensure you are settling in and answer academic questions including supporting you with assessment and feedback.

At Level 4, we will support you with the transition from Level 3 to Level 4. We will continue to advise on additional support systems, programme administration and support for your wellbeing. We will reflect on your academic progress to date and over the academic year and offer further advice and guidance on assessment and feedback. We will also consider your career plans and wider experience.

At Level 5, we will work with you to reflect on your progress to date and consider any areas which may require academic development. We will continue to offer guidance and support on feedback and assessment and signpost you to additional support mechanisms We encourage you to consider your career plans and the benefits of engaging in volunteering opportunities and placement activity where appropriate.

At Level 6, we will review and discuss overall performance at L5 and areas requiring development to maximise success in the latter part of degree classification stages. We will discuss and support final year challenges such as dissertations, projects and academic progress and offer encouragement/guidance on careers and opportunities for post-graduate study.

Additionally, your personal tutor will work alongside your Programme Leader and Module Tutor to offer support and signposting to central services should you need wellbeing, study skills or other specialist support.

Personal Development Planning

Personal development planning has been embedded throughout your programme and within the personal tutorial system where help will be given on finding volunteering opportunities locally. Moreover, the applied, industry specific nature of the environmental science degree offers career relevant training throughout the course curriculum. To compliment this, we will also offer you opportunities for self-reflection and time to consider behaviours associated with good physical and mental health and wellbeing which will enable you to understand the advantages of these essential life skills when seeking and engaging in employment.

Library Services and Academic Skills

The Library home page can be accessed here: https://my.cumbria.ac.uk/Student-Life/Learning.

Module leaders will collaborate with Library Services to ensure that your online reading and resource lists are current and items are available via the library discovery tool OneSearch. In order to maximise access, availability and usefulness, ebooks and electronic journal titles will, in most cases, be prioritised. You can access a wide range of electronic and print content using OneSearch and you can find out more about key texts, databases and journals for your subject by accessing the library's subject resources webpages. Where appropriate, module reading and resource lists will be made available to you electronically on Blackboard using the University's online reading and resource list system.

Each campus library has a dedicated webpage. Check out local information about opening hours, reserving books, using self-service kiosks, printing and photocopying, booking study spaces and more. https://my.cumbria.ac.uk/Student-Life/Learning/Libraries/

An Ask a Librarian service runs from 17:00 - 09:00 weekdays and round the clock on weekends and holidays. This means you can get professional help using about library services, finding information, referencing and searching, even when the library is closed. https://my.cumbria.ac.uk/Student-Life/Learning/Libraries/Ask/

The Skills@Cumbria service can help support your academic, library and digital skills and success throughout your programme. It includes a suite of online self-help resources accessible 24/7 via the University's website and Blackboard site.

The Student Enquiry Point is a simple way to contact Library and Skills@Cumbria Services. Additional skills support for students is offered via:

- Workshops
- Appointments
- Webinars
- Learn Well at Cumbria
- Study from Home Webpage
- Digital Capabilities and LinkedIn Learning Pathways

Headstart: Head Start is a self-learning pre-entry module that is completed online and at your own pace. The module gives new undergraduate students an opportunity to prepare for your transition into university and to start to develop the academic skills that will help them become successful students. library, academic and digital skills that will help you become successful students. Learning at university, academic writing and referencing are key topics introduced in the module and previous students have told us how useful they have found the online resources and activities.

The module is accessible via Blackboard on a self-enrol basis, where you receive badges and certificate of completion, or there is a non-certificated open access version available via the Head Start webpage.

Head Start Plus: Head Start Plus is also an online skills development course, designed to support students who are about or who have just started study at level 5 or 6 (2nd and 3rd year undergraduate). This course is particularly recommended to students who may not have studied at HE level for some time or who are transitioning into the higher HE levels. The course provides a useful refresh on academic skills and practice and an insight into the expectations of tutors at those levels.

