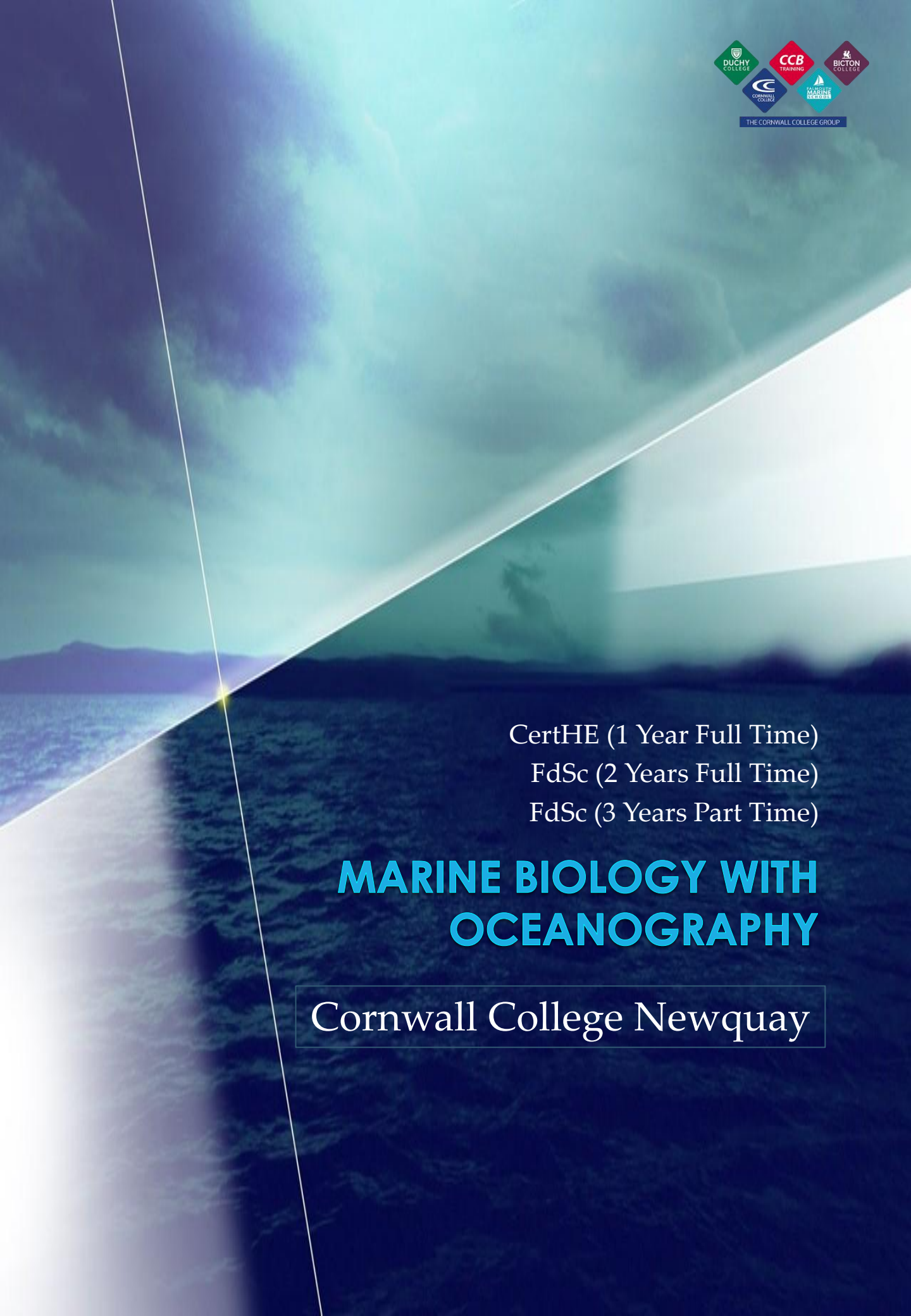


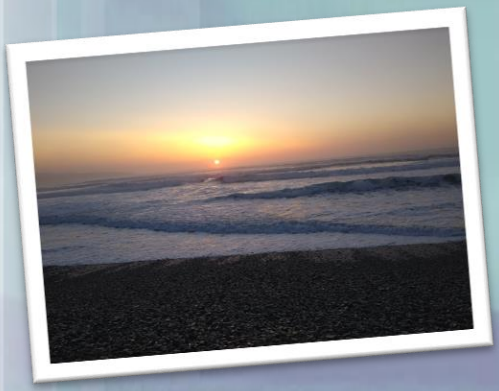
CertHE (1 Year Full Time)
FdSc (2 Years Full Time)
FdSc (3 Years Part Time)

MARINE BIOLOGY WITH OCEANOGRAPHY

Cornwall College Newquay

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

The United Nations has proclaimed 2021-2030 to be the Decade of Ocean Science for Sustainable Development. Higher education must now produce science graduates capable of realising the ambitious goals of this framework. These graduates must be able to grasp the global scope and timeliness of the issues at hand, to undertake the science required that will provide answers to questions as they arise, then convey these faithfully and articulately to whichever audience needs to hear them.



