JICAS

JERSEY INTERNATIONAL CENTRE OF ADVANCED STUDIES

Master of Science, Island Biodiversity and Conservation

In partnership with BioSciences, University of Exeter

University of Exeter

2025-2026 Prospectus

Dr Sean Dettman
Programme Coordinator
Sean.dettman@jicas.ac.je

WHY ISLANDS?

Islands provide spectacular examples of evolution, owing to their isolation from mainland land masses in space and time. They host a number of unique species disproportionate to their total land mass, making them important repositories of the planet's biodiversity. Yet there are probably more endangered species and habitats per capita in Small Island Developing States and territories than anywhere else in the world. It is the inherently small sizes of island populations that increase their vulnerability to extinction.

Human activities in most peopled islands are eroding the natural resource base on which not only the islanders themselves, but also the nonhuman species depend for survival. Those vital resources include soil, water and the natural habitats of inland and coastal areas, all of which are affected by overexploitation, pollution, waste disposal and invasive species (including pathogens). With the added burden of climate change, some small island nations are being pushed to their environmental limits. Overcoming the challenges requires good scientific understanding of the island environment, adaptive management skills and solutions appropriate to island circumstances.

Islands are a model for the future, as they now face what must become the long- term preoccupation of the whole world as the attrition of natural resources takes its toll.

WHY JERSEY?

Jersey exhibits many of the features of islands that will be studied for this degree: a crossroads of biodiversity with unusual endemic taxa, fluctuating populations of native species, troublesome invasive species, loss of habitat and ever greater pressure on resources by its human residents.

Jersey is not only a safe and convenient location for international students, but has the potential to call upon generous start-up funding sources from the private sector. The States of Jersey (the Island government) approve of the efforts of JICAS to promote higher education in the Island.

THE MSC DEGREE IN ISLAND BIODIVERSITY AND CONSERVATION

The proposed degree is unique. Although several UK and European universities offer degrees in conservation biology, none specialises in island biodiversity. This course will fill an empty niche in the academic ecosystem; worldwide there is no other similar MSc taught in English.

The course will comprise eight months of lectures and field work in the Channel Islands and Tenerife, followed by four months preparing a dissertation. The taught portion will be delivered in multi-disciplinary modules as related to islands: biogeography, ecology, biodiversity, evolution, invasion, extinction, conservation strategies and legislation, conservation in action and conservation tools, including genetics and statistics. Although Jersey does not have a university, there are existing tertiary education facilities which will be available.

The degree will appeal to high calibre students from island nations who are committed to acquiring further knowledge and skills needed to meet the environmental challenges of their homelands. Students must have sufficient skills in the English language.

MSc Structure and Modules

JBIM001 Dissertation

JBIM002 Field Work Statistics and Experimental Design (Jersey / Guernsey, Channel Islands)

JBIM003 Island Biogeography

JBIM004 Island Ecology

JIBIM005 Biodiversity and Evolution

JBIM006 Invasion and Extinction on Islands

JBIM007 Global Conservation Strategies and Legislation

JBIM008 Islands and Climate Change

JBIM009 Conservation in Action (Tenerife, Canary Islands)

Meet our

LECTURERS

JICAS

JERSEY INTERNATIONAL
CENTRE OF ADVANCED STUDIES

www.jicas.ac.je

Dr. Kostas A. Triantis

University of Athens
Module: IUCN assessor training

Claudia Martans

Legal Consultant
Module: Conservation Law

Prof. Julia Fa

Manchester Metropolitan University
Module: Invasion & Extinction

Dr. Nathan Gregory

Nature Conservancy
Module: Conservation Strategy

Prof. Jose Maria Fernandez-Palacios

University of La Laguna
Module: Island Biodiversity & Evolution

Dr. Thomas Hesselberg

University of Oxford
Module: Fieldwork Statistics

Dr. Paul Chambers

Jersey Heritage
Module: Islands & Climate Change

Prof. Robert J Whittaker

University of Oxford
Module: Island Biogeography

Dr. Lea de Nascimento Reyes

University of La Laguna
Module: Island Ecology

THE GLOBAL IMPORTANCE OF ISLAND BIODIVERSITY AND CONSERVATION

Why study Biodiversity?

What is Biodiversity?

Biological diversity – or biodiversity – refers to the variety of life on Earth at *all* its levels and the ecological and evolutionary processes that sustain it. Biodiversity includes not only species we consider rare, threatened, or endangered, but every living thing—even organisms we still know little about, such as microbes, fungi, and invertebrates. Biodiversity is important everywhere; species and habitats in your area as well as those in distant lands all play a role in maintaining healthy ecosystems.

Although biodiversity is mainly considered to be “Species Diversity”, this is only one aspect of Biodiversity. To properly catalogue all the life on Earth, we also have to recognize the genetic diversity that exists within species as well as the diversity of entire habitats and ecosystems. “Genetic Biodiversity” is the variation in genes that exists within a species, whereas “Ecological Biodiversity” is the diversity of ecosystems, natural communities and habitats existing on the Earth. In essence, biodiversity is the variety of ways that species interact with each other and their environment. Finally, some authors include within Biodiversity the “Cultural Diversity” found in human societies, including issues concerning the arts, religion, languages, professions, tools, etc..

Why is Biodiversity important?

Biodiversity plays an important role in ecosystem functions that provide supporting, provisioning, regulating, and cultural services. These services are essential for human well- being. We need biodiversity to satisfy basic needs like food, drinking water, fuel, clothing, shelter, and medicine. Ecosystems provide services such as pollination, seed dispersal, climate regulation, water purification, nutrient cycling, and control of agricultural pests. Many flowering plants depend on animals for pollination, and 30% of human crops depend on the free services of pollinators. Thus, biodiversity has a direct economic value to humans. Furthermore, the value of beauty and scientific discovery cannot be measured but are extremely important for life.

Species composition matters as much or even more as species richness when it comes to ecosystem services. Ecosystem functioning, and hence ecosystem services, at any given moment in time is strongly influenced by the ecological characteristics of the most abundant species, not by the number of species. The relative importance of a species to ecosystem functioning is determined by its traits and its relative abundance. For example, the traits of the dominant or most abundant plant species—such as how long they live, how big they are, how fast they assimilate carbon and nutrients, how decomposable their leaves are, for example.

Why study Islands?

It is calculated that there are 175,000 islands larger than 0.1 km^2 on Earth and more than a million if all sizes are considered. They are home to more than 650 million inhabitants or about 10% of the world population (Global Island Database). Furthermore, 43 out of the world's 195 countries are islands or archipelagos and over two thirds include islands.

Although islands make up only 3-5 % of the Earth's land area (this figure depending on the inclusion of Greenland or not), harbour **20%** of all bird, reptile and plant species as well as extraordinary cultural diversity.

As we are going to see, because of their isolation, islands have a disproportionately high number of endemic species, i.e. species that only occur on a specific island or archipelago.

Even small islands have large exclusive economic zones with huge territorial claims to surrounding oceans, thus island people are stewards for one sixth of the Earth's surface, including many of its most endangered species and vulnerable ecosystems:

- More than half of the world's marine biodiversity
- 7 of the world's 10 coral reef hotspots
- A quarter of the ecological regions of highest terrestrial priority
- 10 of the 34 richest areas of biodiversity in the world
- 13% of UNESCO's World Heritage Sites.

