The Nautical Institute
NI ACADEMY

Professional Short Courses

Command Diploma Scheme

www.nautinst.org/courses

Command Diploma Scheme

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QUALITY ASSURANCE

The NI is accredited with ISO 9001: 2015 and its quality control ensures that the course contents and delivery adhere to those high standards.

Feedback from students and instructors is encouraged and will be used towards improvements in the course.

Contents

Introduction and guidance for candidates

1. What is the Nautical Institute Command Diploma Scheme?

The Nautical Institute Command Diploma Scheme is a self-study programme designed primarily for chief officers aspiring to command, or those who have just taken command, of vessels. Successful completion provides evidence of their readiness to serve successfully in the role of master.

2. How was the Command Diploma Scheme created?

For many years The Nautical Institute has had a Command Diploma Scheme but this was becoming dated and, in early 2014, The Nautical Institute conducted an open survey asking masters what they wished they had known more about when they took command. It also asked those aspiring to command what they were most concerned about. Both the NI Sea Going Correspondence Group and some of those who attended the NI's Command Seminar series that year contributed their views.

The five top topics of concern were:

- Shiphandling
- Business and shipping law
- Crew management/welfare
- The ISM Code and day-to-day management of the ship including coping with catastrophe and salvage operations

The NI brought together a panel of experts, both seagoing and shoreside members who represented the NI's global reach, to compose a scheme to address these issues and replace the original command diploma scheme. The draft scheme was reviewed by former masters and shore-based personnel. This Command Diploma Scheme is the result.

3. Why participate in the Command Diploma Scheme?

Industry stakeholders, including employers, are becoming aware that STCW should be regarded as a minimum standard. There is significant variation between flag States and individual training institutions in the way that this standard is delivered and the degree to which it is met.

An article from issue 11 of the Institute's magazine, The Navigator, Building on Competence, reveals that many shipowners now expect their deck officers to offer more than just the IMO defined minimum competencies. They need to display greater proficiency than this before they are promoted to the next level. Some ship operators define extra competencies related to their business, such as specialist operations or commercial knowledge. The IMO focuses on safety, security and environmental protection, but the shipowner needs to consider profitability too.

The Navigator February 2016 Issue no. 11: Building on competence. Developing strengths and skills

This article explains that future seafarers need to be:

- self-motivated
- proactive
- good communicators
- relationship builders
- change-managers
- aware of automation vulnerabilities

They also need to be able to:

- provide leadership
- demonstrate professional development
- show high standards of safety and good seamanship
- concentrate on critical issues
- process large amounts of data
- cope with stress

We believe The Nautical Institute Command Diploma Scheme will help seafarers to become fully engaged problem-solvers with the management skills required by the industry.

4. In what way will the diploma scheme help me?

When you take up command, it is worth considering what others will expect of you.

- Officers and crew onboard will expect you to provide guidance and good management of the vessel.
- Superintendents, agents, surveyors, port officials, port state control officers, vetting inspectors and other stake holders will expect you to deal with them in a manner that conveys authority, confidence, knowledge and recognition of the important aspects of what is being discussed.
- Those who authorised your appointment will expect you to be 'a safe pair of hands'; someone who makes sound and well-considered decisions with the best interests of the company and those of customers in mind.

There are other expectations, the more technical aspects; sound ship handling skills, the practice of good seamanship, and understanding of the commercial operation affecting the vessel, to name but three.

These expectations can appear to be quite daunting if you are taking command for the first time, particularly if you are not well prepared. There are those who have taken up command for the first time and relied mainly on the training required to gain a Class 1 certificate of competency and the experience gained while meeting commensurate sea time requirements. They will quickly recognise the importance of the 'office' for support, often relying on the experience and wisdom of others to get through the early days of command.

So, how will The Nautical Institute Command Diploma scheme give you the confidence and knowledge required?

By successfully completing practical written assignments, a project, and participating in an on-line interview, while supported by experienced former masters acting as mentors and assessors, you will recognise the value of holding a Nautical Institute Command Diploma when you are appointed to command.

Many of the assignments have been designed to test how you would approach plausible, challenging problems, involving practical issues that you might easily face in command.

It is intended that once the course has been completed, you will have developed a 'master's mindset' and be considered a proficient shipmaster fit and ready to embrace command.

5. In what way will it benefit your Company?

Your company will take your appointment or promotion to master very seriously; it is a big decision and often requires approval at senior management level. As an ambitious officer, you will wish to be promoted as soon as you are qualified.

As a newly appointed master your shore-based colleagues will be looking carefully at your performance and how the ship is being managed. Superintendents and commercial operators may be somewhat concerned initially about your lack of experience.

Those who have completed the scheme will be well equipped to deal with problems more effectively and able to work with others and to communicate in a way that is more likely to inspire confidence and create reassurance.

Candidates will be better able to search for and find information, present it in a concise and academically acceptable manner and to implement it practically onboard.