In this way, the HE sector can produce science graduates that will deliver on the UN aspiration to give us the science we need for the ocean we want. We intend to deliver a programme to produce the graduates this decade – and decades beyond – need for a sustainable ocean. A sustainable planet.

You will be starting a journey on a marine programme like no other.

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

To our knowledge, no other degree programme in the UK has embedded the UNESCO-promoted Ocean Literacy programme to this extent. We can find no other course that has based a first-year module around this programme by using the seven ocean literacy principles as Assessed Learning Outcomes.

You will be embarking on a programme of study which embeds science communication. In each year, there is a specific module where science communication and education/interpretation/outreach are taught, and it forms part of the assessment. In addition, other modules have learning outcomes that make the dissemination of marine scientific knowledge a core attribute.

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

In your second-year you will engage with a suite of three 20-credit modules that are heavily active and field-based. You will collect data, maintain equipment and publish recordings in an approach that is designed to be as practical as possible, with repeated attempts at activities that then embed you with their applied skillset. These modules cover biological, chemical and physical oceanography, thereby equipping you with the skillset to become a technician in these fields, or well prepared to gain higher level qualifications to enable a research-related career.

You will be undertaking a module that cultivates your sense of entrepreneurship. This module teaches you the past achievements in marine resource use, allows you to develop your GIS skills in mapping the present marine resource use from a marine spatial planning perspective and then explore new products from marine resources – including learning about how these could be marketed.

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

You will be based in a fantastic rural campus in the heart of Newquay, with a small, family feel. Our 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.

You 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 you will be 45 minutes' drive from an additional range of south Cornish coast habitats. You will be four hours' travel from the world-famous biodiversity hotspot of the Isles of Scilly, a location for which a residential fieldtrip could be based. There are a number of marine protected areas on your doorstep in which to learn your subject area, including one on your doorstep.

Finally, we have strong links with local conservation and marine organisations to develop your work-related experience, which is a very strong thread through the programme.

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.

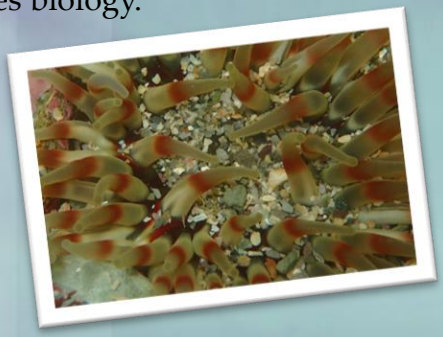
Marine Survey Techniques (20 credits)

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

Applications of Biological Oceanography (20 credits)
Applications of Chemical Oceanography (20 credits)
Applications of Physical Oceanography (20 credits)

In the first year, biological, chemical and physical oceanography was introduced as part of the wider concept of Ocean Literacy. In this suite of second year modules, the theoretical underpinning of oceanography will be strengthened. However, all three 20-credit modules will focus on long term data collection, contributing to, and maintaining, a website called **Newquay Marine Observatory**.

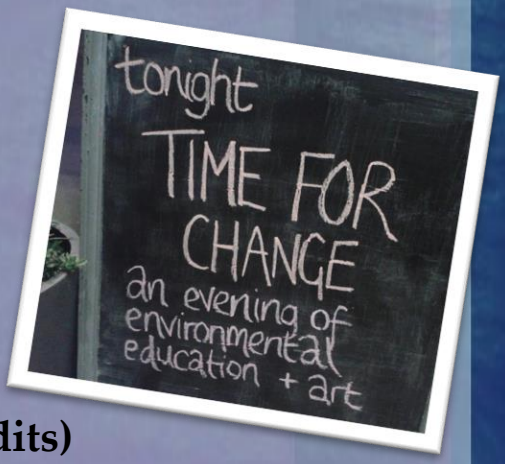
The modules – second year

Marine Resources Innovation and Management (20 credits)

In this module students learn about the range, impact and potential of historical and present exploitation of marine resources. Students consider this in the light of contemporary environmental and political constraints and, given these, devise a new marine product or service.

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 past expertise in delivering optional residential 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, hydrology, mapping, 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 and we will get back to your for a chat by phone, video conference or in person. Alternatively, ring the number on the Cornwall College website (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)

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Cornwall College Newquay
Wildflower Lane
Trenance Gardens
Newquay
TR7 2LZ