# Template C4



# Programme Specification

# Title of Course: BSc. (Hons) Environmental Science and BSc. (Hons) Environmental Science, Hazards and Disasters

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| Date first produced | December 15th, 2022 |
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| Version number | 2 |
| Faculty | Engineering, Computing and the Environment (ECE) |
| School | Engineering and the Environment (EE) |
| Department | Geography, Geology and the Environment (GGE) |
| Delivery Institution | Kingston University, London (KU) |

This Programme Specification is designed for prospective students, current students, academic staff and employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes and content of each module can be found in the course VLE site and in individual Module Descriptors.

## SECTION 1: GENERAL INFORMATION

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| Award(s) and Title(s): | *BSc. (Honours) Environmental Science*  *BSc. (Honours) Environmental Science, Hazards and Disasters*  *BSc. (Honours) Environmental Science with Placement*  *BSc. (Honours) Environmental Science, Hazards and Disasters with Placement* |
| Intermediate Awards(s) and Title(s): | *Diploma of Higher Education*  *Certificate of High Education* |
| FHEQ Level for the Final Award: | *Honours Degree Level 6* |
| Awarding Institution: | Kingston University, London |
| Teaching Institution: | *N/A* |
| Location: | *Penhryn Road Campus* |
| Language of Delivery: | *English* |
| Modes of Delivery: | *Full time, Part time, Placement\** |
| Available as: | Full field |
| Minimum period of registration: | *Full-time – 3 years or 4 years with Placement*  *Part-time – 6 years or 7 years with Placement* |
| Maximum period of registration: | *Full-time – 6 years or 7 years with Placement*  *Part-time – 12 years or 13 with Placement* |
| Entry Requirements: | The minimum entry qualifications for the programme are:   * 96 UCAS points (CCC at A-level), with A-level or equivalent from subject areas including but not limited to Geography, Environmental Science, Chemistry and Biology or other relevant disciplines, plus min five GCSEs grades A to C to include Math and English. * BTEC/advanced Diploma/Access/Foundation qualifications considered where relevant. * Science foundation year * We will consider a range of alternative qualifications or experience that is equivalent to the typical offer. Applications from international students with equivalent qualifications are welcomed. * A minimum IELTS score of 6.0 (with a minimum score of 5.5 in R, L, S and W), TOEFL 88 (R=22, L=21, S=23, W=22) or equivalent is required for those for whom English is not their first language. * Applications from mature students with relevant experience, interest and or commitment, are welcomed. * Applications from holders of qualifications such as the International Baccalaureate are welcomed. * International student applications with relevant qualifications and or interest experience and commitment (in the case of mature students) are welcomed. * Other qualifications will be considered on a case-by-case basis. |
| Programme Accredited by: | *Institute of Environmental Management and Assessment (IEMA)* |
| QAA Subject Benchmark Statements: | [*QAA Subject Benchmark Statement for Environmental Science (2022)*](https://www.qaa.ac.uk/the-quality-code/subject-benchmark-statements/earth-sciences-environmental-science-and-environmental-studies) |
| Approved Variants: | *Yes* |
| UCAS Code: | *BSc. (Hons) Environmental Science – F900*  *BSc. (Hons) Environmental Science, Hazards and Disasters – F820*  *BSc. (Hons) Environmental Science with Placement – F901*  *BSc. (Hons) Environmental Science, Hazards and Disasters with Placement – F822* |

**\***The term “Placement” refers to a Professional Placement, Study Abroad or combination of both.

## SECTION 2: THE COURSE

### Aims of the Course

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The educational aims of the BSc. Honours degree in Environmental Science are to:

* provide students with an understanding of the key concepts of environmental systems and phenomena, and their relevance to modern society.
* enable students to develop a critical reflective, integrated and science-based approach to the study of environmental phenomena, and develop the ability to confidently apply their knowledge in diverse geographical and scientific contexts.
* develop the ability to identify, analyse and critically evaluate relevant primary and secondary information sources and to communicate and debate cogent and informed arguments.
* develop intellectual, practical and fieldwork skills in environmental research including the acquisition, analysis, interpretation and representation of data and information, including its critical appraisal, as a basis for independent study (e.g., in preparation for and execution of the final year research project).
* develop an enquiring, analytical and creative approach to study, encouraging independent judgement and critical self-awareness.
* develop the KU Graduate Attributes, and set and reflect on personal development ambitions to support employment and personal aspirations.
* promote an understanding of professional environmental practices and consultancy skills by active engagement with the wider practitioner community, including fieldwork and other forms of experiential learning.
* facilitate understanding of the relationship between environmental science and the values and concepts of sustainability in general, and in business and governance within a sustainable development context – including global social justice/injustice, notions of development, and the need to consider ethics and politics in sustainability discourses.
* prepare students for further study, research, employment and community engagement in a wide range of contexts where sustainability skills, knowledge and understanding can be applied.

Students opting to take the parent pathway in Environmental Science will additionally be able to:

* demonstrate an understanding of the key concepts which underpin the study of land-water interactions and their management.
* demonstrate an understanding of the key ecological concepts and their application.
* apply a range of technical skills (e.g., GIS) to monitor and evaluate natural landscapes and their management.

Students opting to take the pathway in Hazards and Disasters will additionally be able to:

* demonstrate an understanding of the key concepts which underpin the study and management of hazards and disasters.
* identify a range of hazards, understand the processes by which these become disasters and suggest appropriate management strategies.
* evaluate the advantages and disadvantages of different Disaster Risk Reduction strategies at a range of scales.
* apply a range of technical skills (e.g., GIS) to monitor, evaluate and manage hazard and disaster challenges.

Students opting to take the placement year will additionally be able to:

* apply and develop their environmental science knowledge in an appropriate professional setting and the opportunity to feed these acquired knowledge and skills back to their final year of study.
* gain first hand professional experience to develop skills and knowledge relevant to environmental science and to their career aspirations.

