



Programme Specification

NSC-2024: BSc Nautical Science

B&FC Bachelor of Science with Honours awarded by Blackpool And The Fylde College (FHEQ Level 6)

Programme Status: Draft | Version: 1

Introduction

This programme specification provides a summary of the main features of the BSc Nautical Science programme and includes the learning outcomes that you as a student are expected to have achieved on successful completion of the programme.

Further detailed information related to this programme and the College can be found in the following resources:

- Programme Handbook
- B&FC Admissions Policy
- Work based and placement learning handbook (for foundation degrees)
- Student guide to assessment and feedback

When undertaken as part of a Degree Apprenticeship additional information is available in the following resources:

- The Programme Delivery Plan
- The End Point Assessment Guide
- B&FC Mentor Guide
- B&FC Apprenticeship Strategy

Key Programme Information

Programme Code	NSC-2024
Programme Title	BSc Nautical Science
Teaching Institution	Blackpool and The Fylde College
Professional, Statutory and Regulatory Body (PSRB) Accreditation	None
UCAS Code	
Language of Study	English
Version	1
Approval Status	Draft
Approval Date	Not yet approved
JACS Code	Other: Other
Programme Leader	Alex Barlow

Programme Awards

Award	Award Type	Level	Awarding Body
B&FC Bachelor of Science with Honours	Honours Degree (360 credits)	Level 6	Blackpool And The Fylde College

Programme Overview

The BSc (Hons) in Nautical Science is part of a suite of degree programmes for the maritime industry that will provide you with the knowledge, skills and behaviours needed for a career in commercial shipping. Approved by the Maritime and Coastguard Agency (MCA) and the Merchant Navy Training Board (MNTB), this three-year programme combines academic education with vocational training and 12 months' industrial placement on board ships, leading to the award of Officer of the Watch (OOW) Certificate of Competency (CoC).

Regarded as one of the UK's top maritime education and training providers, Fleetwood Nautical Campus (FNC) has strong industry partnerships, which could open the door to excellent employment opportunities. Many of our students come with sponsors to facilitate their sea time

to obtain their OOW CoC.

This programme is aligned to support your progression through knowledge acquisition at both the operational level and managerial level, as directed by the Standard of Training, Certification and Watchkeeping (STCW) 1978, as amended, in addition to wider skills sought by industry. This is achieved by meeting the requirements of the MCA and following a Merchant Navy Training Board (MNTB) approved training programme. In addition to this programme providing a full accelerated honours degree, most students on the programme will also undertake a cadet training programme that runs alongside the academic award. You will cover topics such as STCW basic training in vocational areas such as first aid, fire fighting and survival at sea, alongside courses such as enclosed space rescue.

Programme Structure

The programme is delivered across 150 weeks (3 years) and broken down into five phases: phases 1, 3 and 5 will be delivered at college whilst phases 2 and 4 will be spent obtaining industrial experience. Industrial experience will normally be achieved through sea time, when sponsored by a shipping or training company, meeting the MCA requirements. However, this qualification could be relevant for other aspects of the maritime industry should you choose to move into shoreside roles.

Phase 1

There are a number of key aspects to the maritime industry that this programme covers: navigation, operations, and business, law and management, all supported by the development of transferrable skills/graduate attributes that you can utilise in any industry. Phase 1 introduces you to the key concepts in each of these three fields – how navigation is carried out safely and practically, how ships carry out operations safely and the basis for the procedures underpinning both of these in law. The key objective here is not to make you experts in the fields of nautical science, rather to equip you with the skills to learn in the workplace and to enable you to behave in a safe and appropriate manner, where risk management is an essential tool in everyday life.

You will also be developing your academic skills: how to engage with industry and academic literature, how to handle data, how to communicate effectively and appropriately in an academic context as well as many other related skills.

In addition, during Phase 1 you will also undertake vocational training involving several safety training courses designed to provide you with the basic training for seafarers.