The module is accessible via Blackboard on a self-enrol basis, where you receive badges and certificate of completion, or there is a non-certificated open access version available via the Head Start webpage.

Student Support Services

The Student Enquiry Point is a simple way to contact Student Services. Using the Student Enquiry Point tile on the Student Hub you can submit an enquiry to any of the Student Services teams, which includes:

- Careers and Employability
- Chaplaincy for faith and spiritual wellbeing
- Mental Health and Wellbeing

- Digital Skills
- Disability and Specific Learning Difficulty (SpLD)
- International Student Support
- Library
- Money Matters
- Safeguarding
- Skills@Cumbria
- Sports and Fitness Facilities
- University Student Accommodation

Further support and guidance, including EDI and Safeguarding: We are an inclusive community, committed to supporting and learning from each other, find out more about Equality, Diversity and Inclusion (EDI). Depending on the nature of your course, you may well already know about or be learning about safeguarding in a professional context and to find out about the University of Cumbria's safeguarding policy and procedures visit: Safeguarding.

Where fieldwork and laboratory components of the programme pose specific challenges, we will work with you to consider reasonable adjustments to ensure you are able to meet module and programme learning outcomes.

Student Voice

As a student at the University of Cumbria you automatically become a member of the Students' Union. The Students' Union represents the views and interests of students within the University.

The Students' Union is led by a group of Student Representatives who are elected by students in annual elections. They also support approximately 400 Student Academic Reps within each cohort across the entire University. The Students' Union represent the views of their cohort and work with academic staff to continuously develop and improve the experience for all University of Cumbria students. You can find out more about who represents you at www.ucsu.me.

You can email at any time on studentvoice@cumbria.ac.uk.

Student Academic Representatives are elected by students on a programme to represent their views. They work closely with the Programme Leader and other members of academic staff both formally via twice yearly Staff Student Forum meetings and informally.

IT and Technical Support

Technology is an invaluable asset when it comes to studying, so it's important you know how to make the most out of the excellent IT facilities we have available. Our aim is to ensure you can access university electronic resources from anywhere or any device, whether on or off campus. The Student Hub is your one-stop gateway to all University systems, Outlook email, and OneDrive.

Whether you consider yourself a computer expert or you're not confident about your IT skills, we're always around to ensure you get the level of support you need. We have a wealth of information and support available on the IT Services website and have a dedicated IT Service Desk where you can talk to someone by phone or log your question online from anywhere, at any time.

University Cumbria Students' Union (UCSU) Student Support

UCSU offers a free, independent and confidential advice service to all students. They can help with things like academic appeals, extenuating circumstances or if you're considering a formal complaint. UCSU are also on hand to represent you in any formal meetings, for example in malpractice panels

or fitness to practice meetings. Appointments are telephone based and can be booked at www.ucsu.me/support.

Programme Curriculum Map					
Academic Level	**Module Code**	**Module Title**	**Credits**	**Module Status***	**Programme Outcomes achieved**
3	UNIF3003	Essential University Skills 1	20	Compulsory	Ka, Sa
3	UNIF3005	Essential Biology	20	Core	Kb, Sa
3	UNIF3015	Scientific Investigation	20	Compulsory	Ka, Kb, Sc
3	UNIF3004	Essential University Skills 2	20	Compulsory	Kb, Sa
3	UNIF3016	Essential Chemistry	20	Core	Kb, Sa
3	UNIF3017	Environmental Sciences	20	Compulsory	Ka, Kb, Sa, Sb
4	HSOE4000	Earth Origins	20	Compulsory	K1, K2, S2, S3
4	HSOE4001	Terrestrial Systems	20	Compulsory	K1, K2, K3, S1, S2
4	HSOE4002	Aquatic Systems	20	Compulsory	K1, K2, K3, S1, S2
4	HSOE4003	Atmospheric Systems	20	Compulsory	K1, K2, K3, S1, S2
4	HSOE4004	Ecology and the Environment	20	Compulsory	K1, K2, K3, S1, S2
4	HSOE4005	Environmental Practice	20	Compulsory	K1, K2, K3, S1, S2, S3
5	HSOE5000	Exploring Contemporary Environmental Challenges	20	Compulsory	K2, K3, K4, K5, K6, S1, S3, S4, S6
5	HSOE5001	Pollution and Monitoring	20	Compulsory	K1, K2, K3, K4, K6, S1, S2, S4, S5, S6