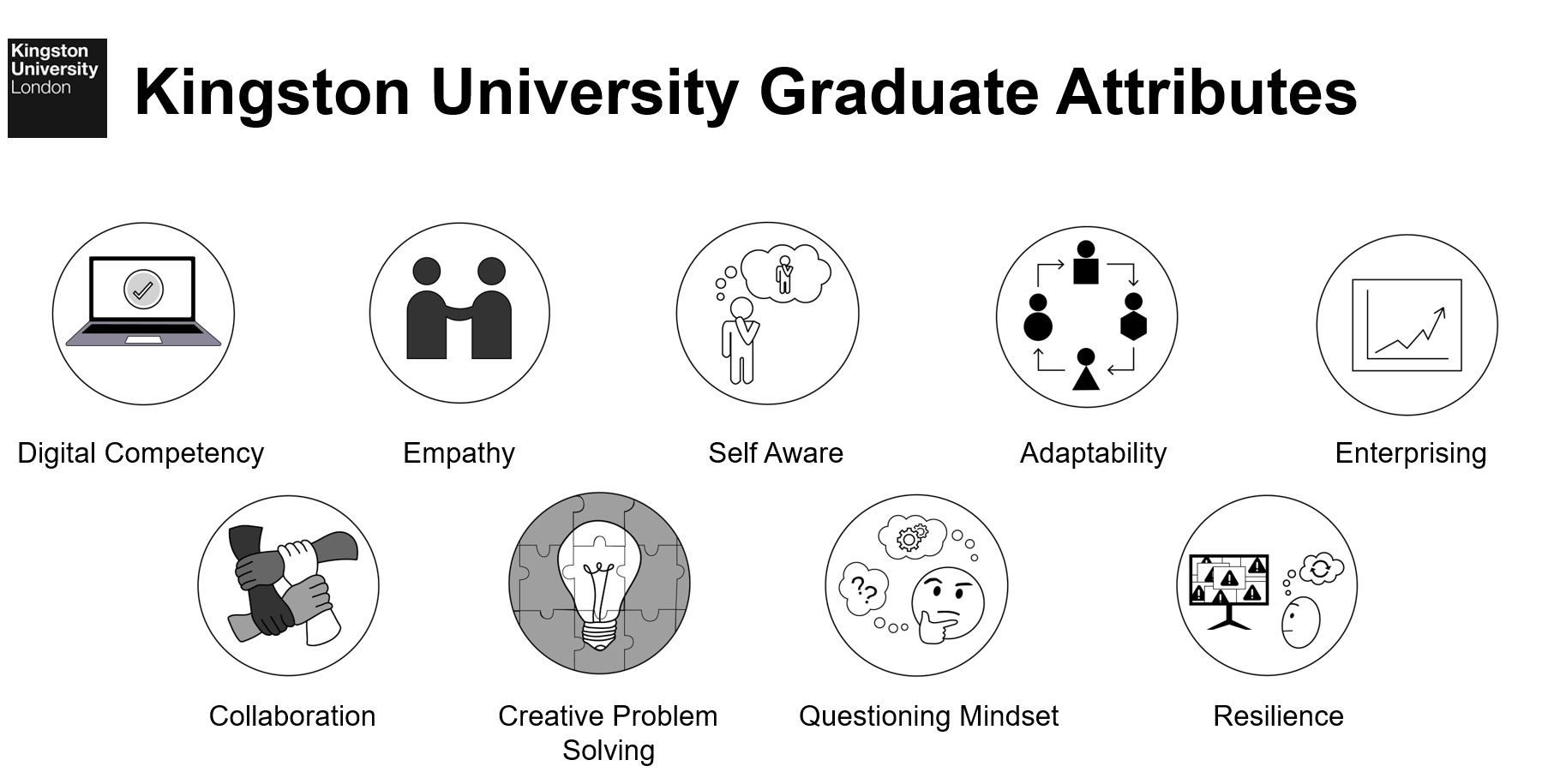
### Intended Learning Outcomes

The course outcomes are referenced to the relevant QAA subject benchmarks indicated and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2022) And relate to the typical student. The programme aims to enable students to progress from the category of threshold/typical to the category of excellent as they move through the programme (categories as per Benchmark Statement). The course is also designed to enable students to become more confident and capable as independent learners as they move from level to level. As such, learning at Level 4 is more teacher directed, Level 5 facilitates more student selected topics and direction, and Level 6 encourages and rewards independent learning and student initiative. The course provides opportunities for students to develop and demonstrate knowledge and understanding specific to the subject, key skills and graduate attributes in the following areas:

### Programme Learning Outcomes

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| --- | --- | --- | --- | --- | --- |
|  | **Knowledge and Understanding**  On completion of the course students will be able to: |  | **Intellectual Skills**  On completion of the course students will be able to |  | **Subject Practical Skills**  On completion of the course students will be able to |
| A1 | Define and evaluate the nature of environmental systems and phenomena, scientific principles that underpin them, their changing nature over a range of interacting scales and the contemporary and historical interactions between people and their environment. | B1 | Critically evaluate and synthesise qualitative and quantitative information from a diverse range of primary and secondary sources. | C1 | Undertake subject related practical work such as primary information acquisition and analysis (e.g., laboratory investigation) with due regard to safety. |
| A2 | Be proficient in a range of techniques for the collection, analysis, interpretation and communication of environmental information. | B2 | Demonstrate the ability for independent and reflective learning. Appraise the arguments of others, rationalise complex contested environmental themes and evaluate sustainable/non-sustainable solutions environmental challenges. | C2 | Solve complex problems by use of appropriate learning technologies (e.g., GIS) and design and execute environmental science project-based investigations with due regard to logistical and ethical issues. |
| A3 | Develop and practice a range of project management skills through practical experience of guided and independent field-based learning and investigations in a range of contrasting settings. | B3 | Construct reasoned arguments using appropriate supporting academic and practical evidence, and develop confidence in the ability to communicate reasoned arguments through verbal, written and digital media. | C3 | Develop experience in the use of support tools for effective communication. |
| A4 | Students opting for the Environmental Science parent will additionally be able to:  Demonstrate an understanding of the key concepts which underpin the study of land, water and ecology and how these interact with changing environmental systems. | B4 | Students opting for the Environmental Science parent will additionally be able to:  Evaluate the challenges posed by environmental change in land-water-ecological systems and the application of environmental science to further understanding of these changes and their management. | C4 | Take informed decisions and solve complex problems by use of appropriate learning technologies in the classroom and the field, understanding the perspectives of a variety of different stakeholders. |
| A5 | Students opting for the Hazards and Disasters pathway will additionally be able to:  Demonstrate an understanding of the key concepts which underpin the study and management of hazards and disasters and how these interact with changing environmental systems. | B5 | Students opting for the Hazards and Disasters pathway will additionally be able to:  Evaluate the advantages and disadvantages of different Disaster Risk Reduction strategies at a range of scales and from varying perspectives. | C5 | Students opting for a placement degree will additionally be able to:  Transcribe and apply the experiences of the practical work-based environment to academic study and chosen career aspirations. |
| A6 | Students opting for a placement degree will additionally be able to:  Practice their theoretical understanding and exemplify the relevance of environmental science in a contemporary work environment and enhance their professional skills portfolio. | B6 | Students opting for a placement degree will additionally be able to:  Synthesise the experiences of the practical work-based environment to the academic study of environmental science. |  |  |

In addition to the programme learning outcomes identified overleaf, the programme of study defined in this programme specification will allow apprentices to develop a range of Key Graduate Attribute and Personal Development Skills in line with the Kinston University’s Championing Future Skills.