In essence, The Nautical Institute Command Diploma scheme is intended to add value to organisations when, as an employer, they promote officers holding a diploma to master. Completing the diploma scheme is intended to prepare a newly promoted master to be confident, knowledgeable and assertive and to understand the limit of their decision-making abilities and to recognise the boundaries of the support network available to them ashore.

6. Who can enrol in the Command Diploma Scheme?

The scheme is available to individuals, with an appropriate STCW Certificate of Competency and already in a senior position, who wish to further their career prospects and to companies seeking to support the transition of their chief officers to master.

7. What qualifications must I possess?

A minimum of an STCW A-II/2 certificate of competency is needed from a flag Administration recognised by IMO as being in full compliance with the STCW Convention, i.e., on the 'White List". Candidates with particular experience who wish to start the scheme with different qualifications should contact The Nautical Institute to discuss this.

8. What topics will I study?

There are five units:

- Unit 1 Understanding the role of an effective master
- Unit 2 Onboard management
- Unit 3 Navigation and shiphandling
- Unit 4 Ship's commercial business
- Unit 5 Emergencies and drills

You must complete unit 1 first after which you may complete units 2 to 5 in any order. After completing some investigation and study, you will be required to upload completed assignments for each unit, as a folio i.e., a completed set of files for a particular unit, to your assessor for assessment and feedback. It is up to you how you plan and organise your own work. This is called self-directed learning.

After successfully completing assignments in each of the five units, you will be required to upload a 2,000-word final project consisting of a report on a topic of your choice related to your role as master. Finally, you will have an on-line interview with your assigned assessor, this will be based on your uploaded assignment work as well as your final project. Your assessor(s) will discuss aspects of your uploaded work in more depth to verify your understanding, where necessary, as well as to consider your final project. The interview should be seen as more of a discussion than the oral examination which you may well be familiar with.

9. What is in each unit?

Each unit follows the same format:

- Introduction and aim of the unit
- Content of the unit
- Learning outcomes *
- Assignment assessment method and criteria
- Approximate timescale for completing the assignments

* Learning outcome means what the candidate is expected to be able demonstrate after completing each unit.

- Assignments
  - Subject title
  - Description
  - Method
  - Suggested learning resources and references
- Accounts based on a case study, where appropriate
- Record of Evidence

10. What is expected of the Final Project?

Once all the assignments have been successfully completed, you will have gained knowledge and have received feedback that will put you in a much better position to speak with authority regarding issues associated with your role as master. You will have developed an effective master's mind set. It is now time for you to carry out one final project that will confirm to the assessors your understanding and ability to discuss an important issue with professional confidence and confirm that you are worthy of being granted a diploma.

As master, at the 'sharp-end' of the operation, your company's senior management has asked you to write a report on a topic that is an issue within your organisation (or within the industry) and relevant to your role as master.

The subject you select will be your own choice.

- It must be associated with a practical problem or issue relevant to your role as master.
- The topic must be treated in an analytical way, looking critically into the issue you have chosen.
- It should require some research or interview/discussion with others so that you can reach a full understanding of the topic.
- It may be in any style you like (a report or an essay, even a power point presentation).
- If in an essay or report format, it should be a length of 1800 to 2200 words.
- Your proposed subject should be approved by your assigned mentor prior to commencement.

The following are examples:

- Managing the ship/shore interface where communication is an issue.
- Improving bridge design to better aid bridge team situational awareness.
- Preparing for a vetting or port state control inspection on an intensively traded ship.
- Managing the risk of fatigue on an intensively traded ship.
- Integrating the pilot into the bridge team more effectively.
- Practical ways of improving the effectiveness of the SMS.

Prior to your online interview, your assessor will have considered your uploaded project and will wish to ask you questions and give you an opportunity to discuss your work and justify your assertions.

11. How long will it take me to complete the Command Diploma Scheme?

Each unit has an estimated timescale for completion:

1.	Understanding the role as master	55 hours
2.	Onboard management	75 hours
3.	Navigation and shiphandling	95 hours
4.	Ship's commercial business	75 hours
5.	Emergencies and drills	55 hours
6.	Final project	20 hours
Total		**375 hours**

You may find you spend more or less time than this to complete units. It is important to allow enough time to carry out thorough investigation and study before completing the assignments to the best of your ability.

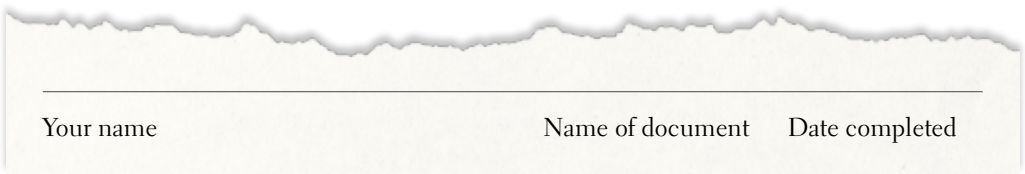
You have up to 24 months to complete the Command Diploma Scheme. If you need an extension you must discuss this as soon as possible with NIHQ at command@nautinst.org.