But what is an island? In a broad biogeographical sense, an island can be defined, in relation to a focal individual, population or species, as "any favourable area located within a surrounding hostile environment". For dwellers of real islands (patches of land surrounded by water) the hostile environment is the water surrounding them (whether ocean, sea, lake or river), whereas for habitat islands the unfavourable environment may be agricultural land, urban area, industrial land or a degraded stage of the same ecosystem. Mountain tops or 'sky islands' are summits separated from similar summits by valleys containing very different climates, whereas seamounts with illuminated summits are separated from similar seamounts by dark abysms, effectively making habitat islands beneath the sea.

Islands can be found in all oceans of the planet, at all latitudes, and consequently in all climate zones: from the Mediterranean Sea, via Macaronesia and across the

Atlantic to the Caribbean Sea, across the vast Pacific from the East Pacific, to Polynesia, Melanesia, and Micronesia and further to South-East Asia, and back to Africa across the Indian Ocean.

Some important island features that make them biologically interesting study systems include:

i) the lower biological complexity of island communities when compared to equivalent mainland ones;
ii) their clearly defined limits (the coast, for real islands);
iii) the availability of a large range of whatever properties are studied (area, age, altitude, isolation, latitude, richness, etc.);
iv) the availability of many replica (although these are never perfect replicates).

Oceanic islands are renowned for the many and diverse scientific breakthroughs that their fascinating biotas have enabled during the past two centuries. Charles Darwin and Alfred Russel Wallace independently discovered the principles of evolution after extended travels through the island archipelagos of the world. MacArthur and Wilson's equilibrium theory of island biogeography has become the most influential theory in biogeography, and has major relevance to other biological fields including conservation biology (Warren et al., 2015). Peter and Rosemary Grant's (2008) work on the dynamic adaptation of beak size and form of Galápagos finches to variation in food sources has become a textbook example of rapid evolution that happens within years in nature. Many concepts emerged mainly or exclusively from island research are today crucial in different disciplines.

Why an MSc in Island Biodiversity and Conservation?

It is usually said that you neither study, nor understand Island Ecology with textbooks done on the continent by continental researchers containing continental examples. Island ecosystems, but also island populations, communities and species, are simply too different and do not conform to continental expectations. If someone is willing to work in Conservation Biology to save ecosystems from extinction she or he has to keep in mind that the majority of the species that have gone extinct or are critically endangered, as we have seen are island species.

Aims and objectives of the JICAS MSc in Island Biodiversity and Conservation

The MSc will aim to produce future professionals in Island Biodiversity Conservation. This profession can be developed in different contexts, including Academia (University teachers and researchers), Environmental and Protected Areas Departments of public Administrations (UNESCO, European Commission, National Governments, Island Councils, Municipalities, etc.), or Conservation/Environmental NGOs (IUCN, WWF, The Nature Conservancy, Conservation International, etc.)

Thus, the general aims of the MSc in Island Biodiversity and Conservation will be:

1. To form professionals in Island Biodiversity and Conservation, giving graduates access to jobs with a high level of responsibility, or in respected research institutions.

2. To offer a state-of-the-art education in the theoretical-practical and multidisciplinary knowledge needed for the understanding of biodiversity, and the methods and techniques for conservation, management and sustainability. The JICAS MSc will include teaching and applied research about present and ancient life forms, as well as about systemic and evolutionary topics of biodiversity.

#wedoislands

MODULE TITLE	Dissertation/Research Project				**CREDIT VALUE**	60
MODULE CODE	JBIM001			**MODULE CONVENOR**	Thomas Hesselberg	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	15
	WEEKS	0	0	12 – 15 weeks		

DESCRIPTION – summary of the module content

The MSc Dissertation/Research Project is the final step of the MSc in which you have to prepare a dissertation using the knowledge and skills acquired in the MSc about a material or research line of your personal convenience. Possible topics for the MSc Dissertation/Research Project include scientific research in any of the subjects being taught on the MSc, ongoing or de novo Island Biodiversity Conservation Projects, Island Biodiversity data collection and analysis or comprehensive literature reviews.

The election of the MSc Dissertation/Research Project topic and supervisor(s) should be the result of an agreement between student and supervisor. The MSc Dissertation/Research Project will be defended through a non-public viva examination. The criteria for the MSc Dissertation/Research Project evaluation will be clearly stated in the MSc handbook, and they will include at least the following items:

- The originality of the research
- The degree of difficulty of the field-work and lab-work carried out
- The robustness of the methodological approach
- The quality of the written dissertation
- The quality of the oral presentation
- The arguments used in its defence.

Once you have passed your viva examination, the MSc Academic Committee will organise a public one-day symposium where all students will carry out an oral presentation of their MSc dissertations. This event will be broadcasted by live streamed online, so that your families and friends can follow from home. These videos will be uploaded and stored in the MSc webpage to make them available for consultation of future MSc student candidates.

MODULE AIMS – intentions of the module

This module aims to teach you to carry out independent research for the purpose of your dissertation literature review and final report. In particular, this module aims to teach you to apply the various theories, methodologies and statistical programming learned across the taught modules, including the use of R studio and/or Geographical Information Systems (GIS), to design, collect and collate primary data and marshal this original research into an effective scientific study.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Collect and analyse data, and use scientific information in addressing conservation problems
2	Describe in detail the fundamental principles underlying the Conservation of Island Biodiversity, both from the human and the biological perspectives
3	Apply these principles and skills to solve real-world conservation problems
Discipline Specific Skills and Knowledge:	
4	Carry out research projects in biogeography, ecology, evolution and conservation biology of islands and archipelagos
5	Carry out quantitative techniques for evaluating the impact of human activities on populations, species, communities and ecosystems
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Apply statistical and modelling skills to understand and interpret quantitative analyses
7	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination
8	Transfer techniques and solutions from one discipline to another

SYLLABUS PLAN – summary of the structure and academic content of the module

The election of the MSc thesis topic and supervisor(s) should be the result of an agreement between you and your supervisor. The MSc thesis will be defended through a non-public viva examination. The criteria for the MSc Thesis evaluation will be clearly

stated in the MSc handbook, and they will include at least the following items:

- The originality of the research
- The degree of difficulty of the field-work and lab-work carried out
- The robustness of the methodological approach
- The quality of the written dissertation
- The quality of the oral presentation
- The arguments used in its defence

Once you have passed your viva examination, the MSc Academic Committee will organise a public one-day symposium where all the students will carry out an oral presentation of their MSc dissertations.

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	20	Guided independent study	580	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	20	Meetings with the project supervisor
Guided independent study	580	Additional reading, research and preparation of a literature review. Experimental design, data collection, data analysis and preparation for the final paper assessment.