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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Graduate Attribute and Personal Development Skills and the Associated Skills and Competencies** | | | | | | | | |
| **Questioning Mindset** | **Creative Problem Solving** | **Collaboration** | **Empathetic** | **Digital Competency** | **Adaptability** | **Resilience** | **Enterprising** | **Self-Aware** |
| **Curiosity** – good at showing an interest in learning about the people or things around me | **Creativity** – good at using my imagination to produce original ideas | **Communication** – good at expressing ideas effectively and confidently in speech, writing and other media, to multiple audiences | **Cross-cultural communication** – good at communicating effectively with people from different cultural backgrounds | **Digital Literacy** – good at using information and communication technologies to find, evaluate, create, and communicate information safely online | **Agility** – good at understanding new ideas, concepts, and situations quickly | **Growth Mindset** – good at recognising that personal abilities can be developed through dedication, hard work and continuous learning | **Entrepreneurial thinking** – good at identifying unexploited opportunities and making the most of them | **Reflective Thinking** – good at carefully thinking about an experience and learning from it for the future |
| **Active Listening** – good at paying attention to and effectively interpreting what others are saying | **Decision Making** – good at evaluating options and determining the best course of action based on facts and logic | **Conflict Management** – good at dealing with conflict in a positive and constructive way to find a mutually agreeable solution | **Cultural Intelligence** – good at working effectively with diverse individuals, demonstrating an interest in cultures other than my own | **Digital Citizenship** – good at engaging positively, critically and competently in the digital environment | **Opportunity Recognition** – good at identifying and seeking out new opportunities for development and growth | **Perseverance** - good at continuing doing something or moving forward in spite of obstacles | **Innovation** – good at demonstrating original ideas and thinking | **Values Informed** – good at identifying the things that I believe are important in my life and work, and living true to them in my actions |
| **Analytical Thinking** – good at analysing information and making reasoned judgements | **Critical Thinking** – good at questioning and challenging information to make reasoned judgements | **Negotiation** – good at discussing an issue and determining ways to reach an agreement to mutual satisfaction | **Perspective Taking** – good at perceiving a situation from the perspective of another person | **Digital Productivity** – good at utilising a range of digital technologies to work smarter, supporting efficiency and effectiveness | **Open-minded** – good at considering ideas and opinions new or different to my own | **Stress Management** – good at applying a range of strategies and tools to support stress reduction | **Networking** – good at making contacts and building good relationships | **Mindful** – good at being aware of my behaviours and considering the consequences on others |

### Outline Programme Structure

This programme is offered in 3-year full-time, 4-year full-time with placement or 6-year part-time mode, and leads to the award of either BSc. (Honours) Environmental Science or BSc. (Honours) Environmental Science, Hazards and Disasters depending on the choice of pathway, defined at the commencement of Level 5 (students many change their pathway until the start of Level 5 because Level 4 is common to both). Entry is normally at Level 4 with A-level or equivalent qualifications (see Section 1). Transfer from a similar course is possible at Level 5 with passes in comparable Level 4 modules – but is at the discretion of the course team. Intake is normally in September.

Each level is made up of 15 and 30 credit modules. Typically, a student must complete 120 credits at each level.

Full details of each module will be provided in module descriptors and student module guides on Canvas.

**BSc. (Hons) Environmental Science (parent course)**

### Level 4 (all core)

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| --- | --- | --- | --- | --- |
| **Core modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Our Dynamic Earth | GG4001 | 30 | 4 | 1 and 2 |
| Introduction to Environmental Science | GG4002 | 30 | 4 | 1 and 2 |
| Digital Mapping | GG4003 | 15 | 4 | 1 |
| Research and Fieldwork Methods | GG4004 | 15 | 4 | 2 |
| Developing Academic Skills | GG4005 | 15 | 4 | 1 |
| Sustainability for Professional Practice | GG4006 | 15 | 4 | 2 |

This course permits progression from level 4 to level 5 with 90 credits at level 4 or above. The outstanding 30 credits from level 4 can be trailed into level 5 and must be passed before progression to level 6.

Students exiting the course at this point who have successfully completed 120 credits at level 4 or above are eligible for the award of Certificate of Higher Education in Environmental Science.

### Level 5 (all core)

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| --- | --- | --- | --- | --- |
| **Core modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Rivers, Oceans and the Atmosphere | GG5021 | 30 | 5 | 1 and 2 |
| Principles of Ecology and Conservation | GG5023 | 15 | 5 | 1 |
| Contaminated Land, Assessment and Remediation | GG5024 | 15 | 5 | 2 |
| Advanced Research Methods and Statistics | GG5026 | 30 | 5 | 1 and 2 |
| Understanding our World with GIS | GG5022 | 15 | 5 | 1 |
| Project Management | GG5031 | 15 | 5 | 2 |

This course permits progression from level 5 to level 6 with 90 credits at level 5 or above. The outstanding 30 credits from level 5 can be trailed into level 6 and must be passed before consideration for an award.

Students exiting the programme at this point who have successfully completed 120 credits at level 5 or above are eligible for the award of Diploma of Higher Education in Environmental Science.

### Level 6

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| --- | --- | --- | --- | --- |
| **Core Modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Research Project | GG6XXX | 30 | 6 | 1 and 2 |
| Land and Water Resources Management | GG6021 | 30 | 6 | 1 and 2 |
| The Science of Climate Change | GG6022 | 15 | 6 | 1 |
| Conservation Theory and Practice | GG6023 | 15 | 6 | 2 |
| Applying Professional Skills | GG6XXX | 15 | 6 | 1 |
| **Optional Modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Climate Change Hazards, Resilience and Solutions | GG6024 | 15 | 6 | 2 |
| Solving Real World Data with GIS | GG6XXX | 15 | 6 | 2 |

Level 6 requires the completion of all core modules.

**BSc. (Hons) Environmental Science, Hazards and Disasters (pathway)**

### Level 4 (all core)

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| --- | --- | --- | --- | --- |
| **Core modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Our Dynamic Earth | GG4001 | 30 | 4 | 1 and 2 |
| Introduction to Environmental Science | GG4002 | 30 | 4 | 1 and 2 |
| Digital Mapping | GG4003 | 15 | 4 | 1 |
| Research and Fieldwork Methods | GG4004 | 15 | 4 | 2 |
| Developing Academic Skills | GG4005 | 15 | 4 | 1 |
| Sustainability for Professional Practice | GG4006 | 15 | 4 | 2 |

This course permits progression from level 4 to level 5 with 90 credits at level 4 or above. The outstanding 30 credits from level 4 can be trailed into level 5 and must be passed before progression to level 6.