12. How should I upload my work?

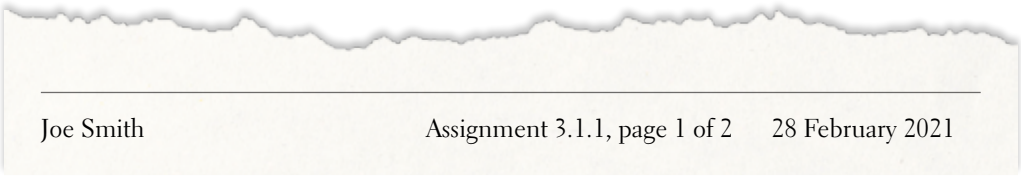
All the work you upload must be in Microsoft Word, whenever possible. Any handwritten sketches, such as hand-drawn diagrams or chart extracts, for example, should be scanned in high resolution, in .pdf file format. If your submission is not legible it will not be passed to an assessor but will be returned to you.

The Nautical Institute uses an Estech sharefolder system. You will be assigned your own secure online folder in which all course documents and supporting material are stored. When your work is ready for assessment, you should upload it into that folder and let NIHQ know by emailing command@nautinst.org. Your assessor will have access to your folder so that they can assess your work and provide feedback.

You must upload all assignment documents and final project. Each page that you upload MUST have a footer as shown.



For example, if you are uploading two pages for the first assignment in Unit 3 you would have the footer below for the first page of that answer:



When uploading unit assignments, your folio should include the Record of Evidence and this should be used as an index. Before uploading work to the Estech sharefolder, please label each document with the appropriate assignment reference number and document description based on what you have entered in the Record of Evidence. This will ensure your assessor is clear as to which assignment your account refers to and will ensure that all evidence uploaded is assessed.

Do check that what you enter in the column 'Name of Document' matches the footers on the pages that contain that work.

You must back up your work. The Nautical Institute and its assessors, employees and agents cannot be responsible for work uploaded that is subsequently lost or corrupted.

Please refer to the Terms of Use. In case of difficulty using the Estech sharefolder, please contact NIHQ at command@nautinst.org.

13. How do I cite other people's work?

In the work you upload for the Command Diploma Scheme you will often need to provide supporting evidence for your statements from published sources such as books, magazine and journal articles, websites and official reports. This is all part of good research and will add to your personal experience. Be aware, though, that whenever you use someone else's words or ideas in this way, you MUST state clearly where they came from.

Failure to acknowledge in your written work the sources of your information is called plagiarism – presenting other people's work and ideas as your own.

Assessors scrutinise all work uploaded for the Command Diploma Scheme and they must satisfy themselves that your application of knowledge and understanding of the subject comes from your own thought process.

Assessors may not assess submissions from anyone who is found to have:

- copied the work of others and passed it off as their own
- included passages from official documents without proper acknowledgement

Remember, the assessor wants to identify what you know and how you apply this knowledge when assessing your uploaded work.

References in the text

Providing proper acknowledgement of sources is termed citation. There are several ways of doing this, but we recommend the Harvard referencing system, which is simple and easy to use.

Here is an example of a Harvard-style citation for a passage quoted from a book:

> *Among your many functions, you as Master must be a leader, listener, confidant, mentor, diplomat and arbitrator.* (Laffoucrière *et al*, 2015, p 81)

To distinguish it from the main text (which will be the text of your paper or dissertation), it is indented from the left margin. After the quoted text is written:

- The name of the author of the publication
- The date of its publication
- The page of the publication where the quoted passage appears

As well as making the source of the information clear to the assessor, it also enables you to find the original quotation again later on, so make sure you have all the details down correctly. When quoting directly from a book in this way, be sure to copy the passage accurately, word for word.

If the quotation is short it can be included within your main text. It must be enclosed within quotation marks " " and followed by the author, date and page number within parentheses ( ). The following are two examples:

> *It is important to consider the whole question of pilots as part of the bridge team. "Pilots are the waterway experts and Masters are the vessel experts."* (Gale, 2016, p 45)

> *Accident reports – not just in the maritime industry, but generally in transport – speak of the importance of the human factor. "Good health is crucial for seafarers as they are often far away from professional help."* (Tavares *et al,* 2012, p 9)

These are acceptable methods of citing books, magazine and journal articles, reports etc to support your written work. Laffoucrière, Gale and Tavares are the authors of the actual words; shown indented in the case of Laffoucrière and within quotation marks in the case of Gale and Tavares. Included with each author's name are the publication date and page number. This sequence of author and date will appear in your bibliography.

Bibliography

The bibliography is a list of all the publications that you have used when writing your essay, report or dissertation. It is an important part of your submission for the Command Diploma Scheme because it allows the assessor to consult the works that support your claims, ideas and conclusions.

There is a normal method of constructing a bibliography. Using the examples, we gave before, here is how to record them:

CHIEF OFFICER A N OTHER [PROJECT NAME] JUNE 2018

Bibliography

Gale, H (2016). *Navigation Assessments.* London: The Nautical Institute

Laffoucrière, F *et al* (2015). *The Nautical Institute on Command*, 3rd edn. London: The Nautical Institute

Tavares, Bonfim D; Barreto, Molinari M; Gonçalves, M A (2012). *Seaways*, Aug. London: The Nautical Institute

The authors are normally listed in alphabetical order, followed by the date of publication in parentheses. The title of the work follows either in italics or underlined, then the place of publication and the name of the publisher.