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Viva presentation	20-30 minutes	2, 6-7	Written

SUMMATIVE ASSESSMENT (% of credit)

Coursework	100	Written exams	0	Practical exams	0

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Literature review	20	2000 words	1-3, 5, 8	Written
Project report	80	10,000 words	All	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Literature review	Literature review	1-3,5,8	16 weeks from the date feedback was given
Project report	Project report	All	16 weeks from the date feedback was given

RE-ASSESSMENT NOTES

Two assessments are required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES			
INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.			
Key texts • Ruxton, G.D. and Colegrave, N. (2006) Experimental Design for the Life Sciences. OUP. ISBN 01992 52327 • Barass, R (2002) Scientists Must Write: A Guide to Better Writing for Scientists, Engineers and Students			
CREDIT VALUE	60	**ECTS VALUE**	30
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	
ORIGIN DATE	03/08/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Islands, biodiversity, conservation, ecology, biogeography, extinction, evasive evolution, climate change		

MODULE TITLE	Fieldwork Statistics and Experimental Design				**CREDIT VALUE**	15
MODULE CODE	JBIM002			**MODULE CONVENOR**	Thomas Hesselberg	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	15
	WEEKS	4	0	0		

DESCRIPTION – summary of the module content

Fieldwork Statistics and Experimental Design is a core module in this MSc; it has a transversal character and is the main basis for a rigorous approach to biotic (faunistic and floristic) and abiotic (geographic, climatic, lithology, soils, etc.) data collection and statistical (univariate and multivariate) description and analysis. For this reason, the module sits at the very beginning of the MSc and is delivered as part of the JICAS Field School and undertaken within the Channel Islands. where you can obtain your own data and are subjected to different analytical procedures.

MODULE AIMS – intentions of the module

The module aims to teach you to carry out fieldwork experiments, sampling and inventories strategies of plant and animal population and communities, including the fundamentals of the scientific method, the basis of the experimental design, floristic, vegetation and faunistic data collection procedures and the statistical description and analysis of the data obtained.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Formulate detailed hypotheses that can explain the observations and experiment where the postulated hypothesis explaining the observations can be falsified
2	Plan rigorously field-based data collection and execute field data collection, either through sampling or inventories (censuses) procedures
Discipline Specific Skills and Knowledge:	
3	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
4	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
5	Communicate effectively through oral presentations, written reports, posters and scientific publication
6	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and manage resources and time

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that the syllabus will cover some or all of the following topics:

- Experiments in Ecology
  - Hypotheses
  - Experimental design (sampling, replication, control)
  - Presentation of results
- Field work: Preparation of datasheet, tools, safety measures
- Data presentation (graphic and tables)
  - Graphical representation of central and dispersion data
  - Tables
- Parametric tests
  - F-Snedecor
  - Matched and unmatched t-test
  - ANOVA (one and more than one factors)
- Non-Parametric tests
  - Chi2 (contingency tables)

- U Mann Whitney
- Kolmogorov-Smirnov
- Kruskal-Wallis

- Correlation and regression
  - Correlation and regression
  - Multiple regression
- Classification vs. ordination
  - Classification
  - Ordination
- Diversity indexes
- The preparation of manuscript
- Introduction to advanced statistic and modeling tools

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	15	Class-based activities and lectures
Scheduled learning and teaching	15	Field work on Channel Islands
Guided independent study	60	Pre-reading for lectures - accessible via UoE VLE
Guided independent learning	60	Writing up and finishing assessments

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Presentation	10 – 15 minutes	1-6	Formative – oral

SUMMATIVE ASSESSMENT (% of credit)

Coursework	100	Written exams	0	Practical exams	0

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Report	100	3000 words	1-6	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Report	Report	1-6	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

One assessment is required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Pre-readings:

- Chalmers and Parker (1989) The OU project guide. The Open University (Field studies council).
- Legendre and Legendre (1998) Numerical Ecology. Elsevier (Chapter 1: Complex Ecological data sets)
- Gauch Jr (1995) Multivariate analysis in community ecology. Cambridge Studies in Ecology (Chapter 4: Ordination).

Key texts:

- Arévalo, J.R., Álvarez, P., Narvaez, N. & Walker, K. 2009. The effects of fire in the regeneration of a *Quercus douglasii* stand in Quail Ridge Reserve, Berryessa Valley (California). ***Journal of Forest Research*** 14: 81-87.
- Arévalo, J.R. & Fernández-Palacios, J.M. 2005. Gradient analysis of exotic *Pinus radiata* plantations and potential restoration of natural vegetation in Tenerife, Canary Islands (Spain). ***Acta Oecologica*** 27: 1-8.
- Arévalo, J.R., Delgado, J.D., Otto, R., Naranjo, A., Salas, M. & Fernández-Palacios, J.M. 2005. Distribution of alien vs. native plant species in roadside communities along an altitudinal gradient in Tenerife and Gran Canaria (Canary Islands). ***Perspectives in Plant Ecology, Evolution and Systematics*** 7: 185-202.

Arévalo, J.R., de Nascimiento, L., Fernández-Lugo, S., Méndez, J., González-Delgado, G., Balguerías, E., Pereira-Cabral, E., Fernández-Palacios, J.M. 2018. Regeneration dynamics in the laurel forest: changes in species richness and composition. ***iForest*** 11: 308-314

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/06/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Statistics, design, islands, biodiversity, conservation, biotic, abiotic, data, collection		

MODULE TITLE	Island Biogeography				**CREDIT VALUE**	15
MODULE CODE	JBIM003			**MODULE CONVENOR**	Robert Whittaker	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	15
	WEEKS	4				

DESCRIPTION – summary of the module content

This module is divided into two sections: 1) Island Origins and Types and 2) Island Biogeography Theories and Models. The module focuses on the different island origin and types, including the role of past events such as continental drift, Pleistocene glaciations and volcanism in shaping island geography and biotas. Furthermore, this module explores in depth the geographical, biological and ecological determinants of arrival and establishment occurring in both animal and plant colonisation processes, as well as the knowledge of the main island biogeography theoretical models, and composition of past and present island biodiversity and the lessons we can use for reserves delimitation.

MODULE AIMS – intentions of the module

Island Biogeography is an essential element for the study of islands and thus essential for both insular and continental biodiversity conservation. Due to the on-going habitat transformation, protected areas actually behaving as isolated entities within a more or less perturbed anthropogenic matrix that act as islands themselves. The module is structured in two different parts: part one introduces islands themselves, including origin, types of islands, such as habitat islands and the abiotic and biotic relevant characteristics; part two explores several complementary theoretical models existing about island biogeography that have been formulated and their role in the design of the establishment of natural reserves.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Compare and contrast the main geographic and biogeographic differences among the different island types
2	Discuss the abiotic and biotic determinants of the island colonisation processes
3	Produce a detailed monitoring plan of the colonisation of a hypothetical emerged oceanic island
Discipline Specific Skills and Knowledge:	
4	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
5	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Communicate effectively through oral presentations, written reports, posters and scientific publication
7	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and resource and time management
8	Integrate and evaluate information from a variety of sources using state-of-the-art communications

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that the syllabus will cover some or all of the following topics:

- Short introduction: islands as biogeographical laboratories (islands globally)
- Types of islands (modes of origin, plate boundary islands, islands in intraplate locations)
    - Environmental changes over long timescales (changes in relative sea level, reefs, atolls, and guyots, eustatic changes in sea level, climate change on islands, the developmental history of the Canaries, Hawaii, Aegean Sea)
    - The physical environment of islands (topographic characteristics, climatic characteristics, water resources, tracks in the ocean)
- The island species-area relationship (application to predicting extinction debt)
- The equilibrium theory of island biogeography (development, evaluation and prospects)
- The general dynamic model of oceanic island biogeography (development, evaluation and prospects)

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)					
Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS		
Category	Hours of study time	Description
Scheduled learning and teaching	30	Class-based activities and lectures
Guided independent study	60	Pre-reading for lectures – accessible via UoE VLE
Guided independent study	60	Writing up and finishing assessment(s)

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Literature review	Individual presentations 7 – 10 minutes	4-5, 6	Written

SUMMATIVE ASSESSMENT (% of credit)					
Coursework	50	Written exams	50	Practical exams	

DETAILS OF SUMMATIVE ASSESSMENT				
Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Exam	50	1800 – 2000 words	1-2, 7	Written
Essay	50	2,000 words	3-6,8	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Essay (50%)	Essay (50%)	3-6,8	Four weeks from the date feedback was given
Exam (50%)	Exam (50%)	1-2,7	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

Two assessments are required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Key texts:

- Borregaard, M. K., T. J. Matthews, and R. J. Whittaker. 2015. The general dynamic model: Towards a unified theory of island biogeography? Global Ecology and Biogeography.
- Burns, K.C. 2015. A Theory of Island Biogeography for exotic species. American Naturalist 186, 441-451.
- Losos, and Ricklefs, eds. 2010. The theory of island biogeography revisited. Princeton, NJ: Princeton Univ.