Phase 2

During Phase 2, you can expect to be working on board a ship as a deck cadet, undertaking daily duties which may range from the menial – basic maintenance and cleaning windows – to the highly rewarding – bringing a large commercial vessel into port safely. You will apply your knowledge and understanding from Phase 1 during this time, thinking about how underpinning theories and concepts relate to what you are experiencing in the day-to-day life of the ship.

If you are completing the integrated cadetship, during your sea phases you will complete a Training Record Book (TRB), a list of tasks that must be signed off by officers onboard; this list is aligned to the industry's National Occupational Standards. You will also write up a Navigation and Shipboard Operations workbook, showing you understand how to complete the tasks identified in the TRB.

If you wish to study the programme but do not have a sponsor, B&FC will help make introductions if required.

Phase 3

Phase 3 will build upon the knowledge gained during your initial modules, as well as industrial

experience acquired during Phase 2. Now at Level 5, you are expected to deepen your understanding of the subject areas and start to think more critically about the core concepts and theories in the field. You will also engage with some of the more advanced concepts of navigation, such as electronic navigation and ship handling, as well as shipboard operations – keeping the vessel stable in both intact and damaged condition; and ‘business, law and management’, where you will learn more about leading a team and ensuring legal compliance. You will also undertake further advanced training courses required for certification as a deck officer.

Phase 4

Phase 4 follows a similar format to Phase 2 – you should now be focussing more on understudying the role of the officer of the watch, as well as learning about the managerial concerns of the master and chief mate.

Phase 5

Phase 5 will be the culmination of your studies, you will use all of your acquired skills to pass final courses and prepare for the MCA Oral Exam, which you must pass to obtain your Certificate of Competency as an Officer of the Watch.

You will also complete your level 6 studies, with a focus on the wider industry and expanding beyond the shipboard context in order to enhance your employability in a broader range of maritime jobs as well as to have better understanding of the strategic and business context that impacts on shipboard operations, making you more valuable to employers.

Admission Criteria

You will need to meet the following criteria to be applicable for consideration of a place on this programme;

- 60 UCAS points at A/AS level, including subjects which support the application
- GCSE Mathematics (level 5 or above), Science and English Language (level 4 or above), or equivalent letter grades
- If English is not your first language, an IELTS score of 5.5 or equivalent, achieved within the two years prior to applying for the programme
- Other qualifications that are equivalent to the above (normally, the programme team will review evidence supplied by mature, non-standard applicants regarding their ability to undertake the programme)
- The award of credits via Recognition of Prior Learning (RPL) will be assessed on an individual basis

We will also consider your application if you have a Level 3 Diploma in Shipping and Maritime Operations with a letter of recommendation on your aptitude for studying at degree level.

You will need to pass an industry-standard medical examination (ENG1) in order to complete a placement at sea; it is strongly advised that you complete this prior to enrolment on the programme.

Career Options and Progression Opportunities

If you complete the programme, alongside the required industrial experience and safety courses, you will have the opportunity to be assessed by the MCA to gain Deck OOW Unlimited CoC. This would normally enable you to take up the position of third or second officer on board a vessel. On completion of the required sea-going service and appropriate additional training, you could then qualify for Chief Mate and Master Certificate of Competency.

Should you be successful, you will also have the option of pursuing one of a variety of shoreside positions available in the maritime industry, among them: ship management, fleet operation, shipbroking, marine insurance, finance, ship repair and shipbuilding, equipment manufacturing, port operations, maritime education and training, surveying and inspecting as well as maritime administration.

You will have the opportunity to progress onto master's degree programmes in related fields, such as those offered at Liverpool John Moores University, Solent University, MLA College, Plymouth University and World Maritime University.