You will now appreciate how important it is to keep a note of the publications, authors and page numbers when you do your study. Trying to retrace your research steps later on can be hugely time-consuming, and you may find some of that material is no longer accessible – for example, it could be on a ship you signed off from months ago.

14. Academic conduct

Candidates are required to undertake the course in a fair and honest manner. They must not seek to gain unfair advantage for themselves, or for other candidates, by collusion, deceit, plagiarism or cheating in assignments, the essay or the on-line interview. See also the Terms of Use.

Collusion

Candidates are not permitted to collaborate in assignments and final project without the prior approval of assessors or an authorised member of NIHQ staff. If one candidate is found to have copied another candidate's work, both may be deemed not to have demonstrated they have met the required learning outcomes due to collusion.

Plagiarism

A candidate must not use other people's material, whether words or images, as if it was their own – i.e., without attributing it (see section 13).

Cheating

Candidates must not try to gain unfair advantage in assignments, final project or the oral interview, nor must they help other candidates to do so. No unauthorised copying or collusion is permitted. Candidates must not impersonate other candidates nor must they try to gain unauthorised access to assessor's papers.

15. What standard is expected of the assignments

What is required is for you to demonstrate the knowledge, application of knowledge, skill and behaviour to provide sufficient evidence that you have met the learning outcomes described in each unit.

Assessors will be expecting succinct and focused accounts. Where the word count is not specified, assignment submissions should not exceed 800 words.

16. Research

A master may sometimes be required to research an unfamiliar subject in order to gain the knowledge required to meet some operational requirement. This could be researching information about a port with which you are unfamiliar or checking a regulation to ensure you are in compliance.

The Nautical Institute Command Diploma Scheme requires you to adopt a similar approach. While there are suggested resources and references with the details of each assignment, it is expected that you would do your own research in preparation for completing assignments, based upon:

- Nautical Institute website and publications
- Discussions and interviews with subject matter experts and other masters
- Accident investigation reports MAIB (UK), NTSB (US), ATSB(Australia), for example
- Marine industry publications and websites
- Government agency websites
- Other authoritative publications, research papers and websites
- Participating in webinars such as those produced by The Nautical Institute (NI you tube channel) or listening to podcasts such as TED talks
- Participating in Nautical Institute Command Scheme LinkedIn Group and other LinkedIn groups
- Your Nautical Institute branch members who are subject matter experts

17. How will I be assessed?

Each unit requires submission of completed assignments. Assessors will review your submissions and make a decision about whether there is evidence to show that unit learning outcome has been met or exceeded.

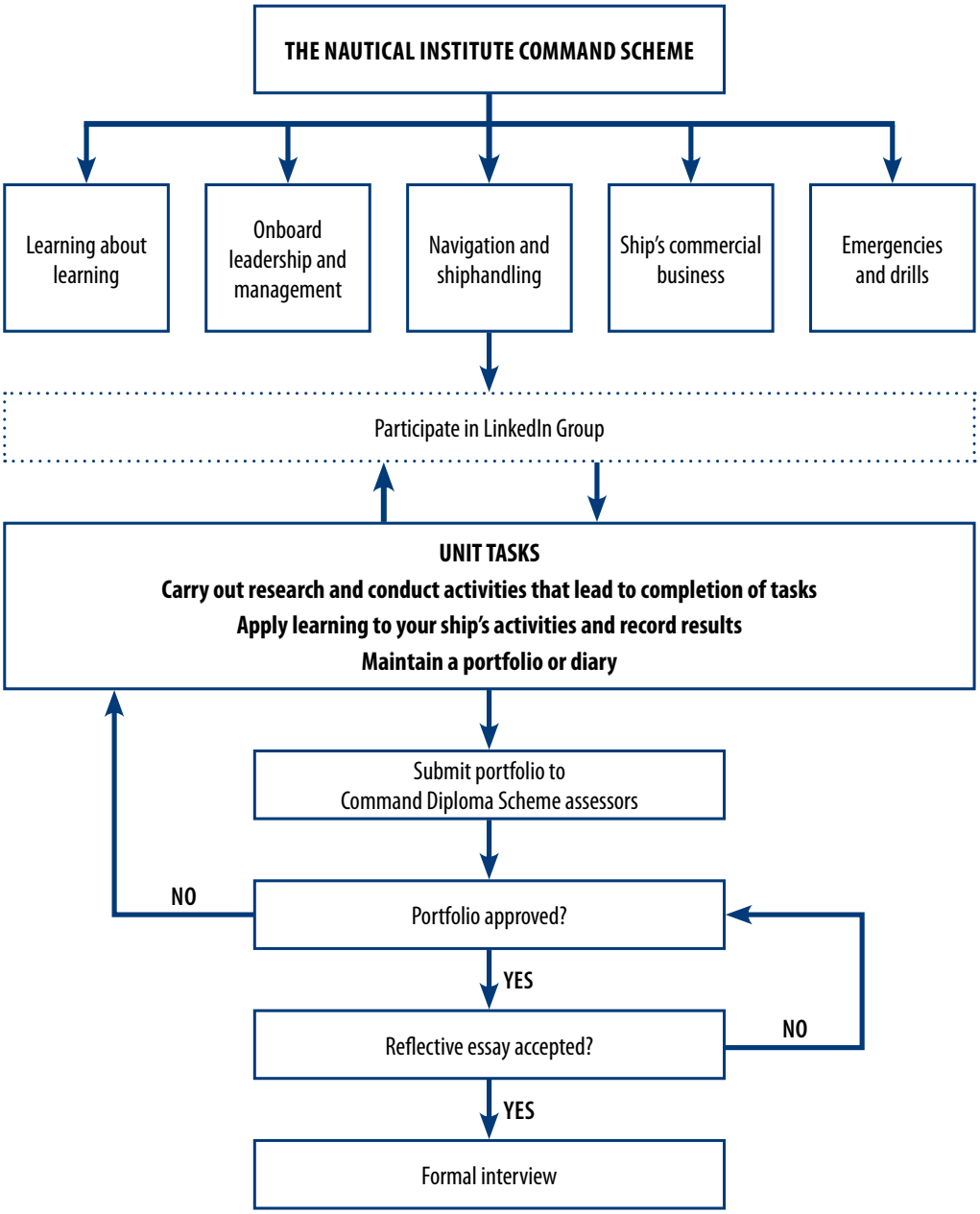
Uploading of your folio of evidence is the final part of the process after study and investigation. It is important that you are happy with your work before uploading and that you have completed the necessary research and investigation. The assessors will not be unreasonable when assessing your work but will be looking for evidence that the learning outcomes have been met.