Press.

- Whittaker, RJ; Fernández-Palacios, JM (2009). Island Biogeography. 2nd edition Lomolino, MV; Riddle, BR; Whittaker, RJ; Brown JH (2016). Biogeography. 5th edition

Web-based and electronic resources:

- Global Ecology and Biogeography, https://onlinelibrary.wiley.com/journal/14668238
- Journal of Biogeography, https://onlinelibrary.wiley.com/journal/13652699

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/06/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Biogeography, islands, biodiversity, conservation, oceanic, reefs, atolls, guyuts		

MODULE TITLE	Island Ecology				**CREDIT VALUE**	15
MODULE CODE	JBIM004			**MODULE CONVENOR**	Jamie Stevens	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	20
	WEEKS	3	0	0		

DESCRIPTION – summary of the module content

This module is divided into two sections: 1) Ecological Processes and Interactions on Islands and 2) Island Palaeoecology. The first part of the module focuses on the exclusive ecological processes occurring on islands, including the species impoverishment, disharmony and relictualism that created a scenario of attenuated interspecific competition yielding to issues such as species relaxation, ecological release or density compensation. The second part of the module examines more deeply both palaeoecology methods and results of the reconstruction of the ecological scenarios that existed in different oceanic islands in the near and remote past, and the conditions that have been created current biodiversity composition and distribution.

MODULE AIMS – intentions of the module

Island Ecology and Palaeoecology are the basis of all the differential processes that distinguish the ecological scenario, and thus the species composition and distribution patterns, between islands and continents. An introduction to the present and past conditions ruling in islands worldwide is thus indispensable for the proper knowledge and understanding of the islands singularities that have created such specific biotic assemblages though time, as is demonstrated by its huge endemicity rates, both of neoendemic and palaeoendemic species. The value of learning the methods of the insular palaeoecological reconstruction, themselves of highest interest, will also contribute to the understanding of the on-going global change scenario and possible fate of islands.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Describe in detail the origin of the singularity of oceanic island ecology and the patterns and products that such singularity can create on the insular biotic assemblages
2	Discuss the differences among island and mainland pollination and dispersal connectance networks
3	Summarise the differences existing between palaeo- and neoendemic species features and distributions
Discipline Specific Skills and Knowledge:	
4	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
5	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Communicate effectively through oral presentations, written reports, posters and scientific publication
7	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and resource and time management

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that the syllabus will cover some or all of the following topics:

- Short introduction: ecological processes and interactions on islands
- Exclusive ecological processes working on islands
    - Insular communities features
    - The islands as competition experiments
- Relaxation and ecological release
- Pollination and dispersal networks on islands
- The emergence of island super-generalists and of bizarre mutualisms
- Secondary dispersal and the double service
    - Habitat fragmentation and metapopulation dynamics
- Short introduction: island paleoecology

- What is natural?
    - Oceanic islands as the last regions of the planet colonised by humans
    - Quantifying the impact of human arrival on the pristine insular nature
- Ecological baselines
- The fossil record as a clue for the restoration of habitats and ecological interactions on islands

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	30	Lectures – class based activities and lectures
Guided independent study	60	Pre-reading for lectures – accessible via UoE VLE
Guided independent study	60	Writing up and finishing assessments

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method

SUMMATIVE ASSESSMENT (% of credit)

Coursework	50	Written exams	50	Practical exams	0

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Essay	50	2000 words	1-2, 4, 6	Written
Examination	50	1800 – 2000 words	3, 5, 7	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Essay	Essay (50%)	1-2, 4, 6	Four weeks from the date feedback was given
Examination	Examination (50%)	3, 5, 7	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

Two assessments are required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Pre-reading texts:

- Gorman, Martin. 1979. Island ecology. London: Chapman & Hall.
- Whittaker, Robert J., and José María Fernández-Palacios. 2007. Island biogeography: Ecology, evolution and conservation. 2d ed. Oxford: Oxford Univ. Press.
- Walsh, Stephen J., and Carlos F. Mena, eds. 2013. Science and conservation in the Galápagos Islands: Social and ecological interactions. Berlin: Springer.
- Wilkinson, D. M. 2004. The parable of Green Mountain: Ascension Island, ecosystem construction and ecological fitting. Journal of Biogeography 31:1–4.

Key texts:

- Checke, and Hume. 2008. Lost land of the Dodo: An ecological history of Mauritius, Réunion and Rodrigues. New Haven: Yale Univ. Press.
- Fernández-Palacios, José María, and Carlo Morici, eds. 2004. Ecología insular/Island Ecology. Santa Cruz de La Palma, Spain: Cabildo Insular de La Palma.
- Fernández-Palacios, José María, and José Luis Martín Esquivel, eds. 2001. Naturaleza de las Islas Canarias: Ecología y conservación. Santa Cruz de Tenerife. Spain: Editorial Turquesa.
- Juan, Carlos, Brent C. Emerson, Pedro Oromí, and Godfrey M. Hewitt. 2000. Colonization and diversification: Towards a phylogeographic synthesis for the Canary Islands. Trends in Ecology and Evolution 15:104–109.
- Kunkel, Günther, ed. 1976. Biogeography and ecology in the Canary Islands. The Hague: Dr. Junk.
- Marshall, Andrew J., and Bruce M. Beehler. 2007. The ecology of Papua, Part One and Part Two. Singapore: Periplus.
- Serrano, Artur R. M., Paulo A. V. Borges, Mário Boieiro, and Pedro Oromí, eds. 2010. Terrestrial arthropods of Macaronesia: Biodiversity, ecology and evolution. Lisbon, Portugal: Sociedade Portuguesa de Entomología.
- Ziegler, A. C. 2002. Hawaiian natural history, ecology, and evolution. Honolulu: Univ. of Hawaii Press.

Web-based and electronic resources:

- ELE page

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/06/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Islands, ecology, pollination, paleoecology, oceanic, insular, fossil, restoration, habits		

MODULE TITLE	Biodiversity and Evolution on Islands				**CREDIT VALUE**	15
MODULE CODE	JBIM005		**MODULE CONVENOR**		Jose Maria Fernandez-Palacios	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	20
	WEEKS	3	0	0		

DESCRIPTION – summary of the module content

This module is divided into two sections: 1) Island Biodiversity and 2) Evolution on islands. Part one introduces the most spectacular cases of island radiation in both the plant and animal realms that make island biodiversity unique. Part two focuses on the evolutionary context existing in oceanic islands that have created such incredible biodiversity. Moreover, you are introduced to the fundamentals of natural selection and genetic drift, as well as to the geographic and genetic ways of understanding speciation yielding to anagenetic or cladogenetic processes. Finally, the island syndrome or island rule is analysed and the most prominent transformations, such as size shift, island woodiness, loss of dispersability, etc. is exemplified and their origins discussed.