Programme Aims

- To develop students with general and specialist maritime knowledge and technical skills
- To develop students with analytical, critical and problem solving skills
- To prepare students to interact safely and effectively in compliance with legislation in the context of the maritime industry
- To prepare students to manage people by developing leadership, communication and interpersonal skills
- To provide students with knowledge and skills relating to shipboard operational management including planning, resourcing and enhancing procedures
- To integrate technical and academic skills that develop students' graduate attributes in support of lifelong learning and career progression

Programme Learning Outcomes

Level 6

Upon successful completion of this level, students will be able to:

1. Demonstrate general and specialist maritime knowledge and technical skills
2. Exercise analytical, critical and problem-solving skills
3. Assess ethical issues faced by/in the maritime industry relating to legislative and contractual compliance and application of sustainability goals
4. Apply digital skills appropriate for operating in an increasingly data-driven maritime industry
5. Lead and manage people by using effective communication and interpersonal skills
6. Evaluate the participation in and management of safe, sustainable shipboard operations including planning, resourcing and quality enhancement
7. Analyse the impact that the wider maritime industry has upon the shipboard context

Programme Structure

Module	Level	Credits	%	Category	Description	Length/Word Count	Grading Method
Stage 1							
MAR422: Marine Engineering Operations (Mandatory)	4	20	-	Practical: Practical Skills Assessment	Safe Working Practices	0	Pass/Fail
			100%	Coursework: Assignment	Written assignment understanding and application of various aspects related to engineering systems and safety practices on board commercial vessels.	2500	Letter Grade
MAR423: Stability and Structures (Mandatory)	4	20	100%	Written Exam: Formal Written Examination	Stability and Structures Exam	150	Percentage Grade
MAR424: Academic and Digital Skills (Mandatory)	4	20	100%	Coursework: Case Study	Data and Computing Case Study	4000	Letter Grade
MAR425: Maritime Safety & Emergency Response (Mandatory)	4	20	100%	Coursework: Assignment	Safety and Emergencies	2000	Letter Grade
			-	Practical: Practical Skills Assessment	Practical skills assessment to evaluate students' proficiency in safely handling oil and chemical cargoes on board ships	0	Pass/Fail
NSC421: Bridge Operations (Mandatory)	4	20	100%	Written Exam: Formal Written Examination	Meteorology Exam	120	Percentage Grade
			-	Practical: Exercise	Bridge Watchkeeping Skills	0	Pass/Fail
NSC422: Navigation (Mandatory)	4	20	100%	Practical: Software Program	CelNav, Sailings and Tides Assessment	180	Percentage Grade
Stage 3							
MAR521: Maritime Leadership and Law (Mandatory)	5	20	-	Practical: Presentation	Oral Questioning on HELM	10	Pass/Fail
			100%	Coursework: Literature Review	Literature Review of Law	3000	Letter Grade
MAR522: Stability and Stresses (Mandatory)	5	20	100%	Coursework: Case Scenario	Stability and Stresses Scenario	4000	Letter Grade
NSC521: Cargo Planning (Mandatory)	5	20	100%	Practical: Presentation	Vessel Operations Presentation	20	Letter Grade
NSC522: Electronic Navigation (Mandatory)	5	30	100%	Coursework: Project	Justified Passage Plan	4000	Letter Grade

NSC522: Electronic Navigation (Mandatory)	5	30	-	Practical: Portfolio / e-Portfolio	NAEST Criteria	0	Pass/Fail
NSC523: Bridge Management (Mandatory)	5	30	50%	Coursework: Evaluative/ Reflective Report	Ship Handling Reflective Log	1500	Letter Grade
			50%	Coursework: Plan	Justified SAR Plan	1500	Letter Grade
			-	Practical: Exercise	Bridge Watchkeeping Skills	0	Pass/Fail
Stage 5							
MAR621: Maritime Business and Projects (Mandatory)	6	20	50%	Practical: Timed Assessment	Commercial Law Timed Assessment	2000	Letter Grade
			50%	Practical: Presentation	Finance and Projects	20	Letter Grade
MAR622: Advanced Tanker Operations (Mandatory)	6	20	-	Practical: Practical Skills Assessment	Tanker Courses	0	Pass/Fail
			100%	Coursework: Case Scenario	Justified Load/Discharge Plan	2000	Letter Grade
MAR623: Digital Ship Management (Mandatory)	6	20	25%	Coursework: Project	Applied data science project	1000	Letter Grade
			75%	Coursework: Report	Evaluation of digital technologies in the maritime context	3000	Letter Grade
MAR624: Dissertation (Mandatory)	6	40	80%	Coursework: Dissertation	Dissertation Report	8000	Letter Grade
			20%	Practical: Presentation	Preliminary Research Presentation	20	Letter Grade
NSC621: Sustainable Maritime Development (Mandatory)	6	20	100%	Coursework: Essay	Sustainable Maritime Business Essay	4000	Letter Grade