It is important for you to understand that it is not the standard of written English that is being assessed. All that is required is for you to demonstrate, through what you have written, an understanding of what is required from each assignment **from the viewpoint of an effective master** and that what you have written can be **clearly understood**.

When the assessors are considering uploaded work, they will be mindful that, in some cases, the quality of uploaded work may exceed that expected and be worthy of publication. In this case the candidate, and if appropriate, their company, will be notified.

Before the award of The Nautical Institute Command Diploma, your final project will be assessed and discussed in depth. You will be required to demonstrate significant depth of understanding of an important issue related to your role as master that you are able to present and discuss with authority.

On completion of the on-line interview, the assessor will the make a final determination on your suitability for the award of the Diploma.



17. Appeals

The assessors for the Command Diploma Scheme strive to be transparent and fair in their appraisal of work. If you are dissatisfied with any aspect of the scheme or if you wish to appeal against a decision reached by the assessor, then you should contact The Nautical Institute at command@nautinst.org to explain your concerns. Every effort will be made to resolve the matter, but in case we cannot do this informally you will be provided with details of the formal appeal process.

18. Who are the assessors?

The assessors are experienced mariners of long standing and with command experience. All are senior members of The Nautical Institute. They are ready to perform their responsibilities under this scheme and to make informed and impartial decisions.

19. How do I contact assessors and other candidates?

The Nautical Institute Command Diploma Scheme has its own LinkedIn group that all candidates will be invited to join. The assessors will be part of the group. Candidates will be able to share ideas and ask questions of each other and the assessors. We hope that participants who complete the scheme will stay involved in the group to act as mentors to new candidates.

20. How do I enrol in Command Diploma Scheme?

Enrolment is simple – just email command@nautinst.org.

21. Summary

Life aboard ship today is not easy: lower manning levels, compliance with ever-expanding regulation and the management of multinational crews are among some of the challenges of command at sea. The Nautical Institute applauds your decision to spend some of your valuable time to develop your knowledge, understanding and skills. We believe you will benefit enormously from the time you spend reading, researching and working on the assignments and from the discussions with others via the LinkedIn group. In feeling more confident to meet the challenges of command successfully you are likely to be less stressed at sea.

This scheme is dynamic, so we really welcome your feedback to help us improve it. If you think there are changes that would make the scheme better, please pass your comments to The Nautical Institute.

Contact us at:

command@nautinst.org

The Nautical Institute
202 Lambeth Road, London SE1 7LQ, UK
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Email: sec@nautinst.org website: www.nautinst.org.

Terms of use

1. Registration

The Nautical Institute provides this Command Diploma Scheme to you subject to the terms in this agreement. If you do not agree with any of the terms of this agreement do not access or otherwise make use of the Command Diploma Scheme. Your use of the scheme shall be deemed to be your agreement to abide by each of the terms below. It is the responsibility of the candidate to read these conditions before entering upon a transaction.

The Nautical Institute grants you a personal, non-transferable and non-exclusive right to use the scheme materials on any personal media device. This is provided that you do not (and do not allow any third party to) copy, modify or create a derivative work from the scheme. You agree not to modify any of the material in any manner or form. You agree not to access The Nautical Institute products or services by any means other than through the Estech folder provided by The Nautical Institute for use in accessing the Nautical Institute Command Diploma Scheme.