MODULE AIMS – intentions of the module

Islands are simultaneously museums of relic species extinct in the continents, and evolutionary laboratories where new, exclusive species are being constantly created. Thus, island biodiversity is outstanding, both in terms of unique species, as witnessed by the huge rate of endemicity existing in both oceanic and continental fragment islands, but especially due to the disproportionate contribution of the islands to the world biota, ca. 25%, even if the islands just mean less than a 5% of the emerged territories. Therefore, the aim of the module is to explore both the radiating lineages of island biodiversity, and the evolutionary scenarios that have made this process possible.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Describe in detail the origin of the most important cases of island radiation existing worldwide
2	Present the evolutionary basis of the disproportionate contribution of islands to the world biodiversity
3	Discuss the different evolutionary scenarios existing on islands
Discipline Specific Skills and Knowledge:	
4	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
5	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and resources and time management
7	Transfer techniques and solutions form one discipline to another

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that they syllabus will cover some or all of the following topics:

- Island Biodiversity:
  - The disproportionate contribution of the insular biota to global biodiversity
  - Radiating and non-radiating taxa: causes
  - Some examples of explosive species radiation on oceanic islands and lakes
    - The cichlids of African lakes
  - The Biodiversity of Europe's and UK Outermost Regions and Territories

- Evolution on Islands:
  - Evolutionary processes occurring on islands
  - Speciation frames

- Selection through competition; character displacement; sexual selection; polyploidy and transgressive hybridisation; mechanisms of reproductive isolation
- Evolutionary trends on islands; insularity syndrome
- Paleo- and neoendemisms; gigantism and dwarfism
- Selection by migration

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	30	Lectures – class-based activities and lecture
Guided independent study	60	Pre-reading for lectures – accessible via UoE VLE
Guided independent study	60	Writing up and finishing assessment(s)

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method

SUMMATIVE ASSESSMENT (% of credit)

Coursework	50	Written exams	50	Practical exams	0

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Report	50	2000 words	2, 5, 7	Oral
Exam	50	1800 – 2000 words	1, 3-4, 6	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Report	Report (50%)	2, 5, 7	Four weeks from the date feedback was given
Examination	Examination (50%)	1, 3-4, 6	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

Two assessments are required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Pre-reading:

- Kueffer, C., Drake, D. & Fernández-Palacios, J.M. (in press) Island Biology. In Gibson, D. (ed.) Oxford Bibliographies in Ecology

Key Texts:

- Carlquist, S. 1974. Island Biology. Columbia University Press, Nueva York.
- Cody, M. 2006. Plants on islands. Diversity and dynamics of a continental archipelago. California University Press.
- Fernández-Palacios, J.M., (2011) Why Islands? In: Pérez Mellado, V. & Ramón, C. (eds.) Islands and Evolution. Institut Menorquí d'Estudis.
- Fernández-Palacios, J.M. (2011) The islands of Macaronesia. In: Serrano , P. Et al. (eds.) Terrestrial arthropods of Macaronesia. Biodiversity, ecology and evolution. Sociedad Portuguesa de Entolomología. Lisboa
- Fernández-Palacios, J.M. (2016) Shaped by sea-levels shifts. Nature, 532: 42-43
- Fernández-Palacios, J.M. & Morici, C. (eds.) 2004. Ecología Insular / Island Ecology. Cabildo Insular de La Palma, AEET.
- Fernández-Palacios, J.M., Rijsdijk, K.F., Norder, S.J., Otto, R., de Nascimento, L., Fernández-Lugo, S., Tjørve, E. & Whittaker, R.J. (2016) Towards a glacial-sensitive model of island biogeography. Global Ecology and Biogeography, 25: 817-830
- Fernández-Palacios, J.M, de Nascimento, L Otto, R., Delgado, J.D., Garcia del Rey, E., Arévalo, J.R. & Whittaker, R. (2011) A reconstruction of Palaeo-Macaronesia, with particular reference to the long-term biogeography of the Atlantic island laurel forests. Journal of Biogeography, 38: 226-246
- Gorman, M. 1979. Island Ecology. Chapman & Hall, Londres.
- Gotelli, N. 2006. A primer of Ecology. Sinauer.
- Grant, P. (ed.) 1998. Evolution on Islands. Oxford University Press, Oxford.
- Grant, P. & Grant, R.M. 2008. How and why species multiply. The radiation of Darwin's finches. Princeton University Press.
- Lomolino, M., Riddle, B., Whittaker, R.J. & Brown, J. 2010. Biogeography. 4ª Edición. Sinauer.
- Hanski, I. 1999. Metapopulation Ecology. Cambridge University Press.
- Mayr, E. 1970. Populations, species and evolution. Harvard University Press
- Menard, W. 1986. Islands. Scientific American Library.
- McArthur, R. & Wilson, E.O. 1967. The theory of Island Biogeography. Princeton Univ. Press, Princeton.
- Mueller-Dombois, D. Bridges, & Carson, H. (eds.) Island Ecosystems (1980). Hutchinson Ross
- Nunn, P.D. 1994. Oceanic Islands. Blackwell, Londres.
- Stuessy, T. & Ono, M. 1998. Evolution and speciation of island plants. Cambridge Univ. Press, Cambridge.
- Thornton, I. 2007. Island Colonization. Cambridge University Press, Cambridge.
- Wallace, A.R. 1998. Island Life. Edición Fascimil. Prometeus Books, Nueva York.
- Whittaker, R.J. & Fernández-Palacios, J.M. 2007. Island Biogeography. Ecology, Evolution and Conservation. 2nd Ed. Oxford University Press, Oxford.
- Whittaker, R.J., Fernández-Palacios, J.M., Matthews, T.A., Borregaard, M.K., & Triantis, K.A. (2017) Island biogeography: Taking the long view of nature's laboratories. Science, 357, eaam8326
- Whittaker, R.J., Triantis, K.A. & Ladle, R.J. (2008) A general dynamic theory of oceanic island biogeography. Journal of Biogeography, 35: 977–994
- Williamson, M. 1981. Island Populations. Oxford University Press, Oxford.

Web-based and electronic resources:

- ELE page: ??
- Sherwin Carlquist Plant Discoveries: http://www.sherwincarlquist.com
- Surtsey Research Society: http://www.surtsey.is/index_eng.htm

Videos:

- BBC South Pacific
- Canarias Reductos de Biodiversidad

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		

NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/08/18	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Biodiversity, conservation, islands, evolution, biogeography, species, radiation		

MODULE TITLE	Invasion and Extinction on Islands				**CREDIT VALUE**	15
MODULE CODE	JBIM006			**MODULE CONVENOR**	Julia Fa & Kostas Triantis	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	20
	WEEKS	0	4	0		

DESCRIPTION – summary of the module content

This module is divided into two sections: 1) Island Invasions and 2) Extinction on Islands. Part one introduces the problems caused on island communities and ecosystems by alien species, deepening in the biotic and abiotic consequences of their introduction, especially on species that have evolved in the absence of predators, diseases, or humans or a human modified environment. Part two deals with the ongoing extinction on islands and the natural causes of species extinction in the past (volcanic activity, sea level shift, etc.), especially the cultural (human-related) causes such as habitat destruction, transformation and fragmentation, overhunting and overfishing or species collecting. Finally, the module introduces the cases of some charismatic islands species lost.