Study Workload

It is important to understand that this is an intensive programme of study. You will be required to study modules at a rapid pace throughout your college phases. This means you can expect full working days at college for much of your time and individual studies on top of that in your own time. The payback for this is that you get a full honours degree in three years in addition to all the prerequisites to apply for your MCA CoC examinations whilst getting paid.

If you wish to discuss the expectations for the programme, please enquire and a member of the programme team will be happy to discuss this with you.

Programme Delivery: Learning and Teaching

Throughout your programme you will learn and be assessed in a range of ways to support the overall aims and outcomes of the programme in order to equip you with the appropriate skills for roles within the maritime industry. Employers will be looking for a range of skills and competencies, including innovation and initiative. Employers want you to have strong communication and team-working skills. The programme promotes the development of these qualities alongside technical competencies and academic knowledge.

The programme utilises a mix of classroom-based lectures and seminars as well as more practically oriented sessions using Fleetwood Nautical Campus's world-leading simulator facilities. This gives you the opportunity to learn theories and principles *and* see how they apply in practice.

Resources

The resources to support you in your studies include books, ebooks and journals, as well as B&FC's Learning Management System (LMS). The Learning Resource Centre provides access to all relevant publications, as identified on the reading lists. You will receive access to maritime specific documents and ebooks with membership to Witherby publications and Regs4Ships, an online curated repository of conventions, codes and regulations relevant to the maritime industry.

Additionally, as a maritime cadet you are entitled to free student membership in the Nautical Institute and the Institute of Marine Engineering, Science and Technology (IMarEST) and this will allow you to access international journals and e-books relating to all areas of the programme. The campus has also invested in access to Ocean Learning Platform, which is used to supplement classroom-based learning to provide access to a repository of bite-sized courses and videos designed for maritime industry.

Academic and Pastoral support

If you have subject specific issues or would like a focused learning environment to work, clinics are available each evening from Monday to Thursday. Typically, there are at least two staff members available each evening providing support for a range of subjects and levels. This is used to provide support where you feel you require extra support or want to further develop skills and knowledge.

This is in addition to the Partners for Success framework, where subject lecturers and progress tutors can identify support mechanisms and ensure that you are provided with the best possible opportunities to engage fully with your learning experience and the full life of B&FC. This support allows you to truly be a partner in your own success. This includes Higher Education Learning Mentors, who provide broader support for your studies outside of the maritime-specific context.

The college also invests heavily in providing extensive support for your wellbeing during your studies with a blend of self-serve materials for you to develop your resilience, together with access to the Health Assured 24/7 helpline for all sorts of individual concerns and a team that will support your application for any assessment access arrangements.

Programme Delivery: Assessment

The assessment strategy for this programme is something we hope will really set this programme apart for you. In addition to more traditional assessments such as exams and coursework, practical assessment through simulation has been woven throughout the fabric of the programme and by being assessed in practical contexts in simulators and through giving presentations and fielding questions, you will get the chance to develop your ability to convey your professionalism. This will be great for your confidence in going and *doing* the job in the real

world and also for you to have confidence to truly sell the skills you have developed as a marine professional.

