

CertHE (1 Year Full Time)  
FdSc (2 Years Full Time)  
FdSc (3 Years Part Time)

# MARINE BIOLOGY WITH CONSERVATION

Cornwall College Newquay

# A unique course that prepares you for a career in marine biology and conservation

“The ocean makes the Earth habitable, everything is connected, there can be no healthy planetary ecosystem without a healthy ocean. .... To protect the ocean we need to understand it.”

Peter Thompson, United Nations Secretary-General's Special Envoy for the Ocean.

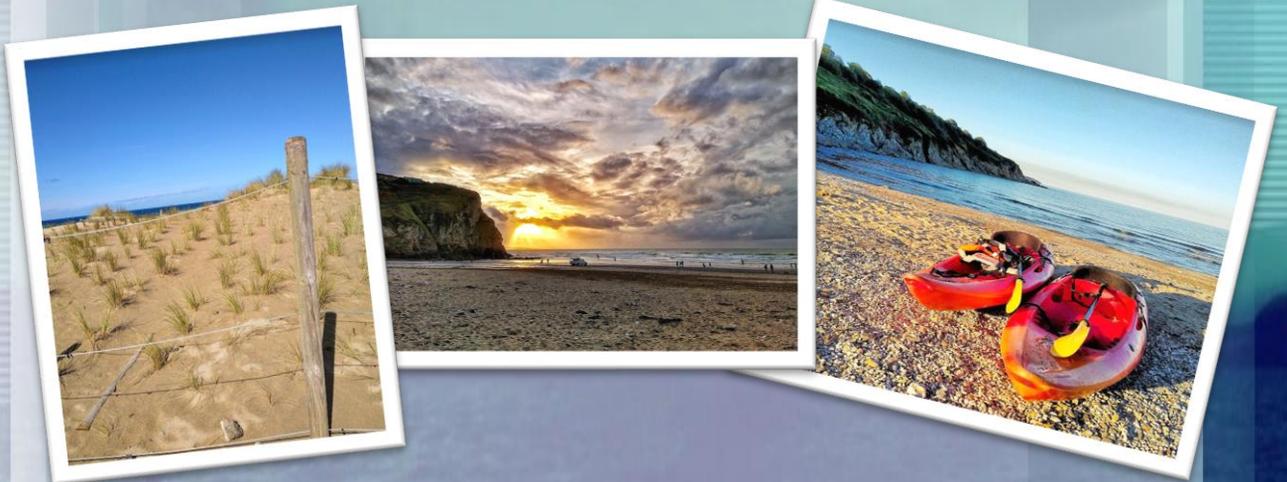


What is more exciting or enigmatic than the life in our oceans? We still know so little about this alien world which makes up 98% of the living space on our planet - forget space, the ocean is the final wild frontier out there to explore. It is an exciting time to be involved in any aspect of marine science; a crucial one too, as our impact on the world's oceans has never been greater. There has never been a more urgent need for impassioned marine biologists who can speak for the ocean and its inhabitants. So much so that The United Nations has proclaimed 2021-2030 to be the Decade of Ocean Science for Sustainable Development.



# A unique course that prepares you for a career in marine biology and conservation

Where better to study marine life and conservation than here in Cornwall? A county which has always been intricately linked to the seas around it. A range of aquatic habitats from wild to sheltered coast, freshwater streams, saltmarsh and estuary is all accessible within 20 minutes walking from the campus, with an additional variety of habitats a short drive away. In addition there is a local dive school with a range of dive courses on offer, a research-equipped vessel for coastal work operating out of Newquay harbour.



We are so lucky to have an active and an enthusiastic marine conservation community in Cornwall, from local marine community groups like Newquay Marine Group to charities such as Cornwall Wildlife Trust, Cornwall Seal Group Research Trust and British Divers Marine Life Rescue giving ample opportunities for students to join in ground roots conservation work whilst they study.



# A unique course that prepares you for a career in marine biology and conservation



As a college which has always focused on the applied nature of Foundation Degrees, employability and real-world relevance is at the heart of everything we do. To that end, there is considerable emphasis on building practical skills and survey experience, underpinned by a strong academic and scientific core. To complement your degree you will receive funds to undertake courses in relevant skills such as diving or boat handling.