Students exiting the course at this point who have successfully completed 120 credits at level 4 or above are eligible for the award of Certificate of Higher Education in Environmental Science, Hazards and Disasters.

### Level 5 (all core)

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| **Core modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Disasters, Society and Culture | GG5045 | 30 | 5 | 1 and 2 |
| Rivers, Oceans and the Atmosphere | GG5021 | 30 | 5 | 1 and 2 |
| Geomorphology, Geotechnics and Geohazards | GG5028 | 15 | 5 | 2 |
| Advanced Research Methods | GG5029 | 15 | 5 | 1 |
| Understanding our World with GIS | GG5022 | 15 | 5 | 1 |
| Project Management | GG5031 | 15 | 5 | 2 |

This course permits progression from level 5 to level 6 with 90 credits at level 5 or above. The outstanding 30 credits from level 5 can be trailed into level 6 and must be passed before consideration for an award.

Students exiting the programme at this point who have successfully completed 120 credits at level 5 or above are eligible for the award of Diploma of Higher Education in Environmental Science, Hazards and Disasters.

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### Level 6 (all core)

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| --- | --- | --- | --- | --- |
| **Core modules** | **Module code** | **Credit Value** | **Level** | **Teaching Block** |
| Research Project | GG6XXX | 30 | 6 | 1 and 2 |
| The Challenge of Climate Change | GG6XXX | 30 | 6 | 1 and 2 |
| Disaster Management | GG6XXX | 15 | 6 | 1 |
| Geophysical Hazards: Processes and Disaster Risk Reduction | GG6XXX | 15 | 6 | 2 |
| Applying Professional Skills | GG6XXX | 15 | 6 | 1 |
| Solving Real World Data with GIS | GG6XXX | 15 | 6 | 2 |

Level 6 requires the completion of all core modules.

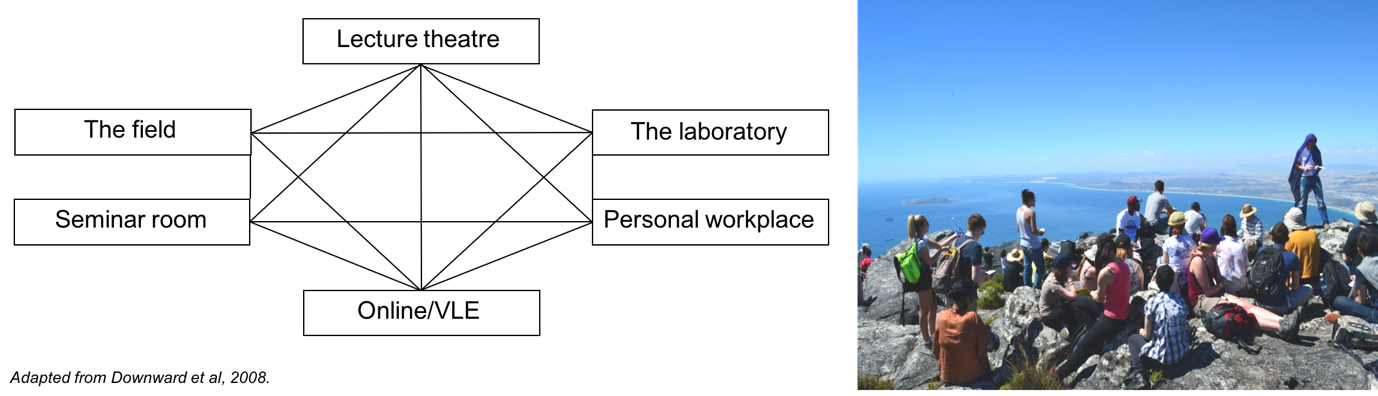
## Principles of Teaching, Learning and Assessment

This course has been designed in accordance with Kingston University Curriculum Design Principles and Inclusive Curriculum Framework as defined in the KU Academic Framework. These include a conscious commitment to equality, diversity and inclusion, Constructive Alignment of activities and their assessment and associated feedback and personalised learning. The course is highly sensitive to the diversity of learning needs of our students (typically up to half of the course are non-UK students and many are mature students who must balance family commitments) to ensure inclusivity, on and off-campus engagement and student-to-student based peer support and supported group-based learning activities. Examples include the conscious choice of global case study examples to illustrate environmental phenomenon and the choice of fieldwork destinations and sites that are culturally diverse.

In line with the University’s Inclusive Curriculum Framework, the programme is delivered in a diversity of formats which includes face-to-face teaching, recorded materials with transcriptions, online quizzes, small group discussions either in person or online via CANVAS, and opportunities for one-to-one consultation sessions. We enable students to see themselves in the curriculum by inviting students to work on self-selected case studies and to suggest discussion topics that are of interest to them. The course also places emphasis on the ethical importance of and value of diverse perspectives on issues, and in addressing real world problems. In doing so, the course aims to offer a programme that caters for diverse students and produce graduates that value diversity.

The course adopts a range of learning and teaching methods that enable students to learn actively in all elements of the course and develop environmental skills and knowledge in the context of their personal development ambitions. Learning and Teaching methods are designed to suit the learning outcomes of each module within the context of the course learning objectives and the identification of learning pathways from Levels 4 to 6. For example, we have purposefully designed-in a study-skills and project management thread, from GG4005 Developing Academic Skills – with an emphasis on learning-to-learn in higher education (appreciative of the differential backgrounds of the students we wish to attract) and GG4004 Research and Fieldwork Methods at Level 4, linking to Advanced Research Methods (and Statistics) and Project Management at Level 5 including essential training in data collection and analysis, and preparation for the final year research project, culminating in Research Project itself in Level 6.

Environmental Science students typically inhabit multiple learning environments and students learn to blend their knowledge and experiences: lectures are used to introduce key theoretical concepts and methodologies; practical sessions and field-based investigations introduce specific methods and exemplify theoretical concepts; independent learning space (e.g., guided by tutorials and seminar reflection) allows in-depth insight to support key concepts, and group work is used to expose students to team working and managing integrated environmental projects. Fieldwork teaching and learning is a vitally important component of our teaching and learning strategy. Fieldwork experiences serve several functions: developing a range of specific employment-ready field-based skills in a range of environmental settings; experiential exposure to a range of environmental challenges; and exposure to environmental practitioners in the workplace to gain first hand experiences of the application of environmental theory in practice.