Timing of Reassessment

You must pass each level of the programme before you can proceed to the next. Given that it is expected that straight after you complete Level 4 and Level 5 you will proceed to sea to obtain sea time for your CoC. The typical expectation will be that you undertake reassessment during your sea phase so that your progression can be confirmed prior to your enrolment for the next college phase.

Additional Rules for Exemption from MCA Written Safety Papers at the OOW Level

It is important to know that, in accordance with the *MCA Training & Certification Guidance: UK Requirements for Master and Deck Officers*, it is required that you achieve an overall average mark of 50% or more in order to successfully achieve the Certificate of Competency.

In addition, you will need to obtain a mark of 60% (or B- for letter graded assessments) in each assessment in 'Navigation' and 'Stability and Operations'; the relevant assessments are itemised below. Achieving these grades will allow you to claim an exemption from external SQA OOW examinations. Should the rules governing this exemption change in the duration of the programme, the programme will operate in accordance with the up-to-date requirements of government. You will be given a 2nd attempt at meeting any higher MCA pass mark even if you already achieved the minimum module pass mark.

Because of the very high pass marks required by the MCA, you may, at the sole discretion of the board of examiners, be given the opportunity to undertake an exceptional 3rd attempt to meet the higher MCA pass marks. This would be authorised by the board of examiners when being considered for the degree award. The board of examiners will agree if you should be offered an exceptional 3rd attempt on the basis that you meet both of the following criteria:

- You have no more than 4 assessments below the higher MCA pass mark outstanding at the end of the programme across the full programme (when all 2nd attempts have been exhausted)
- You have achieved the degree with no failed modules

The board of examiners will agree a period in which you will be able to revise the subject(s) using the same digital and physical resources you used for the original delivery of the module, supported by the ordinary clinics and other facilities offered to FNC students. Ordinarily, this would be no more than four months for all third attempts to be completed. If there is an unforeseen circumstance interfering with 3rd attempts, you will have the same opportunity to apply for Personal Mitigating Circumstances or Interruption of Study as you would have at any other point in the programme.

Any marks obtained in a 2nd or 3rd attempt, taken solely for the purpose of meeting the MCA criteria, will have no impact on the module mark or the classification of the degree.

Level 4 assessments with higher pass mark

- Stability and Structures Exam
- Navigation Exam

Level 5 assessments with higher pass mark

- Stability and Stresses Coursework
- Electronic Navigation Coursework
- Bridge Management Coursework

Programme Delivery: Work Based and Placement Learning

This Honours Degree is typically expected to form part of an integrated training programme where you are sponsored by a company or training provider. They will provide you with a berth on a ship to work as a cadet. You will undertake a range of associated short courses that, combined with this Honours Degree, will lead to you obtaining your Officer of the Watch Certificate of Competency.

During your time on board, you will complete a Training Record Book and Navigation and Operations Workbook.

You also will engage in a number of industry standard short courses as a part of this qualification which puts you in simulated real-world conditions.

The programme helps you to develop:

Collaborative teamwork and leadership skills

During lessons you will have opportunities to work as a team, communicating with your team members, taking leadership roles when needed, managing groups and working towards a common goal.

Personal and intellectual autonomy

We support your development of independence in academic and practical skills throughout the programme, most prominently in the assignments and projects where you will be responsible for managing your work.

Ethical, social and professional understanding

Mapping of the programme content to the requirements of a degree set by the MCA ensures that the module delivery and assessment considers legal, social and ethical issues to enhance your professional development. You will also need to ensure that the research and findings for your dissertation module meets ethical guidelines with appropriate safeguarding in place.

Communication, information and digital literacies

The programme provides the foundations for developing these skills which are then applied in assessments throughout the programme. This will assist you in researching; engaging critically with material; utilising digital technologies effectively to support discovery, analysis and dissemination of information; collaboration; and reflection. In modules throughout the programme, you will be required to communicate in a range of formats to meet assessment criteria including poster and panel presentations, report writing, digital visualisations, design documents, reflective accounts, and use a range of digital technologies related to your specialist area.