# A unique course that prepares you for a career in marine biology and conservation



Finally, you will be based in our fantastic rural campus in the heart of Newquay, with a small, family feel. The staff are research active and bring that expertise to the class. We often encourage students who write exceptional and publishable project reports to co-write their work for scientific publication, with them as the lead author. Students will be 10-30 minutes' walk from a range of north Cornish coast habitats, a dive school with a range of dive courses on offer, a local and very active marine conservation group, a research-equipped vessel for coastal work and are 45 minutes' drive from an additional range of south Cornish coast habitats.



# The modules – first year

## **Our Ocean Planet (40 credits)**

About 70% of planet Earth is covered by our oceans and yet it remains poorly understood, poorly explored and poorly managed. It is our global dustbin and yet, it regulates our climate and has profound influences and impact on everyday human life. This module aims to produce students who are ocean literate by the definitions promoted by UNESCO. The Learning Outcomes are principally based around the seven ocean literacy principles and the need to be able to communicate these to others.



## **Marine Survey Techniques (20 credits)**

In order to conserve the ocean, we must first understand it and to understand it we have to know how to explore it! This module is designed to introduce the skills needed to investigate marine life and habitats safely and responsibly. Theory of effective survey design is taught practically through a series of field and laboratory workshops. These will be reviewed and underpinned with class sessions to develop skills and understanding of survey design, data collection, data handling and analysis. Students will be introduced to the principles of GIS and how to use this to produce maps.



# The modules – first year

## Diversity of Life (20 credits)

We live amongst a tremendous diversity of life. But what are their features? How are they related to each other? How do we identify them? How did they evolve? What is evolution? This module aims to answer those questions and provide students with the foundation on which to build their understanding of species biology.



## Fundamentals of Biology (20 credits)

Our sheer diversity of life depends upon a myriad of biological processes. In this module, we look at the organ systems and delve deeper, looking at the cellular and biochemical processes that allow those organs to work the way they do. Add in a sprinkling of genetics and students have the foundation of organismal biology that will aid their future studies.



## Skills for Scientific Success (20 credits)

The ability to process and analyse raw data, find patterns and communicate findings to others is a critical skill in the sciences. This module aims to produce students with the necessary toolkit to handle data, apply appropriate methods to establish patterns and to communicate findings to different audiences and/or stakeholders. This module also emphasises the need to plan for future developments and skill specific career opportunities in the sciences.

# The modules – second year

## **Marine Vertebrate Biology and Conservation (20 credits)**

This module explores the functional biology of marine vertebrates, focussing especially on key conservation flagship species from fish, marine reptiles, seabirds and marine mammals. The feeding, physiological and morphological adaptations to the marine environment, locomotion and migration, social and reproductive behaviour will be explored using case studies and related to their conservation.

## **Marine Invertebrate Biology and Conservation (20 credits)**

This module provides an introduction to the biology and ecology of keystone marine invertebrates including cnidarians, molluscs, crustaceans, and echinoderms with particular reference to local species in Cornwall and south-west England. Emphasis will be directed towards unique adaptations and characteristics of the key phyla as well as major conservation issues surrounding marine invertebrates.



## **Field Studies in Marine Systems (20 credits)**

This module builds on and reinforces the skills developed in Marine Survey Techniques 1 in order to enable students to plan and undertake marine practical work and scientific investigations effectively, safely and responsibly.



# The modules – second year

## **Husbandry and Conservation of Aquatic Organisms (20 credits)**

This module considers the scientific principles required to establish and maintain aquaria and explores conservation issues and practices as they apply to aquatic organisms.



## **Marine Biology in Practice (20 credits)**

It is important that the ocean scientist is able to communicate what they have learned to the wider public. However, that learning is also valuable to the scientist: this is the accrued experience that will allow them to progress to future employment. This module teaches students how to educate the public, and also to record and reflect on experiences that benefit themselves.



## **Individual Research Project (20 credits)**

This module gives students the opportunity to conduct their own research project. Student involvement and responsibility stretches from project conception and planning, literature research, analysis and interpretation of data to report writing and presentation. A large range of marine subjects can be investigated in more detail.

# Tickets, work experience and residential fieldtrips

## Tickets

Tickets is the name we give to short courses and smaller qualifications. We guide you to choose the right tickets to improve your employability in the module *Skills for Scientific Success* and assess you on what you have learnt from doing them in *Marine Biology in Practice*.

## Work experience

We put a lot of emphasis on work experience and volunteering and we guide you in getting it. It is launched in *Skills for Scientific Success* and assessed in *Marine Biology in Practice*. The more you do, the more accompanying experience you get, the richer the CV, the more you can talk about in your cover letters and interviews. Furthermore, you meet more people, who might give you a job or reference or know someone who has a vacancy. Finally, it fires you up to want to do better in your academic work.