By registering with The Nautical Institute, you represent that you are of legal age to form a binding contract. You agree to provide true, accurate, current and complete information about yourself in all required fields of the registration form. If any of your information changes, you agree to update your registration information as soon as possible. If the Nautical Institute suspects that your registration information is not complete, current or accurate, or that you have otherwise violated these Terms of Use, your account may be subject to suspension or termination, and you may be barred from using the Nautical Institute Command Diploma Scheme.

2. Privacy policy

The Nautical Institute takes your privacy extremely seriously. We are committed to treating any information we may collect from you in a sensitive and respectful manner. From time to time the Institute runs advertising programmes that allow third parties, such as Google and Twitter, to use cookies and other data to serve advertisements based on an individual's past visits to The Nautical Institute's website. You can find out more about Google's use of cookies (including how to opt out) by visiting Google's Ads Help Centre. You may also wish to view the Twitter Ads policies page.

3. User account, password and security

The creation of an account is compulsory to upload Command Diploma Scheme material to the Estech folder. You will be required to create a password and user account. You are responsible for maintaining the confidentiality of the password and account and are responsible for all activities that occur under your account. You agree to (1) immediately notify The Nautical Institute of any unauthorised use of your password or account or any other breach of security and (2) ensure that you log out from your account at the end of each session. The Nautical Institute cannot and will not be liable for any loss or damage arising from your failure to comply with these requirements.

4. Proprietary rights – trademarks and copyright

You acknowledge and agree that any content, including but not limited to text, data, photographs, graphics etc, or material contained or distributed through the site by The Nautical Institute, its advertisers or third parties is protected by trademarks, service marks, patents, copyrights or other proprietary rights and laws.

You therefore may not, under any circumstances, use or distribute any content received through the site without authorisation of the content owner. You agree not to publish, reproduce, copy, in whole or part, nor upload, download, post, email, sell or otherwise distribute content available through the site.

5. Rules of conduct

The following rules of conduct apply to your use of the website and to any and all materials

you upload to The Nautical Institute Estech folder, including text, data, graphics, audio or video content, sound, chat, messages, files or any other material (collectively, user submissions) whether the user submission is included in blogs, discussion groups, emails, profiles, comments or any other portion or feature of The Nautical Institute Estech folder.

You may not, in connection with The Nautical Institute Estech folder, upload, post, email or otherwise transmit any user submission that:

- Is libellous or defamatory, pornographic, sexually explicit, unlawful or plagiarised
- Infringes or violates any patent, copyright, trademark, trade secret or other property right
- Breaches a duty of confidentiality by which you are bound due to a contractual or fiduciary relationship (such as inside information, or proprietary and confidential information learned or disclosed as part of employment relationships or under non-disclosure agreements)
- Is material that a reasonable person would consider harassing, abusive, threatening, harmful, vulgar, profane, excessively violent, racially, ethnically or otherwise objectionable or offensive in any way
- Constitutes a breach of any person's privacy or publicity rights, a misrepresentation of facts, or hate speech
- Violates or encourages others to violate any applicable law, statute, ordinance or regulation
- Promotes software or services that deliver unsolicited email
- Contains viruses, Trojan horses, worms, time bombs, cancelbots or other similar harmful programming routines

6. Internet connection

The Nautical Institute Command Diploma Scheme requires a correctly configured and functional internet data connection, both for the initial purchase and for use.

Data charges may be charged to you by your network provider depending on your individual tariff. You are responsible for any such costs.

The Nautical Institute does not provide any warranties as to the levels of connectivity you will receive via your personal media device. This may depend upon your tariff, your network provider or your corporate policy if you have a work-issued device. We will not accept any responsibility for any connectivity issues you may experience. Please contact your network provider or visit their website if you require assistance configuring a data connection for your telephone.

If the Nautical Institute's Estech folder site is down and it is believed to be our fault we agree to compensate users as we see fit. This would usually be in the form of a credit note being issued for unfinished assessments. The Nautical Institute will deal with claims on a case-by-case basis.

7. Content and refunds

Once payment is received and the Command Diploma Scheme has been downloaded by the candidate, refunds are not available. Refunds are only applicable if the products or services are not as described. This does not affect your statutory rights.

Goods, such as books, will only be dispatched to the customer when payment has been made in full and funds cleared and any variance of this term shall be upon such terms as The Nautical Institute dictates.

Access to modules and assignments is limited to 24 months, from the date on which the first assignment is attempted. NIHQ at command@nautinst.org may grant more time to complete the scheme on a case-by-case basis.

Other than for unit 1, assignments can be uploaded once within the two-year period if payments have been cleared.

8. Discount codes

Account discount codes

Discount codes may from time to time be offered to Command Diploma Scheme candidates. Such codes may only be applied to purchases made through the account in respect of which the discount code was offered and registered.