Global citizenship

The programme was developed in consultation with international maritime companies for example, Carnival, Princess Cruises, BP, Chiltern Maritime, Shell and V-Ships. As a global industry, by its very nature, the maritime industry inherently promotes the concept of global citizenship as you will work alongside seafarers from around the world who may hold very different cultural values and expectations from your own. Even within the UK, the pool of candidates is far more cross-sectional across the strata of class backgrounds than many other industries.

Research, scholarship and enquiry skills

This programme will help you in developing skills required for engagement with technical and academic literature as well as data gathering and analysis skills that will help you to become a part of the global scholarly community, should you wish to pursue scholarship at a higher level.

Study Costs: Equipment Requirements

B&FC provide access to key reading materials and other resources as a part of the course costs. You are expected to provide stationery, including parallel rulers and dividers for chart work, celestial navigation and radar plotting, as well as a scientific calculator.

You are strongly advised to have a laptop or equivalent device that you can bring to college as part of your studies as many classes will incorporate technology throughout the learning process. There are limited quantities of laptops available for short-term loan from the LRC if you are not in position to bring your own device to college.

Study Costs: Additional Costs

Incorporated within the programme are a number of short courses that provide you with certification that form part of your application for an Officer of the Watch Certificate of Competency. Uniform and general personal protective equipment, such as safety shoes and boiler suits are required for some of the associated short courses. Sponsors also typically fund all associated short courses that form part of your eligibility for your Certificate of Competency.

If you require MCA Final attempts, these bear a fee that might or might not be borne by your sponsor.

Related Courses

Fleetwood Nautical Campus is home to the Maritime Operations Curriculum Area and offers the following programmes:

This degree forms part of a suite of three Honours Degrees and you will be taught together with the students on these programmes for around half of the programme, which offers a unique opportunity to exchange and share perspectives between curriculum areas as you progress through your maritime training:

- BEng (Hons) Marine Electrical and Electronic Engineering (for Electro Technical Officers – ETOs)
- BEng (Hons) Marine Engineering (for Marine Engineering Officers)

If you are not sure that an Honours Degree is the right pathway for you but you want to work in the Deck Department, you could consider the following alternative programmes we offer:

- Level 3 Diploma in Maritime and Shipping Operations to Advanced Diploma Cadetship – this programme only requires GCSEs and will take you up to Level 5, whilst delivering all your maritime education up to Chief Officer level (also known as SQA or HNC/HND route for Deck Officers). This programme also leads to an Unlimited OOW CoC.
- Advanced Certificate onsite or by Blended Learning for Rating To Officer or Royal Navy to Merchant Navy Conversion, also leading to an Unlimited OOW CoC.
- Seafarer Deck Apprenticeship – if you are interested in becoming a Deck Rating able work on any kind of commercial vessel worldwide – no GCSEs are required and you will get support to attempt Functional Skills during the Apprenticeship
- OOW Near Coastal Apprenticeship – if you're only looking to work on smaller coastal vessels, such as workboats or tugs, this Apprenticeship leads to a more restricted Certificate than the Honours Degree but also has a more flexible academic entry point with no GCSEs required and support to achieve Functional Skills during the Apprenticeship

If you are planning on undertaking a cadetship, be sure to examine each of our pathways to ensure you are on the right pathway for you.

As part of your journey towards a Deck OOW CoC, you will also complete the following short courses, these are typically funded by your sponsor:

- STCW Basic Training For Seafarers
- Efficient Deck Hand
- Proficiency in Survival Craft and Rescue Boats
- Advanced Fire Fighting
- Medical First Aid
- Navigational Aids and Equipment Simulator Training at the Operational Level: NAEST (O)
- Global Maritime Distress and Safety System General Operator Certificate: GMDSS GOC
- Enclosed Space Entry Training
- Training for Seafarers with Designated Security Duties