## Residential fieldtrips

We have expertise in delivering optional trips, having organised them in various locations like the Hebrides, Egypt, Basque Country, Borneo, Kruger and Honduras (the last of these with Operation Wallacia).



# Progression and entry requirements

## Progression

The FdSc Marine Biology with Oceanography course can progress on to the final year of the BSc (Hons) Applied Marine Zoology course that we run here at Newquay. This is a University of Plymouth-validated course that we have designed and run. This means that after three years of study, you can come out with a University of Plymouth-awarded BSc (Hons) degree.

An alternative progression route would be the BSc (Hons) Environmental Resource Management top-up, which is also a University of Plymouth-awarded course. Or there is the BSc (Hons) Applied Zoology top-up (with caveats on module choice), which is also a University of Plymouth awarded course. Both of these are delivered at Newquay, meaning no disruption in your education and living arrangements.

Alternative, you could apply through UCAS for other courses. However, they may ask you to enter into their second year of study.

## Entry requirements

The CertHE is a one year course, designed to follow into the second year of the FdSc on completion. It requires Cs/4s at GCSE Maths, English and Science or Functional Skills Level 2 in Literacy and Numeracy. 48 UCAS points in relevant Level 3 subjects are required. Application is via UCAS for the full time route. If you do not meet these requirements, we run a Science Gateway one-year course that is HE funded. On successful completion of the CertHE, you can enter the second year of the FdSc Marine Biology and Oceanography course.

The FdSc is a two-year course and requires Cs/4s at GCSE Maths, English and Science or Functional Skills Level 2 in Literacy and Numeracy. 64 UCAS points in relevant Level 3 subjects are required. Application is via UCAS for the full time route.

If you are a mature student, we have some flexibility on entry requirements and can take on board career experience.

# Academic and pastoral care, and student activities

## **Pastoral care**

We have a great team to provide support for your mental health, accommodation and financial issues. This team can refer you on to a number of other support services. You are assigned a personal tutor as well, who is your first port of call.

## **Academic support**

We have a great team in the Learning Centre who will assist in helping you use the Learning Centre, structure your notes and academic work and assist with any issues including revision support. In your first week we have a comprehensive induction process to make sure you start your academic career with us with every success.

## **Student activities**

Newquay is a predominantly higher education environment yet we have only a few hundred students on site. Classes are small and the staff team friendly. Whilst there is not a series of student clubs on site, Newquay as a town has a lot of clubs and societies, and they welcome student involvement. There is a Cornwall College Student Union presence on site and they organise activities through the year – and you can get involved in the running of this too. Finally, the Student Engagement Teams will often run trips and events, in support of the Student Union,



# Careers and contact details

## Careers

This course builds on a 20+ year heritage in delivering marine degree courses at Cornwall College. The easiest way to describe what jobs you could go on to do would be to talk about where previous graduates have gained employment from earlier versions of our courses. Our graduates have gone on to work in turtle conservation, wildlife guiding, research (e.g. seals, turtles, manta rays, coral reefs, plankton dynamics, etc). We have primary school teachers, dive instructors, environmental educators amongst our graduates. We have marine managers who have worked for Natural England, Marine Management Organisation, Inshore Fisheries and Conservation Authorities, county councils and the Environment Agency. We have had those go on to work in public aquaria like Blue Reef and the National Marine Aquarium in Plymouth. Even the Marine Biological Association as research ship manager! Be prepared to think nationally and internationally. Our students *do* on our courses, which shows employers they can *do* in the world of work.



## Contact

If what you have read grabs you, book on to a taster day or email [newquay@cornwall.ac.uk](mailto:newquay@cornwall.ac.uk) and we will get back to you for a chat by phone, video conference or in person. Alternatively, ring the number on the Cornwall College website ([www.cornwall.ac.uk](http://www.cornwall.ac.uk)) and we will call you back.

CertHE (1 Year Full Time)  
FdSc (2 Years Full Time)  
FdSc (3 Years Part Time)

# MARINE BIOLOGY WITH CONSERVATION

Cornwall College Newquay  
Wildflower Lane  
Trenance Gardens  
Newquay  
TR7 2LZ

© 2022. All information contained within was  
correct at the time of print.

We reserve the right to change module names,  
content and other details contained within this  
document.