

DEFINITIVE COURSE RECORD

Course Title	FdSc Environment and Sustainable Energy
Awarding Bodies	University of Suffolk
Level of Award ¹	FHEQ Level 5
Professional, Statutory and Regulatory Bodies Recognition	None
Credit Structure ²	240 Credits Level 4: 120 Credits Level 5: 120 Credits
Mode of Attendance	Full-time and part-time
Standard Length of Course ³	2 years full-time
Intended Award	FdSc Environment and Sustainable Energy
Named Exit Awards	CertHE Energy and Environment
Entry Requirements ⁴	Standard entry requirements for the programme are a minimum of 80 UCAS tariff points or above (CDD at A Level, MMP at BTEC Level 3). All applicants are expected to hold Maths and English GCSE at grade C/4 or above.
Delivering Institution(s)	University of Suffolk at East Coast College (Lowestoft)
UCAS Code	H221

This definitive record sets out the essential features and characteristics of the FdSc Environment and Sustainable Energy course. The information provided is accurate for students entering level 4 in the 2022-23 academic year⁵.

Course Summary

The FdSc in Environment and Sustainable Energy is a truly unique and multi-disciplinary programme aimed at those interested in the environmental/sustainability/energy interphase. The course will enable students to develop an understanding of the essential theoretical elements of energy engineering science with an emphasis towards non-carbon and renewable and sustainable technologies, and the interactions and impacts these have on the climate, ecosystems, ecology, wildlife and human populations in terms of ecosystems services, economics, law and environmental justice.

Furthermore the course offers students the opportunity to develop the employability skillsets not normally available until much higher level study; including GIS (Geographic Information Systems and Science), Data Analysis and Statistics, Ecosystem Services and also in a unique collaboration with the World Land Trust, students will learn first-hand from global

¹ For an explanation of the levels of higher education study, see the [QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies \(2014\)](#)

² All academic credit awarded as a result of study at the University adheres to the [Higher education credit framework for England](#).

³ Where the course is delivered both full-time and part-time, the standard length of course is provided for the full-time mode of attendance only. The length of the part-time course is variable and dependent upon the intensity of study. Further information about mode of study and maximum registration periods can be found in the [Framework and Regulations for Undergraduate Awards](#).

⁴ Details of standard entry requirements can be found in the [Admissions Policy](#) and further details about Disclosure and Barring Checks (DBS) can be found on the [University's DBS webpage](#).

⁵ The University reserves the right to make changes to course content, structure, teaching and assessment as outlined in the [Admissions Policy](#).

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leaders all aspects of NGO (Non-Governmental Organisation management); including finance, marketing, cybersecurity, in situ and remote project management.

Course Aims

- To provide students with the knowledge, understanding and skills required to apply theoretical principles of traditional and renewable energy systems engineering, climate, environmental science and ecological conservation, GIS and data science, NGO management and natural resource economics for multi-sector employability in an increasingly multi-disciplinary world.
- To raise student aspirations and achievement through the development of scientific, technical and vocational skills required in their chosen area of employment.
- To enable students to reflect on their personal learning, identify future goals and plan their career development.
- To develop students' academic skills such as research, analytical and evaluative reasoning to allow progression to Honours programmes and beyond
- To develop students' employability skills such as communication, numeracy, ICT and autonomous learning skills that will enable them to perform as independent learners in multi-disciplinary roles.
- To enable students to plan and implement research projects addressing vocational problems.
- To enhance student employability by offering vocational skills not normally available (but in high demand) until later stage academic programmes.
- To build resilient and adaptable students that are workplace ready at a time of global uncertainty.

Course Learning Outcomes

The following statements define what students graduating from the FdSc Environment and Sustainable Energy course will have been judged to have demonstrated in order to achieve the award. These statements, known as learning outcomes, have been formally approved as aligned with the generic qualification descriptor for level 5 awards as set out by the UK Quality Assurance Agency (QAA)⁶.

⁶ As set out in the [QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies \(2014\)](#)

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Knowledge and Understanding	Cognitive Skills	Subject Specific Skills	Key/transferable Skills
Demonstrate a deep understanding of the complexity of the interactions between anthropogenic changes to climate and environment driven by the growth economy paradigm and potential resource based capital mitigation strategies.	Demonstrate ability to consider issues from a range of often conflicting interdisciplinary and multidisciplinary perspectives.	Apply scientific principles to analyse the cause of global energy production and distribution and the impacts this has on ecological conservation. Suggesting appropriate mitigation strategies.	Develop strong analytical skills to select and apply via ICT the correct statistical and or spatial methodologies to apply to multi-disciplinary data sets.
Exhibit a thorough understanding of the relationships between energy engineering, demand, socioeconomics, environmental justice, regulatory law and renewable alternatives.	Debate and illustrate using a variety of media current issues in carbon and renewable technologies with regard to socioeconomic wellbeing and the impacts on the biosphere.	Justify the use of radical new environmental restoration strategies designed to increase natural capital, human wellbeing and alleviate climate change.	Propose appropriate methodologies, analysis, considered risks, time frames, costs and expected outcomes for research into a given field.
Demonstrate a thorough understanding and competence with GIS and data analysis packages in the production of statistical and simple spatial analyses	Employ a variety of methods to investigate current issues and formulate potential solutions to problems across the energy and environment interphase	Apply and ecological principles to investigate and develop effective energy production and ecological restoration strategies.	Communicate in a non-biased and effective manner to a variety of audiences using a range of formats including verbal, visual, written and data based methods.
Demonstrate knowledge and understanding of the implications and costs of restoration and explore the potential costs, benefits and ethics of ecotourism as a novel mitigation strategy.	Relate sector practice with scientific Energy/environmental and management theories and evaluate current practice.	Evaluate the potential for renewable technologies to meet current and future energy demands.	Apply appropriate statistical and or spatial methodologies to present and analyse data