*Fieldwork is an integral part of the Environmental Science course and fieldwork experiences are effectively blended with knowledge and skills acquire in multiple learning spaces.*

The Canvas Virtual Learning platform provides a virtual space to connect these environments and provides a consistent setting where students can archive and search learning materials (e.g., assessment and feedback) and interact and reflect on their learning outside of the classroom with their peers and staff (e.g., via discussion boards). Additionally, staff in the Department of Geography, Geology and the Environment have a proven track record in Technology Enhanced Learning provision to support and enrich the student learning experience in Environmental Science. This includes virtual fieldtrips to support in the field studies, promoting dialogic feedback (e.g., blog-based field reporting), mobile-based learning, and electronic feedback on assessments in a variety of formats. Computer practicals are used to introduce students to generic as well as specialised ICT skills and digital literacies. Generic packages include Microsoft Office applications while specialised packages include ArcGIS Pro and ArcGIS online for mapping and spatial analysis, SPSS and NVivo for data analysis, and Adobe Illustrator for graphics and design.

The course places an emphasis on practitioner-based learning to raise awareness of professional applications of Environmental Science, and Environmental Hazards and Disasters, and instil a sense of professionalism in student learning. Fieldwork learning is a good example of this, where students can learn from experts in a range of UK, European and/or developing world settings. Guest speakers (e.g., experts in the field of hazard and disaster management in the case of the pathway) are a key feature of many learning activities and there are numerous opportunities to attend subject related guest talks, seminars and conferences at Kingston University (e.g., organised by the CEESR and KU Sustainability Hub) and other London-wide professional and academic institutions.

Sustainabilityis a thread that runs through all modules in programme, from induction to the final project, group design and final examinations. The programme is designed so that sustainability is pervasive in the curriculum and is integral to the professional accreditation of the course with IEMA. Sustainability may be considered thoroughly embedded and there are a number of modules where sustainable development and environmental concerns are explicit within the intended Learning Outcomes (e.g., Sustainability for Professional Practice, Exploring Professional Skills in Project Management and Application of Professional Skills for End Point Assessment – the latter two modules in requirements of group project work).

The course modules are committed to assessment *for* learning and employ a range of formative and summative assessment tasks to incrementally scaffold knowledge and skills, reflect of progress with respect to personal targets and professional aspirations. We have made conscious choices to provide diversity of assessment types that emphasise authenticity and choice to appeal across the range of student strengths. Summative and formative assessments include: course work – including research, fieldwork and/or stakeholder reports, blogs and podcasts; practical examinations – including oral and poster presentations with questions and answers, debates and viva-style interviews, and in-class tests; and end of module written examinations. Assessment regimes for each module have been designed to provide numerous formative opportunities that allow students to practice and to receive feedback on their performance and benchmark their progress in preparation for summative assessments. Summative assessments may be synoptic and reflective of broader course learning objectives.

Students will undertake training in the design and management of environmental projects in all years. This culminates in Level 6 when students are required to complete a 30 credits independent environmental science research project that allows them to demonstrate and apply the knowledge and skills that they have acquired throughout the programme. The topic is initially developed as a formative exercise with the personal tutor at Level 5, and then progressed to completion through independent study at Level 6 under the guidance of a supervisor. The selection and management of the research project is carefully developed with the supervisor to allow the student to select a specialisation in a specific Environmental Science and/or Environmental (including geophysical and geomorphological) Hazards and Disasters topic of interest, commonly tailored to their professional career aspirations and further raise awareness of professional practices and a sense of professionalism. Students have choice in their selection of final year research project and this will be guided by their personal tutor and will typically reflect the choice of the parent or pathway course.

Employment-readiness is central to our learning design. Employability skills are constructively aligned from the course level to the module level and closely managed and moderated by the Course Leader (common to the parent and pathway). Two discipline specific employability skills pathways are identified in our learning design: (1) an Information Technology and GIS pathway, with 15 credit modules in GIS at all Levels – L4 Digital Mapping, L5 Understanding Our World with GIS and L6 Solving Real World Data with GIS; and (2) a Research, Fieldwork and Study Skills pathway – with L4 Research and Fieldwork Methods, L5 Advanced Research Methods (developing quantitative and qualitative data analytical skills) and L5 Project Management, culminating in the L6 Research Project. Graduate attributes and professional development skills are learnt and advanced in the Kingston University Future Skills module strand – Navigate (L4 Developing Academic Skills), Explore (L5 Project Management) and Apply (Business Innovation for a Sustainable Planet). The Personal Tutorial Scheme is embedded within the Navigate, Explore and Apply 15 credit modules at Levels 4, 5 and 6 respectively.

## Support for Students and their Learning

Students are supported by:

* A Course Leader to help students understand the programme structure and progression and to ensure student supports.
* A Module Leader for each module to provide academic support.
* A module team for each module to provide academic support.
* A Personal Tutor programme which ensures that students have a designated personal tutor for the duration of their studies.
* A Student Mentoring scheme.
* A Future Skills and Employability Service (FSES) to provide students with advice on careers and employability, job applications, CVs and interviews and placement opportunities.
* Technical support to advise students on IT and the use of software packages.
* A designated programme administrator.
* An induction week at the beginning of each new academic session.
* Course Representatives and a Student Voice Committee.
* CANVAS– a versatile on-line interactive learning environment.
* A range of Study Skills and Academic Skills support services (SACS).
* Student support facilities that provide advice on issues such as finance, regulations, legal matters, and accommodation, as well as international student support.
* A faculty-based Student Support Team that provides advice and guidance on mitigation and student issues.
* A Disability, Dyslexia and Wellbeing student support centre.
* A Students' Union who run a range of clubs and societies and student advice services
* A student society who organise discipline related social events

Students opting for a placement degree will additionally be supported by the Future Skills and Employability Service, the Course Leader and the Personal Tutor.

A Personal Tutorial Scheme (PTS) supports the student’s learning and teaching at all levels. The PTS will:

* act as a central pillar of the pastoral care system building rapport between GGE staff and environmental science students and supporting an environmental community of learners.
* support students in the development of their academic skills, providing appropriate academic advice and guidance while monitoring their academic progress and helping to identify individual needs.
* encourage students to be self-reliant, independent and confident self-reflective learners who use feedback to their best advantage and reflect on how their learning relates to a wider context and their personal and career progression and management.
* engage students with core values of sustainable development and align their learning closely to the principles of sustainability with guidance and engagement with KUSH.

The PTS is embedded into the programme and constructively aligned to the Learning Aims of the course and at each level, specifically to the Learning Objectives of the following modules:

* Level 4 – Developing You Academic Skills: settling in and building confidence; assisting students in making the transition to Higher Education; encouragement of good academic habits and to gain the confidence to operate successfully in a university context; and preparing students to make the most of feedback throughout their course.
* Level 5 – Project Management: broadening horizons; encouraging students to foster increasing independence to allow students to evaluate the ways in which their academic programme fits into the ‘bigger’ global picture; responding effectively to feedback; and consideration of employability skills.
* Level 6 – Applying Professional Skills: providing students with support in preparing for their journey after graduating, be that looking to continue in further education or entering the professional world of work through help and support sessions in CV, personal statements and application writing, and mock interview practice.