MODULE AIMS – intentions of the module

The aim of this module is to raise your awareness of the risks of introducing exotic species in islands, which interferes and disrupts biological processes leading to population reductions and putatively to species extirpations or extinctions, as well as the social and/or economic consequences of exotic plagues. A further aim is to deepen your understanding of the importance of species extinction on islands, and to understand both the natural and cultural mechanisms that have produced the demise of 80% of species on islands after the 15th Century.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Evaluate qualitative and quantitatively the impact produced by exotic species due to natural systems disruption
2	Diagnose, program and solve the environmental problems caused by invasive species
3	Discuss the fundaments of the different natural and cultural causes affecting island extinctions and discern the causes able to produce island extinction in the near future
Discipline Specific Skills and Knowledge:	
4	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
5	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Communicate effectively through oral presentations, written reports, posters and scientific publication
7	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and resource and time management

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that they syllabus will cover some or all of the following topics:

Island Invasions:

- Characteristics that make a species a good invader
- Invasibility of island communities
    - Causes of species introductions
- Ecological and evolutionary processes affecting local biota as a consequence of the introduction of species: competition, herbivory, predation, the prevalence of parasitism and diseases (through pathogens or vectors

introduction), ecosystem transformation due to the introduction of nitrogen fixers, mutualistic (pollination, dispersal) networks disruption or genetic dilution
- The black lists
- The most dangerous invasive species

Extinction on Islands:

- Conservation management for control and eradication of problematic non-native species
- Extinction, an eminent insular biogeographical process
- Pre- and post-description extinctions
- Cultural extinctions
    - the human activity on islands
- Some paradigmatic cases of human-induced insular species extinctions:
    - Mauritius dodo, New Zealand moas, Madagascar elephant bird, Stellers sea-cow, Tasmanian thylacine, the Canarian giant rats and lizards, Hawaiian honeycreepers, Caribbean monk seal, the Easter Island Palm or St Helena Olive tree.

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	30	Lectures – class-based activities and lecture
Guided independent study	60	Pre-reading for lectures – accessible via UoE VLE
Guided independent study	60	Writing up and finishing assessment(s)

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method

SUMMATIVE ASSESSMENT (% of credit)

Coursework	75	Written exams	0	Practical exams	25

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Essay IUCN Red List Exam	75 25	2000 words Online professional exam	1-2, 4, 6-7	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Essay	Essay	1-2, 4, 6-7	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

One assessment is required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Pre-reading:

- Island Conservation (2018) Data matters: informing the eradication of invasive species on islands: North America and the Arctic region. Contractor's Report 2018-1. National Invasive Species Council Secretariat, Washington, DC
- Kawakami, Kazuto, and Isamu Okochi, eds. 2010. Restoring the Oceanic Island ecosystem: Impact and management of invasive alien species in the Bonin Islands. Berlin: Springer.
- Rodríguez, A., N. D. Holmes, P. G. Ryan, K.-J. Wilson, L. Faulquier, Y. Murillo, A. F. Raine, J. Penniman, V. Neves, B. Rodríguez, J. J. Negro, A. Chiaradia, P. Dann, T. Anderson, B. Metzger, M. Shirai, L. Deppe, J. Wheeler, P. Hodum, C. Gouveia, V. Carmo, G. P. Carreira, L. Delgado-Alburqueque, C. Guerra-Correa, F.-X. Couzi, M. Travers and M. Le Corre (2017). 'A global review of seabird mortality caused by land-based artificial lights'. Conservation Biology.
- Russell, JCR, Meyer J-Y, Holmes ND, Pagad, S (accepted) Invasive Alien Species on Islands: impacts, distribution and interactions. Environmental Conservation.
- Spatz, D. R., Holmes, N. D., Reguero, B. G., Butchart, S. H., Tershy, B. R., & Croll, D. A. (2017) 'Managing Invasive Mammals to Conserve Globally Threatened Seabirds in a Changing Climate'. Conservation Letters.
- Spatz, D. R., Zilliacus, K. M., Holmes, N. D., Butchart, S. H., Genovesi, P., Ceballos, G., … & Croll, D. A. (2017). 'Globally threatened vertebrates on islands with invasive species'. Science Advances, 3(10), e1603080.
- Simberloff, Daniel; Keitt, Brad; Will, David; Holmes, Nick; Pickett, Erin; and Genovesi, Piero (2018) "Yes we can! Exciting progress and prospects for controlling invasives on islands and beyond," Western North American Naturalist: Vol. 78 : No. 4 , Article 50.

Key Texts:

- Bastille-Rousseau, G., Gibbs, J. P., Campbell, K., Yackulic, C. B. & Blake, S. (2017) 'Ecosystem implications of conserving endemic versus eradicating introduced large herbivores in the Galapagos Archipelago'. *Biological Conservation* 209: 1-10.
- Brooke, M. d. L., E. Bonnaud, B. J. Dilley, E. N. Flint, N. D. Holmes, H. P. Jones, P. Provost, G. Rocamora, P. G. Ryan, C. Surman and R. T. Buxton (2017). 'Seabird population changes following mammal eradications on islands'. *Animal Conservation.*
- Figuerola-Hernández CE, Swinnerton K, Holmes ND, Monsegur-Rivera OA, Herrera-Giraldo JL, Wolf C, Hanson C, Silander S and Croll DA (2017) Resurgence of *Harrisia portoricensis* (Cactaceae) on Desecheo Island after the removal of invasive vertebrates: management implications. *Endangered Species Research* 34:339-347.
- Raine A, Holmes ND, Day, R, Cooper B (2017) 'Declining population trends for Hawaiian Petrel and Newell's Shearwater on Kaua'i Island, Hawaiian Islands'. *Condor.*
- Schulwitz, S., Castaño, P. A., Mosquera, D., Chugcho, M., Campbell, K. J. & Johnson, J. A. (2017) 'Floreana Island Re-colonization Potential of the Galápagos Short-eared Owl (Asio flammeus galapagoensis)' *Conservation Genetics*.
- Wolf CA, Young HS, Zilliacus KM, Wegmann AS, McKown M, Holmes ND, et al. (2018) 'Invasive rat eradication strongly impacts plant recruitment on a tropical atoll'. *PLoS ONE*

Web-based and electronic resources

- ELE page: ??
- https://www.islandconservation.org

CREDIT VALUE	15	**ECTS VALUE**	7.5

PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/08/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Invasion, extinction, biodiversity, conservation, islands, insular, species, ecosystems		

MODULE TITLE	Global Conservation Strategies and Legislation				**CREDIT VALUE**	15
MODULE CODE	JBIM007			**MODULE CONVENOR**	Nathan Gregory Claudia Martans	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	20
	WEEKS	0	4	0		

DESCRIPTION – summary of the module content

This module is divided into two sections: 1) Global Conservation Strategies for islands and their biotas and 2) Conservation Legislation. Part one explores Conservation Biology strategies and policies, with special emphasis in the role of the more important NGOs (IUCN, WWF, CI, NC, Birdlife, etc) and public administrations (UK, EU, UNEP, etc.). Furthermore, the fundamentals and history behind relevant Conservation Biology concepts, such as red lists, protected area networks, threatened categories, species catalogues, etc. are analysed. Part two introduces key UK and EU legislation on Conservation, highlighting their similarities and differences, as well as the international agreements dealing with Conservation Biology, such as Convention on Biological Diversity, Bern Agreement or CITES.