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Demonstrate critical understanding of legal ethical and environmental issues across the energy and environmental sectors with particular reference to renewable sources	Consider and evaluate the paradigm shift necessary to ensure satisfactory outcomes for humanity and the environment.	Apply ecological restoration techniques in a vocational setting and apply effective sampling methods to monitor habitats and species	Develop strategies for, resilience, critical thinking self-care and lifelong learning.
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Course Design

The design of this course has been guided by the following QAA Benchmarks / Professional Standards:

- Environmental Sciences and Environmental Studies 2019;
- Engineering 2019;
- Economics 2015;
- Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences 2016;
- Computing 2016.

Course Structure

The FdSc Environment and Sustainable Energy comprises modules at levels 4 and 5.

Module Specifications for each of these modules is included within the course handbook, available to students on-line at the beginning of each academic year.

	Module	Credits	Module Type ⁷
Level 4			
	Work-based Learning and Personal Development	20	M
	Introduction to NGO Management	20	R
	Wildlife and Climate Change	20	R
	Introduction to Energy Systems: Present and Future	20	R
	Introduction to GIS and Data Analysis	20	R
	Investigating Sustainability	20	R
Level 5			
	Restoration Ecology and Ecotourism	20	R
	Introduction to Ecosystem Services	20	R
	Legal and Regulatory Aspects of Energy and Environment	20	R

⁷ Modules are designated as either mandatory (M), requisite (R) or optional (O). For definitions, see the Framework and Regulations for Undergraduate Awards

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	Intermediate GIS and Data Analysis	20	R
	Renewable Energy Technology and the Environment	20	R
	Work-based Research Project	20	M

Depending on the work setting, the employer may require students to undertake a DBS check within the Work-based Learning and Personal Development module.

Awards

On successful completion of the course, students will be awarded an FdSc Environment and Sustainable Energy. Students who leave the course early may be eligible for a CertHE Environment and Sustainable Energy on successful completion of 120 credits including all mandatory modules at level 4.

Course Delivery

The course is delivered at Lowestoft. Students studying full-time on FdSc Environment and Sustainable Energy are likely to have approximately 360 contact hours for level 4 and 360 contact hours for level 5. The contact hours will be a mix of lectures, seminars, workshops, tutorials, peer teaching and learning, presentations, formative assessments and practical activities including field work. Students will also be required to complete a minimum of 50 hour of work placement (during the first year for full-time students) with an appropriate negotiated environmental, sustainability or energy workplace provider, for example a wildlife trust, local council or local on or offshore energy company. Students will be expected to find their own placement with the guidance and support of their course leader and/or personal tutor. Students will normally be expected to undertake a minimum of 8 hours of independent study in an average week, per module, but should be prepared for this to vary based on assignment deadlines and class exercises.

Course Assessment

A variety of assessments will be used on the course to enable students to experience and adapt to different assessment styles. The assessment methods used will be appropriate to assess each module's intended learning outcomes. Assessment on the course overall will be mostly coursework (including essays, reports, presentations (oral and video), portfolio, group work, reflective learning journals and research projects), with two exams, one at level four and one at level five.

Course Team

The academic staff delivering this course are drawn from a team that includes teaching specialists and current practitioners. All staff are qualified in their subjects with their own specialist knowledge to contribute.

Course Costs

Students undertaking FdSc Environment and Sustainable Energy will be charged tuition fees as detailed below.

Student Group	Tuition Fees
Full-time UK	£8,220 per year
Part-time UK	£1,370 per 20 credit module
Full-time EU/International	£14,598 per year
Part-time EU/International	£2,443 per 20 credit module

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Payment of tuition fees is due at the time of enrolment and is managed in accordance with the Tuition Fee Policy.

Students will be required to pay additional costs for the planned Gambia/Senegal/Ghana field trip, rope access and sea survival course to a maximum of £1250 payable at a later date.

Academic Framework and Regulations

This course is delivered according to the Framework and Regulations for Undergraduate Awards and other academic policies and procedures of the University and published on the [website](#).