## Ensuring and Enhancing the Quality of the Course

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

* Accreditation by the Institute of Environmental Management and Assessment (IEMA)
* External examiners
* Education Committee
* Course Representatives and a Student Voice Committee
* Annual Monitoring and Enhancement
* Continuous Monitoring of courses through the Kingston Course Enhancement Programme (KCEP+)
* Student evaluation including Module Evaluation Questionnaires (MEQs), level surveys and the National Student Survey (NSS)
* Moderation policies
* Feedback from employers

## Employability and work-based learning

The Environmental Science course is geared towards the preparation of graduates for the workplace. Staff in the Department of Geography and Geology are engaged in research and consultancy activities that keep them in regular professional contact with practitioners across the spectrum of employers accepting applications from Environmental Science graduates. Our Future Skills and Employability Service provides a dedicated careers service that students at all levels will access and the course team will regularly invite staff from the Future Skills and Employability Service to address the students to keep them updated with news and events (e.g., CV workshops, information and guidance in support of placement years, careers events, etc.).

Employability skills are explicitly emphasised throughout the course, particularly in the final year Personal Tutorial System that includes and emphasis on the reflection of acquired skills over the period of study:

(1) Knowledge skills – Environmental Science students acquire specific environmental knowledge and the cognitive abilities to synthesise and apply this knowledge in a range of workplace settings. The final year Research Project provides an opportunity to for students to focus in areas of personal environmental interest and tailor their specific knowledge skills to their career aspirations.

(2) Practical skills – the acquisition of practical skills is essential preparation for students entering the workplace. Irrespective of whether Environmental Science students choose a career in an Environmental Science related discipline/s, the generic skills that must be acquired and practiced throughout the course in order to synthesise and evaluate multi-dimensional challenges at a variety of scales are valuable for most graduate jobs. Students seeking employment specifically within their subject area can be confident that they are trained and fully prepared for a range of practical tasks their employer will expect.

Additionally, for those students who take a placement year:

(3) Workplace skills – the experience of a one-year work placement to gain first-hand experience of the challenges and opportunities offered to apply environmental skills in a practical context.

Graduates have found employment in a range of businesses, governance and associated sectors. Recent examples include: environmental consultancies (e.g., Halcrow), local government (e.g., Surrey County Council), environmental regulators (e.g., Environment Agency) and Businesses (e.g., Thames Water).

Other recent graduates have gone on to study at postgraduate level and Kingston University Environmental Science graduates have the opportunity to apply internally to study MSc. Environmental Management at Kingston University.

**Work-based learning, including placement courses and higher or degree apprenticeships**

Work placements are actively encouraged – although it is the responsibility of individual students to source and secure such placements. This allows students to reflect upon their own personal experience of working in an applied setting, to focus on aspects of this experience that they can clearly relate to theoretical concepts and to evaluate the relationship between theory and practice.

## Other sources of information that you may wish to consult

[QAA Subject Benchmark Statement for Environmental Science (2022)](https://www.qaa.ac.uk/the-quality-code/subject-benchmark-statements/earth-sciences-environmental-science-and-environmental-studies)

[Kington university’s Inclusive Curriculum Framework](https://canvas.kingston.ac.uk/courses/311/pages/the-kingston-inclusive-curriculum-framework?module_item_id=33174)

[Inclusive Curriculum Framework](https://canvas.kingston.ac.uk/courses/311/pages/curriculum-design-principles)

## Development of Course Learning Outcomes in Modules

This table maps where course learning outcomes are **summatively** assessed across the modules for this course. It provides an aid to academic staff in understanding how individual modules contribute to the course aims, a means to help students monitor their own learning, personal and professional development as the course progresses and a checklist for quality assurance purposes.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Level** | **Level 4** | | | | | | **Level 5** | | | | | | | | | **Level 6** | | | | | | | | | |
|  | **Module code** | GG4001 – Our Dynamic Earth | GG4002 – Introduction to Environmental Science | GG4003 – Digital Mapping | GG4004 – Research and Fieldwork Methods | GG4005 – Developing Academic Skills | GG4006 – Sustainability for Professional Practice | GG5021 Rivers, Oceans and the Atmosphere | GG5023 Principles of Ecology & Conservation | GG5024 Contaminated Land, Assessment and Remediation | GG5026 Advanced Research Methods and Statistics | GG5045 Disasters, Society and Culture | GG5028 – Geomorphology, Geotechnics and Geohazards | GG55029– Advanced Research Methods | GG55022 – Understanding the World with GIS | GG5031 – Project Management | GG6XXX – Research Project | GG6XXX – Land and Water Resources Management | GG6XXX – The Science of Climate Change | GG6XXX – Conservation Theory and Practice | GG6XXX – Climate Change Hazards, Resilience and Solutions *(optional)* | GG6XXX – The Challenge of Climate Change | GG6XXX – Geophysical Hazards: Processes and Disaster Risk Reduction | GG6XXX – Disaster Management | GG6XXX – Applying Professional Skills | GG6XXX – Solving Real World Data with GIS *(optional for Env Sci; core for Hazards pathway)* |
| **Knowledge & Understanding** | A1 | X | X | X | X |  | X | X | X | X | X | X | X | X | X |  | X | X | X | X | X | X | X | X |  | X |
| A2 | X | X |  |  |  |  | X | X | X | X | X | X | X | X |  | X |  |  | X |  |  | X |  | X | X |
| A3 |  |  |  | X | X |  | X | X | X | X |  |  | X |  | X | X |  |  | X |  |  |  | X | X |  |
| A4 | X | X |  | X |  | X | X | X | X | X |  |  |  |  |  | X | X | X | X | X | X |  |  |  |  |
| A5 | X | X |  | X |  |  | X |  |  |  | X | X |  |  |  | X |  |  |  | X | X | X | X |  |  |
| **Intellectual Skills** | B1 |  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |  | X | X | X | X | X | X | X | X |
| B2 |  | X |  | X | X | X |  | X | X | X | X |  | X |  | X | X | X | X | X | X | X |  | X | X |  |
| B3 | X | X | X | X | X |  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| B4 | X | X |  | X |  | X | X | X | X | X |  |  |  |  |  | X | X | X | X | X | X |  |  |  |  |
| B5 | X | X |  | X |  |  | X |  |  |  | X | X |  |  |  | X |  |  |  | X | X | X | X |  |  |
| **Practical Skills** | C1 | X | X |  | X |  |  | X | X | X | X | X | X |  |  |  | X |  |  | X |  |  | X | X |  |  |
| C2 |  |  | X |  |  |  | X | X |  | X |  | X |  | X |  | X |  |  | X | X | X | X |  |  | X |
| C3 |  |  | X | X | X |  |  |  |  | X | X | X | X | X | X | X |  |  |  |  |  | X |  | X | X |
| C4 |  |  | X | X |  | X | X | X |  | X | X | X |  | X | X | X | X | X | X | X | X | X | X | X | X |

Note, A6, B6 and C5 are not included in this table as these apply only to those on a placement year, and so are not specific to the modules.

**Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.**

**Appendix A**

**Mapping of Learning Outcomes for Accreditation by the Institute of Environmental Management and Assessment**

Graduates from accredited programmes must meet the following Learning Outcomes from the Institute of Environmental Management and Assessment (IEMA)

**Core Knowledge**

**C1. Explain the implications of global trends for the environment, for society, for the economy and for organisations**

1.1 Explaining the global mega-trends driving the need to transform the world to sustainability

1.2 Explaining the concept of sustainable development

1.3 Explaining how the UN's Sustainable Development Goals provide a framework for action

1.4. Describing the five sustainable capitals and the dependencies between them

1.5 Explaining how environmental limits and the equalities agenda are fundamental to maintaining economic growth and sustainable capital

1.6 Explaining how current economic activity regularly creates unintended environmental and social consequences, locally and globally

1.7 Recognising that delivering sustainable outcomes involves applying sustainability skills to overcome internal and external challenges

**C2. Explain sustainable business/governance models, their underlying principles and their relationship with organisations, products and services**

2.1 Explaining the role of ethics in individual and organisational decision making

2.2 Explaining the importance of accountability, equalities (incl: gender equality), inclusivity, integrity, stewardship, transparency, cultural context and engagement

2.3 Explaining the concepts of corporate responsibility, corporate sustainability and sustainable business

2.4 Describing the differences between balancing and resolving interactions between social, environmental and economic issues in the context of sustainable development

2.5 Explaining the concept of safe operating space and to what extent they can impact an organisation

2.6 Describing the sustainable business models that will help drive the transition to a sustainable economy

**Technical Knowledge**

**T3. Explain environmental or socio-economic principles and their relationship with organisations, products and services**

3.1 Explaining the importance of natural cycles, ecological systems, ecosystem services and environmental limits and their impact on your organisation

3.2 Explaining the impact of human interventions on natural ecological systems, habitats, species and individuals

3.3 Describing pollution sources, pathways and receptors

3.4 Explaining the importance of tackling global inequalities, a social protection floor and their impact on your organisation

3.5 Explaining the impact of human interventions on social systems, cultural practices, community cohesion and individuals

3.6 Describing the social and physical determinants of health

**T4. Explain major policy and legislation and their implications for organisations, products and services**

4.1 Explaining how sustainability issues link to policy issues

4.2 Outlining the main types of law and the relationship between international, national and sub-national law

4.3 Describing key policy instruments in place and how they are used to achieve sustainable change

4.4 Explaining key environmental / socio-economic principles and how they have been applied within policies

4.5 Explaining key legislation

4.6 Outlining the role of regulators and penalties for non-compliance

4.7 Identifying relevant stakeholders that influence environmental / socio-economic issues and policy development, and explaining their roles

4.8 Explaining the benefits and opportunities organisations can achieve in moving beyond compliance

**T5. Explain major and relevant tools, techniques, systems and practices, their application and how they can be used to develop sustainable products and services and improve sustainability performance**

5.1 Explaining the application of major management tools, techniques, systems and practices, their advantages and disadvantages

5.2 Explaining the concept of lifecycle thinking, its benefits and challenges, and illustrating its application in decision making

5.3 Explaining the different roles people play in delivering sustainable outcomes, and their interactions

5.4 Describing the tools, techniques, systems and/or practices used by organisations to manage compliance and non-compliance

5.5 Describing the role verification and assurance plays in improving sustainability performance

**T6. Explain the role of innovation and other leading practices in developing sustainable products and services and providing sustainable solutions**

6.1 Explaining how innovation and other leading practices can be used to develop sustainable products and services and provide sustainable solutions

6.2 Explaining innovation and how the principles of innovation can be applied in any given context

**Skills for Sustainable Leadership**

**7. Collect data, perform analysis and evaluate information**

7.1. Identifying relevant sources of data and describing techniques used to collect, process and store accurate data

7.2 Explaining the importance of relevant and accurate data

7.3 Describing how to analyse and interpret data / information to draw appropriate conclusions and make practical recommendations that improve sustainability performance

7.4 Describing methods to monitor a programme to improve sustainability performance

**8. Research and plan to provide sustainable solutions**

8.1 Identifying the benefits of research, planning and keeping up-to-date with innovations to provide sustainable solutions

**9. Deliver effective communication and capture feedback**

9.1 Explaining the role effective communication plays in achieving sustainable outcomes

9.2 Identifying a range of internal and external stakeholders

9.3 Identifying different communication methods that provide information and capture feedback

9.4 Describing the differences between informing, consulting and engaging

**10. Engage with stakeholders**

10.1 Identifying the benefits of collaboration and cooperation in responding to sustainability challenges, particularly when facing the same issues

**11. Outline tools and techniques that identify opportunities and risks**

11.1 Outlining tools and techniques that can be used to identify and understand risks and opportunities

11.2 Determine the nature of risks related to sustainability challenges

**12. Identify and propose ways to improve performance**

12.1 Outlining how a long-term vision for sustainability, with milestones and targets, can improve sustainability performance