MODULE AIMS – intentions of the module

This module is an introduction to public institutions and private NGOs working in Conservation Biology, and the main objectives and goals regarding Conservation Biology that have emerged from international meetings (Stockholm, Rio I, Johannesburg, Rio II, etc.) are critically analysed. Again, there is a particular emphasis on UK and European Union countries and conservation legislation, with some material covering international agreements existing in Biodiversity Conservation.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Classify threatened species according to IUCN categories
2	Evaluate the vulnerability of the biota of a specific island
3	Suggest and carry out actions against environmental problems with conservation consequences, and increasing the survival likelihood of threatened populations and species
Discipline Specific Skills and Knowledge:	
4	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
5	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Communicate effectively through oral presentations, written reports, posters and scientific publication
7	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and resource and time management
8	Integrate and evaluate information from a variety of sources using state-of-the-art communications technology

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that they syllabus will cover some or all of the following topics:

- Management solutions

- Control and reduction
- Ecological restoration
- Reserves
- Reserve design
- Reserve networks
  - Challenges
  - Protected areas as islands
- Planning for future change
- Public versus private land
  - Community-based approaches
  - Conservancies
  - Governance and development
- Conservation case studies and discussion
- Monitoring and adaptive management
- Principles of adaptive management
  - Technological innovations

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	30	Lectures – class-based activities and lecture
Guided independent study	60	Pre-reading for lectures – accessible via UoE VLE
Guided independent study	60	Writing up and finishing assessment(s)

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method

SUMMATIVE ASSESSMENT (% of credit)

Coursework	50	Written exams	0	Practical exams	50

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Policy document/management plan	50	2000 words	3-4, 6	Written
Group presentation - groups 2-3	50	15 minutes	1-2, 5, 7-8	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Policy document/management plan	Policy document/management plan	3-4, 6	Four weeks from the date feedback was given
Presentation	Presentation	1-2, 5, 7-8	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

Two assessments are required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Key texts:

- Burney, D. A., and L. P. Burney. 2007. Paleoecology and "inter-situ" restoration on Kauai, Hawaii. Frontiers in Ecology and the Environment 5:483–490.
- Ewel, J. J., J. Mascaro, C. Kueffer, A. E. Lugo, L. Lach, and M. R. Gardener. 2013. Islands: Where novelty is the norm. In Novel ecosystems: Intervening in the new ecological world order. Edited by R. J. Hobbs, E. S. Higgs, and C. M. Hall, 29– 44. Oxford: Wiley-Blackwell.
- Florens, F. B. V., and C. Baider. 2013. Ecological restoration in a developing island nation: How useful is the science? Restoration Ecology 21:1–5.
- Kueffer, C., and C. Kaiser-Bunbury. 2014. Reconciling conflicting perspectives for biodiversity conservation in the Anthropocene. Frontiers in Ecology and Environment 12:131–137.
- Meyer, J. -Y., R. Pouteau, E. Spotswood, R. Taputuarai, and M. Fourdrigniez. 2015. The importance of novel and hybrid habitats for plant conservation on islands: A case study from Moorea (South Pacific). Biodiversity and Conservation 24:83–101.

Web-based and electronic resources:

- ELE page: ??
- IUCN Red List: https://www.iucnredlist.org/
- Biodiversity Hotspots: https://www.conservation.org/How/Pages/Hotspots.aspx
- WWF Global 200 Ecoregions: https://www.worldwildlife.org/publications/the-global-200-priority-ecoregions-for-global-conservation
- Channel Islands Marine Protected Area: https://www.nps.gov/chis/learn/nature/marine-protected-areas.htm
- Climate-smart conservation: https://wwf.panda.org/our_work/climate_and_energy/climate_change_adaptation/climate_smart_conservation/
- Parks and Peoples: The Social Impact of Protected Areas
- https://www.wildlife.ca.gov/Conservation/Planning/NCCP
- NatureVest: http://www.naturevesttnc.org/
- SMART: http://smartconservationtools.org/
- Open Standards: http://cmp-openstandards.org/

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	08/04/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Island, biodiversity, conservation, legislation, restoration, environmental law, strategies		

MODULE TITLE	Islands and Climate Change				**CREDIT VALUE**	15
MODULE CODE	JBIM008		**MODULE CONVENOR**		Paul Chambers	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	20
	WEEKS	0	4	0		

DESCRIPTION – summary of the module content

The module will start with an introduction of fundamentals of climatology and climate change and then apply this general knowledge to the specific situation of island climates at different latitudes and in different climatic regions. Based on an understanding of island climates and how they might be affected by climate change, we will review the impacts of climate change on terrestrial island biodiversity. We will discuss both direct effects (e.g. changing precipitation patterns) and indirect effects (e.g. displacement of human settlements into biodiversity areas due to sea level rise) on island biodiversity. A special focus will be on understanding the different types of evidence that are used to predict climate change and its effects on biodiversity (statistical modelling, simulation models, meta-analysis of observational data, experimental approaches).

MODULE AIMS – intentions of the module

You will achieve a solid general understanding of climatology and climate change. You will have a good overview of the potential effects of climate change on terrestrial island biodiversity and understand the relative importance of different climate change effects. You will be able to explain and defend in a policy context or towards the general public the scientific evidence that support predictions of climate change and its effects on biodiversity.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Demonstrate scientific competence and function effectively within the social and political context that conservationist face, particularly matter relating to climate change
2	Analyse data and use scientific information in addressing climate change
Discipline Specific Skills and Knowledge:	
3	Use predictive models for projecting population sizes into the future and estimate their viability
4	Catalogue and evaluate the status of climate change of a given island or archipelago
Personal and Key Transferable/ Employment Skills and Knowledge:	
5	Apply statistical and modelling skills to understand and interrupt quantitative analysis
6	Transfer techniques and solutions from one discipline to another

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that they syllabus will cover some or all of the following topics:

- Fundamentals of climatology (Introduction to climatology, seasonality and weather, solar radiation and energy budget, hydrological cycles, climate zones and climates of the world including for instance Monsoon and Mediterranean climate, biosphere – climate feedbacks, climate change in geological and historical times)
- Fundamentals of climate change (greenhouse effect and greenhouse gases, climate models and scenarios, climate change predictions, evidence of ongoing climate change, irreversibility and thresholds, IPCC, denialism)
- Evidence of climate change effects on biodiversity (observed trends, experimental studies, past climate change, species distribution modelling)
- Island climates (e.g. oceanic climate, orographic effects)
- Evidence and predictions of climate change effects on island biodiversity (with a focus on specific challenges of islands, e.g. spread of diseases and invasive species)
- Adaptation and mitigation strategies on islands

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)					
Scheduled Learning and Teaching activities	30	Guided independent study	120	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS		
Category	Hours of study time	Description
Scheduled teaching and learning	30	Lectures – class based activities and lectures
Guided independent study	60	Pre-reading for lectures – accessible via UoE VLE
Guided independent study	60	Writing up and finishing assessment(s)

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method

SUMMATIVE ASSESSMENT (% of credit)					
Coursework	50	Written exams	50	Practical exams	0

DETAILS OF SUMMATIVE ASSESSMENT				
Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Essay	50	2000 words	1, 4, 6-7	Written
Written examination	50	1800 – 2000 words	2-3, 5	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Essay	Essay	1, 4, 6-7	Four weeks from the date feedback was given
Written examination	Written examination	2-3, 5	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

Two assessments are required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Key Texts:

- Textbook(s) on climatology and climate change depending on availability as eBook from University of Exeter library services.
- IPCC reports
- Weigelt, P., W. Jetz, and H. Kreft. 2013. Bioclimatic and physical characterization of the world's islands. *Proceedings of the National Academy of Sciences USA* 110:15307–15312.