5	HSOE5002	Natural Resource Use	20	Compulsory	K1, K2, K3, K4, K5, K6, S1, S2, S3, S4
5	HSOE5003	Environmental Legislation and Regulation	20	Compulsory	K2, K3, K4, K5, S2, S5
5	HSOE5004	Environmental Assessment	20	Compulsory	K1, K2, K3, K4, K5, K6, S1, S2, S3, S4, S5, S6
5	HSOS5106	Exploring Research	20	Compulsory	K6, S2, S5
6	HSOE6000	Managing Waste and Pollution	20	Compulsory	K4, K5, K7, K9, S5, S8
6	HSOE6011	Energy and Water Resource Sustainability	20	Compulsory	K4, K5, K7, K9, K10, S2, S5, S6, S7, S8
6	HSOE6012	Land Use and Biodiversity Conservation	20	Compulsory	K1, K2, K3, K4, K5, K6, K7, K8, K9 S1, S2, S3, S4, S5, S6, S7
6	HSOE6013	Environmental Management and Solutions	20	Compulsory	K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, S1, S2, S3, S4, S5, S6, S7, S8
6	HSOS6106	Dissertation	40	Compulsory	K6, S1, S2, S4, S5, S8, S9

Notes

This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes.

This programme uses year long modules in levels 4 – 6 to allow for sustained assessments with a greater emphasis on development and on modelling process and outcomes on sector practice. You will be well supported on these modules with stop-reviews, formative assessment points and interim objectives that monitor progress, encourage reflection and guard you against failure. Where a student has not succeeded in their programme, they will not be permitted to re-register on the same programme.

This programme contains two core modules at Level 3 and as such in addition to any other progression requirement these modules must be passed at 40% in order for you to continue on this programme at Level 4. If you have passed all your other modules at Level 3 but have a confirmed fail in UNIF3005 and UNIF3016, and with a mark of between 35% and 39%, then a transfer to another integrated foundation programme for Level 4 study,

where the programme does not have any core modules at Level 3, may be considered. In these circumstances, normal university procedures apply and, provided that you meet the entry requirements and any pre-requisites for the alternative programme, then a transfer may be considered subject to space being available on that programme

* **Key to Module Statuses**	
Compulsory Modules	Must be taken although it may possible to condone/compensate as a marginal fail (within the limits set out in the Academic Regulations and provided that all core or pass/fail elements of module assessment have been passed).
Core Modules	Must be taken and must be successfully passed

Programme Delivery Structure: Full Time				
Module Code	**Module Title**	**Delivery Pattern** **Sept – Dec** **Jan – May** **June – Aug**	**Method(s) of Assessment**	**Indicative week number of Assessment Deadline**
UNIF3003	Essential University Skills 1	Autumn	Written assignment (50%) Presentation (50%)	Mid Semester End Semester
UNIF3004	Essential University Skills 2	Spring	Written assignment (50%) Presentation (50%)	Mid Semester End Semester
UNIF3005	Essential Biology	Autumn	Portfolio (50%) Set Exercise (50%)	Mid Semester End Semester
UNIF3015	Scientific Investigation	Autumn	Set Exercise (50%) Report (50%)	Mid Semester End Semester
UNIF3016	Essential Chemistry	Spring	Portfolio (40%) Written Exam (60%)	Mid Semester End Semester
UNIF3017	Environmental Sciences	Spring	Portfolio (100%)	End Semester
Students exiting at this point with 120 credits would receive a FdCert Science				
HSOE4000	Earth Origins	Year long	Written Assignment (50%) Written Exam (50%)	End Sem 1 End Sem 2