Promotional discount codes

We may from time to time offer promotional discount codes that may apply in respect of any, or certain, specified purchases made through The Nautical Institute.

All prices and course fees are listed in British Pounds Sterling (GBP). The Nautical Institute is not responsible for any exchange rate changes or any bank charges that arise from this or any other payments made to The Nautical Institute.

9. Links

The Nautical Institute, or third parties, may provide links to other websites or resources through the website or the Command Diploma Scheme. As the Nautical Institute has no control over such sites and resources, you acknowledge and agree that The Nautical Institute is not responsible for the availability of such sites or resources. The Nautical Institute does not endorse and is not responsible or liable for any content, advertising, products or other materials on or available from such sites or resources or the policies of such sites and resources.

The Nautical Institute is not responsible or liable, directly or indirectly, for any damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods or services available on or through any such site or resource

10. Variations and correction of errors and inaccuracies

The Nautical Institute makes reasonable endeavours to ensure the information in the Command Diploma Scheme and on its website is accurate. However, the information and product listings on the site may contain typographical errors or inaccuracies and may not be complete or current. We make no representation or warranty that any information is accurate, complete or up to date and, to the fullest extent permitted by law, we accept no liability for any loss or damage caused by any reliance placed on such information placed by you or by anyone to whom you may communicate such information.

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11. Warranty disclaimer

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- Authorised access to or use of our secure servers and/or any and all personal information stored therein
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17. Data protection

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19. Updates to terms and conditions

Terms and conditions updated 13 January 2021

Unit 1 – Understanding the role of an effective master

Introduction and aim of the unit

To develop your understanding of the role of master.

Content of the unit and approach

This unit consists of six assignments each designed for you to study general aspects of the role of an effective master.

These aspects are:

- expectations of those with whom you will interact
- attributes or characteristics required of an effective master
- standard of communications with those with whom you will interact
- commercial awareness
- decision-making ability
- taking over command from and handing over command to another master

For each assignment you will be required to conduct some research into and investigation of the area under consideration and to complete the assignment in a manner that provides evidence of meeting the relevant learning outcome as described in the next section.

The intention is that once you have uploaded your folio of evidence and it has been assessed and feedback given, you will have started to develop an understanding of the role of an effective master. This unit has been designed to provide groundwork for the more technical units that follow.

Learning outcomes

On completion of this unit, you will be able to:

- Identify the general attributes required of an effective Master
- Recognise the ways effective masters approach decision making, communication and commercial issues
- Explain how to take command of a ship with which you are unfamiliar and prepare for handover on completion of tour of duty

Assignment assessment method and criteria

The assessors will consider the evidence that the learning outcomes have been met based upon the following criteria.

Assessment Criteria Table		
Criteria	**Learning outcomes not met**	**Learning outcomes met**
Choice of research material	Evidence is based on material that is either outdated, cursory or basic. Typically, from websites or sources that are not authoritative.	Evidence is valid and appropriate. Material is from authoritative sources (industry publications or websites, Nautical Institute publications, etc.).
Quality of evidence submitted	Evidence is not well structured or detailed. Assessors find difficulty in understanding what has been submitted. It is cursory without any depth or based on poor accepted practice. Style of account is inconsistent suggesting "cut and pasting".	The evidence is detailed and presented in a well-structured manner and can be easily understood and followed. The subject area is covered in some depth. Account is supported by illustrations where appropriate.
Evidence of learning and understanding	Candidate uses the same language as that in research documents rather than own words. There is no evidence of applying knowledge learnt that would provide evidence of meeting learning outcomes.	Candidate provides evidence of a clear understanding of what is required by each assignment. The terms used and language, and practical examples to support their accounts, where appropriate, are seen by the assessors as convincing that the learning outcomes have been met.

Since this is the first unit, it is recommended that you should complete assignments 1.1 and 1.2 and then submit them to your assessor by email. With copy to command@nautinst.org, this will enable your assessor to provide feedback to confirm or otherwise that you are working to the level required so as to be able to successfully complete the diploma scheme. After receiving feedback, you should amend your work as necessary and upload to your Estech folder.

For unit 1, candidates with submissions that do not provide evidence of meeting learning outcomes will be required to resubmit, however normally only ONE resubmission will be allowed. In this case the assessor will provide helpful comments as to why they feel your submission did not provide the required evidence and will explain what you need to do to submit future work to meet the expected standard.

Approximate timescale for completing the assignments

55 hours.

Assignments

Subject
1. 1 Relationship with stakeholders

Description
In your role as master, you will interact or need to communicate with various stakeholders who will have particular expectations of a master. This is a starting point for the scheme, where it is important that the assessors can establish that you have an understanding of the role and recognise how you will be viewed by others.

Your assignment is to provide evidence that you recognise the knowledge areas, behaviours and (technical and non-technical(soft)) skills that would be expected when interacting with the following:

- officers and crew
- superintendent
- ship operator (or office-based person you interact with regarding the commercial operation)
- charterer (or customer, passengers on a ferry or passenger ship, person or organisation with whom the company has a contract with)
- classification society surveyor (in classification society role and statutory role representing a recognised organisation)
- port state control officer
- senior management
- agent
- port officials
- pilots
- P&I correspondent
- surveyors, inspectors (such as vetting inspectors)
- auditors

What is important in this assignment is investigation, i.e., research, observation and asking questions. You should not assume you fully understand what is required from your viewpoint as chief officer.