- Harter, David E. V., Severin D. H. Irl, and Bumsuk Seoc, et al. 2015. Impacts of global climate change on the floras of oceanic islands: Projections, implications and current knowledge. *Perspectives in Plant Ecology, Evolution and Systematics* 17(2): 160–183.

Web-based and electronic resources:

- Information on the climates and climate change threats of the specific islands from which the participating students originate

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/08/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Islands, climate change		

MODULE TITLE	Island Conservation in Action				**CREDIT VALUE**	15
MODULE CODE	JBIM009		**MODULE CONVENOR**		Robert Whittaker & Jamie Stevens	
DURATION	**TERM**	**1**	**2**	**3**	**Number Students Taking Module (anticipated)**	20
	WEEKS	0	2	0		

DESCRIPTION – summary of the module content

This module consists of a ten-day fieldwork research study trip to Tenerife, Canary Islands where several protected areas and conservation-related institutions are housed. You are required to review the material relating to environmental and conservation biology issues (papers, books, reports, webpages, etc.) before the trip in order to obtain a deeper understanding of the environmental problems related with mass tourism and agriculture in Tenerife. The module is delivered in part with La Laguna University, where students and staff from both institutions simultaneously undertake a programme of study that includes several excursions.

MODULE AIMS – intentions of the module

The aim of this module is to gain practical experience in island biodiversity and conservation, and consolidate learning over the previous seven months. The module explores a real model system (Tenerife, Canary Islands), and how biodiversity is protected through several natural area networks and species catalogues, despite being subjected to increasing economic development and mass tourism. You will meet with local policy makers and the technical staff of these protected areas to complement the theoretical approach developed during the MSc course.

INTENDED LEARNING OUTCOMES (ILOs) (see assessment section below for how ILOs will be assessed)
On successful completion of this module **you should be able to**:

Module Specific Skills and Knowledge:	
1	Discuss the main impacts that the economic development model is exerting over the natural areas
2	Propose solutions for making compatible conservation and local population development
3	Discuss the political criteria existing behind the conservation decisions
Discipline Specific Skills and Knowledge:	
4	Apply statistical and modelling skills to understand and interpret quantitative analyses using the more important statistical computational tools and packages
5	Analyse scientific results and determine their strength and validity
Personal and Key Transferable/ Employment Skills and Knowledge:	
6	Communicate effectively through oral presentations, written reports, posters and scientific publication
7	Demonstrate management skills, such as decision-making, problem definition, project design and evaluation, risk management, teamwork and coordination, and resource and time management
8	Integrate and evaluate information from a variety of sources using state-of-the-art communications

SYLLABUS PLAN – summary of the structure and academic content of the module

Whilst the module's precise content may vary from year to year, it is envisaged that the syllabus will cover some or all of the following topics:

Island Conservation in Action:

- Visit protected area of the Canary Islands local network and Natura 2000 European network: Teno Rural Park, Anaga Rural Park, Malpals de Gulmar Special Natural Reserve and Las Canades de Teide National Park
- Discussions with Conservation experts about the main problems faces in the different areas visited and ongoing conservation and restoration carried out there.
- Visits to Tenerife's Island Council Environment Departments and discussion with policy makers and civil servants about the main goals of conservation efforts on Tenerife
- Visit to Canarian Government Environmental Department and analysis of the conservation plans for recovering threatened plant and animal endemic species

- Visit to La Laguna University and contact with staff and student of the local Islands Ecology Research Group, for discussions about:
- Natural webs in Tenerife
- Tenerife natural areas organisations and management
- Tenerife endangered species management
- Tenerife on-going ecological restoration projects
- Climate Change impact on the Canaries

LEARNING AND TEACHING

LEARNING ACTIVITIES AND TEACHING METHODS (given in hours of study time)

Scheduled Learning and Teaching activities	75	Guided independent study	75	Placement/study abroad	0

DETAILS OF LEARNING ACTIVITIES AND TEACHING METHODS

Category	Hours of study time	Description
Scheduled learning and teaching	15	Class based activities and lectures
Scheduled learning and teaching	60	Field work on Tenerife
Guided independent study	60	Pre-reading for lectures - accessible via UoE VLE
Guided independent study	15	Writing up and finishing assessment(s)

ASSESSMENT

FORMATIVE ASSESSMENT - for feedback and development purposes; does not count towards module grade

Form of Assessment	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Field quizzes	10 questions	1, 5	Oral

SUMMATIVE ASSESSMENT (% of credit)

Coursework	0	Written exams	0	Practical exams	100

DETAILS OF SUMMATIVE ASSESSMENT

Form of Assessment	% of credit	Size of the assessment e.g. duration/length	ILOs assessed	Feedback method
Presentation	100	12 – 15 minutes individual / 45 minutes group	2-4, 6-8	Written

DETAILS OF RE-ASSESSMENT (where required by referral or deferral)

Original form of assessment	Form of re-assessment	ILOs re-assessed	Time scale for re-assessment
Presentation	Presentation	2-4, 6-8	Four weeks from the date feedback was given

RE-ASSESSMENT NOTES

One assessment is required for this module. In all cases re-assessment will be the same as the original assessment. Where you have been referred/deferred for any form of assessment detailed above you will have the opportunity to retake within the period specified above from the date that feedback was provided.

If you pass re-assessments taken as a result of deferral, your re-assessment will be treated as it would be if it were your first attempt at the assessment and the overall module mark will not be capped.

If you pass re-assessments taken as a result of referral (i.e. following initial failure in the assessment), the overall module mark will be capped at 50%.

RESOURCES

INDICATIVE LEARNING RESOURCES - The following list is offered as an indication of the type and level of information that you are expected to consult. Further guidance will be provided by the Module Convener.

Key texts:

- **Ashmole, P. & Ashmole, M. (2027) Natural History of Tenerife (Whittles).**
- **Fernandez-Palacios, et al. (2007) Los bosques termofilos de Canarias (Cabido Insular de Tenerife)**
- **Fernandez-Palacios, et al. (2019) The Laurisilva. Canaries, Madeira and Azores. (Macaronesia Editorials)**

Web-based and electronic resources:

Other resources:

- A booklet about the excursion (to be prepared) with important logistic and scientific info will be given to student groups with enough time. Contents of this booklet will include:
  - pdfs of relevant (biodiversity and conservation) literature
  - web addresses of institutions to be visited
  - map of the island protected areas
  - logistic info

CREDIT VALUE	15	**ECTS VALUE**	7.5
PRE-REQUISITE MODULES	None		
CO-REQUISITE MODULES	None		
NQF LEVEL (FHEQ)	7	**AVAILABLE AS DISTANCE LEARNING**	No
ORIGIN DATE	04/08/2018	**LAST REVISION DATE**	27/04/2023
KEY WORDS SEARCH	Island, biodiversity, paleoecology, conservation, fieldwork, ecology, protection, species, catalogue		