HSOE4001	Terrestrial Systems	Sept - Dec	Report (30%) Written Assignment (70%)	End Sem 1 Mid Sem 1
HSOE4002	Aquatic Systems	Sept - Dec	Oral Assessment/Presentation (70%) Report (30%)	Mid Sem 1 End Sem1
HSOE4003	Atmospheric Systems	Jan - May	Set Exercise (30%) Set Exercise (70%)	Mid Sem 2 End Sem 2
HSOE4004	Ecology and The Environment	Jan - May	Project Work (50%) Written Assignment (50%)	Mid-End Sem 2 End Sem 2
HSOE4005	Environmental Practice	Year long	Portfolio (100%)	Early-Mid Sem 2 End Sem 2
Students exiting at this point with 240 credits would receive a CertHE Environmental Science				
HSOE5000	Exploring Contemporary Environmental Challenges	Jan- May	Fieldtrip Workbook (50%) Group Presentation (50%)	End Sem 2 End Sem 2
HSOE5001	Pollution and Monitoring	Sept - Dec	Written Assignment (70%) Set Exercise (30%)	Mid Sem 1 End Sem 1
HSOE5002	Natural Resource Use	Sept - Dec	Set Exercise (40%) Written Assignment (60%)	Mid-End Sem 1 End Sem 1
HSOE5003	Environmental Legislation and Regulation	Sept - Dec	Written Assignment (50%) Written Exam (50%)	Mid Sem 1 End Sem 1

HSOE5004	Environmental Assessment	Jan - May	Portfolio (100%)	Mid-End Sem 2 End Sem 2
HSOS5106	Exploring Research	Jan - May	Written assignment (60%) Project work (40%)	End Sem 2 End Sem 2
Students exiting at this point with 360 credits would receive a DipHE Environmental Science				
HSOE6000	Managing Waste and Pollution	Jan - May	Report (50%) Poster or similar (50%)	Mid Sem 2 End Sem 2
HSOE6011	Energy and Water Resource Sustainability	Sept - Dec	Written Assignment (70%) Oral Assessment/Presentation (30%)	Mid Sem 1 End Sem 1
HSOE6012	Land Use and Biodiversity Conservation	Sept - Dec	Oral Assessment/Presentation (40%) Written Assignment (60%)	Mid Sem 1 End Sem 1
HSOE6013	Environmental Management and Solutions	Jan- May	Portfolio (100%)	Mid-End Sem 2 End Sem 2
HSOS6106	Dissertation	Year long	Oral Assessment/ Presentation (20%) Dissertation (80%)	End Sem 1 End Sem 2
Students exiting at this point with 480 credits would receive a BSc (Hons) Environmental Science				

Exceptions to Academic Regulations
This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes

Methods for Evaluating and Improving the Quality and Standards of Learning	
Mechanisms used for the Review and Evaluation of the Curriculum and Learning, Teaching and Assessment Methods	• Module Evaluation • Programme Validation and Periodic Review • Annual Monitoring • Peer Review • External Examiner Reports • Student Success and Quality Assurance Committee • Integrated Foundation Year Management Group
Mechanisms used for gaining and responding to feedback on the quality of teaching and the learning experience – gained from: Students, graduates, employers, placement and work-based learning providers, other stakeholders, etc.	• Staff Student Forum • Module Evaluation Forms • Programme Evaluation: National Student Survey, UK Engagement Survey • Module/Programme/Personal tutorials • Meetings with External Examiners

Date of Programme Specification Production:	March 2022
Date Programme Specification was last updated:	March 2024
For further information about this programme, refer to the programme page on the University website	

The following information has implications for potential international applicants who require a Student Visa to study in the UK	
Is the placement requirement more than 50% of the programme?	No

If yes, what % of the programme is the placement requirement?	n/a
If yes, is the amount of placement a statutory requirement to meet Professional, Statutory or Regulatory Body (PSRB) or Department of Education requirements?	n/a