12.2 Identifying key project management techniques that, when used, can deliver sustainable outcomes

12.3 Outlining how a financial return on investment and wider benefits can create a business case for sustainability

12.4 Outlining how contracting and procurement can be a vital component of improving sustainability performance

**13. Support change and transformation to improve sustainability**

13.1 Outlining the principles of change management

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Level** | **Level 4** | | | | | | **Level 5** | | | | | | | | | **Level 6** | | | | | | | | | |
| **IEMA Learning Outcomes** | **Module code** | GG4001 – Our Dynamic Earth | GG4002 – Introduction to Environmental Science | GG4003 – Digital Mapping | GG4004 – Research and Fieldwork Methods | GG4005 – Developing Academic Skills | GG4006 – Sustainability for Professional Practice | GG5021– Rivers, Oceans and the Atmosphere | GG5023 – Principles of Ecology & Conservation | GG5024 – Contaminated Land, Assessment and Remediation | GG5X026– Advanced Research Methods and Statistics | GG5045 – Disasters, Society and Culture | GG5028 – Geomorphology, Geotechnics and Geohazards | GG5029 – Advanced Research Methods | GG5022– Understanding the World with GIS | GG5031 – Project Management | GG6xxx Research Project | GG6XXX – Land and Water Resources Management | GG6XXX – The Science of Climate Change | GG6XXX – Conservation Theory and Practice | GG6XXX – Climate Change Hazards, Resilience and Solutions *(optional)* | GG6XXX – The Challenge of Climate Change | GG6XXX – Geophysical Hazards: Processes and Disaster Risk Reduction | GG6XXX – Disaster Management | GG6XXX – Applying Professional Skills | GG6XXX – Solving Real World Data with GIS *(optional for Env Sci; core for Hazards pathway)* |
| **Core Knowledge** | C1.1 |  | X |  |  |  | X | X | X |  |  |  |  |  |  | X |  |  | X | X | X | X |  |  | X |  |
| C1.2 |  | X |  | X |  | X |  | X |  | X |  |  |  |  | X |  |  |  | X |  |  |  |  | X |  |
| C1.3 |  | X |  |  |  | X |  |  |  |  | X |  |  |  | X |  | X |  | X |  | X |  |  | X |  |
| C1.4 |  | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |
| C1.5 |  | X |  |  |  | X | X |  | X |  |  |  |  |  | X |  | X |  | X |  |  |  |  | X |  |
| C1.6 |  | X |  | X |  | X | X | X |  |  |  |  |  |  | X |  | X |  | X |  | X |  |  | X |  |
| C1.7 |  |  |  |  |  | X |  | X |  | X |  |  |  |  | X | X |  |  | X |  |  |  |  | X |  |
| C2.1 |  |  |  | X | X |  |  |  |  | X |  |  | X |  | X | X |  |  |  |  | X |  |  | X |  |
| C2.2 |  |  |  |  | X |  |  |  |  | X |  |  | X |  | X | X |  |  |  |  |  |  |  | X |  |
| C2.3 |  | X |  | X |  |  |  |  |  | X |  |  |  |  | X |  |  |  |  |  | X |  |  | X |  |
| C2.4 |  | X |  | X |  | X |  | X |  | X | X |  |  |  | X |  |  |  |  |  | X |  |  | X |  |
| C2.5 |  | X |  |  |  |  |  |  |  | X |  |  |  |  | X |  |  |  |  |  | X |  |  | X |  |
| C2.6 |  | X |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  | X |  |  | X |  |
| **Technical Skills** | T3.1 | X | X |  |  |  |  | X | X | X |  |  | X |  |  |  |  |  | X | X | X | X | X |  |  |  |
| T3.2 | X | X |  | X |  |  | X | X | X |  |  | X |  |  |  |  |  | X | X | X | X | X |  |  |  |
| T3.3 | X |  |  | X |  |  | X | X | X |  |  |  |  |  |  |  | X | X | X | X | X |  |  |  |  |
| T3.4 |  | X |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  | X | X | X |  |  |  |  |
| T3.5 |  | X |  |  |  |  |  | X |  |  | X |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| T3.6 |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |
| T4.1 |  | X |  |  |  | X |  | X |  |  |  | X |  |  |  |  |  | X |  | X | X |  |  |  |  |
| T4.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  | X |  |  |  | X |  |  | X |  |
| T4.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  | X |  |  | X |  |
| T4.4 |  | X |  |  |  |  | X |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  | X |  |
| T4.5 |  | X |  |  |  |  | X |  |  |  |  |  |  |  | X |  | X |  |  | X | X |  |  | X |  |
| T4.6 |  |  |  |  |  |  |  |  | X |  |  |  |  |  | X |  | X |  |  |  |  |  |  | X |  |
| T4.7 |  | X |  |  |  |  |  |  |  | X | X | X |  |  | X |  |  |  |  | X | X |  |  | X |  |
| T4.8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |  | X | X |  |  | X |  |
| T5.1 | X | X | X |  |  |  |  | X |  |  |  | X |  | X |  | X |  |  | X |  |  | X |  |  | X |
| T5.2 |  | X |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  | X |  |  |  |  |
| T5.3 |  |  |  |  | X | X |  | X |  |  |  |  |  |  | X |  |  |  | X |  |  |  |  | X |  |
| T5.4 |  |  |  |  | X | X |  |  |  | X |  |  | X |  |  |  |  |  |  |  |  |  |  | X |  |
| T5.5 |  |  |  |  |  | X |  |  |  | X |  |  | X |  |  |  |  |  |  |  |  |  |  | X |  |
| T6.1 |  |  |  |  |  | X |  |  |  |  |  |  |  | X | X | X |  |  |  |  |  |  |  | X | X |
| T6.2 |  |  |  | X |  | X |  |  |  |  |  |  |  | X | X | X |  |  |  |  |  |  |  | X | X |
| **Skills for Sustainable Leadership** | S7.1 | X |  | X | X | X |  | X | X |  | X | X | X | X | X | X |  |  | X | X | X | X | X |  | X | X |
| S7.2 | X |  | X | X | X |  | X | X |  | X | X | X | X | X | X |  |  | X | X | X | X | X |  | X | X |
| S7.3 | X |  | X | X | X |  | X | X |  | X | X |  | X | X | X | X |  | X | X | X | X | X | X | X | X |
| S7.4 | X |  |  |  | X |  |  | X |  | X |  |  | X | X | X | X |  | X | X | X | X | X |  | X | X |
| S8.1 |  |  |  |  |  |  |  |  |  | X |  | X | X |  | X |  |  |  | X | X | X | X |  | X |  |
| S9.1 |  |  |  |  | X | X | X |  |  | X |  | X |  | X | X |  |  |  |  | X | X | X | X | X | X |
| S9.2 |  | X |  |  | X |  |  |  |  | X | X | X |  |  | X | X |  |  |  | X | X | X | X | X |  |
| S9.3 |  |  | X | X | X |  | X |  |  | X | X |  |  | X | X |  |  |  |  |  |  |  | X | X | X |
| S9.4 |  |  |  |  |  |  |  |  |  | X |  |  |  |  | X |  |  |  |  |  |  | X |  | X |  |
| S10.1 |  |  |  |  |  | X |  |  |  | X | X |  |  |  | X | X |  |  | X |  |  | X | X | X |  |
| S11.1 |  |  |  | X |  |  |  |  |  | X | X |  | X |  |  |  |  |  |  |  |  | X | X |  | X |
| S11.2 |  |  |  | X |  |  |  |  |  | X | X |  | X |  |  |  |  |  |  |  |  |  | X |  |  |
| S12.1 |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  | X | X |  | X |  |  | X |  |
| S12.2 |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |
| S12.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |
| S12.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |
| S13.1 |  | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  | X |  |  | X |  |