In regard to knowledge areas, assessors are not looking for specific details of knowledge required. For example, you are not expected to be able quote chapter and verse of the SOLAS convention, however a class surveyor or a port state control officer and your superintendent would expect you to have the knowledge to recognise whether life-saving appliances or fire-fighting equipment onboard meet SOLAS requirements, and if you were in doubt as to whether they were, you would have the knowledge to know where to find out.

Method
Your account can be in brief notes, bullet points or table format. An essay format is not necessarily required, but you may submit in this form if you wish.

Suggested resources and references
- Asking questions of stakeholders
- Observational behaviour of those interacting with the master

For this assignment you will need not only to carry out research but talk to other stakeholders or, with permission, observe the master interacting with listed stakeholders.

Publications

- The Nautical Institute on Command, 3rd edition published by the Nautical Institute
- Commercial Management for Shipmasters (1996) published by the Nautical Institute
- Classification Society records
- Your Shipboard Management System requirements
- P&I club rules (carried onboard your vessel)
- The Human Element, a guide to human behaviour in the shipping industry (UK MCA)

Websites

- https://unctad.org/system/files/official-document/unctadstship13_en.pdf (UNCTAD Minimum Standards for Shipping Agents)
- http://www.iacs.org.uk/green-book/ (Classification Societies)
- http://www.iacs.org.uk/blue-book/
- https://www.parismou.org/inspections-risk/port-state-control-inspections-paris-mou
- https://www.impahq.org/admin/resources/article1228231036.pdf (Pilot/master relationship)

Subject
1. 2 Attributes of an effective master

Description
In this assignment you need to think of a memorable master or master(s) with whom you have sailed; masters who have had a positive influence on your career to date.

Your assignment is to write a short essay identifying the attributes and characteristics of the master(s) involved in regard to:

- dealing with officers and crew onboard
- communication generally
- ship handling
- problem solving and decision making
- dealing with commercial aspects of the ship operation

You should provide examples, wherever possible, to support your account as to why you consider this (these) master(s) had such a positive influence on your career.

You should not identify the person(s) nor the vessel(s) involved.

Format
You should submit your account in essay format with arial font 12 and spacing 1.5 lines and it should be no longer than 800 words.

You should now submit your work for sections 1.1 and 1.2 to your assessor for informal assessment and to determine that you are attaining the standard required for success in the scheme.

Subject
1. 3 Decision making

Description
As master you may have to deal with difficult decisions where an ideal outcome may not be attainable.

Your assignment is to consider your role as master onboard a vessel with which you are familiar and identify a particular operational dilemma which would make demands upon your decision-making ability.

The dilemma could be:

- Your gyro compass fails an hour before you are scheduled to heave anchor and join the convoy to transit the Suez Canal. You have two gyros fitted
- You are in the process of manoeuvring at five knots as part of a ship-to-ship transfer operation with another vessel that has a mooring master onboard coordinating the navigation. When you are close to the other vessel the chief engineer telephones the bridge and advises you that he has a small problem with one of the main engine exhaust valves which he says he is investigating and will get back to you shortly
- On a crude oil tanker, the chief officer phones to tell you that the terminal operator has informed him that they will stop loading in ten minutes, at which time, she states, the nominated quantity of cargo will have been loaded. The chief officer says he thinks that the quantity loaded, according to his calculations, will be well below the minimum cargo quantity required under the voyage charter party
- The second officer has reported to you that there appears to be damage to containers and evidence of movement having occurred during heavy weather with a large swell

- Describe the situation in detail and clearly state what the dilemma is
- Explain the decision-making process you would go through when considering the best outcome (in your view).
- Identify the different courses of action and outline the consequences for each different course of action (and how the different stakeholders would be affected).
- Describe how you might convince others involved of the rationale behind your decision (a superintendent, pilot, or chief engineer, for example).

Format
You should submit your account in essay format with arial font 12 and spacing 1.5 lines and it should be no longer than 800 words.

Suggested resources and references
- The Human Element, a guide to human behaviour in the shipping industry (UK MCA)
- How to lead in a crisis. Amy C. Edmondson (TED talks)
- Discussions with other masters and superintendents.

Subject
1. 4 Communications

Description
The effectiveness of your communications with those onboard and ashore is a very important skill required of an effective master.

Describe how you would deal with the following situations, considering the communication style:

- Informing a crew member that his relief has not turned up and she/he will not be able to leave as planned.
- Informing the superintendent or ship operator thathe vessel will be delayed at the next port due to a problem with the main engine.
- Dealing with a port state control officer who has discovered that the endorsement page for the safety equipment certificate was signed but incorrectly dated by the classification society surveyor.
- Communicating on VHF channel 16 to the skipper of a fishing boat close by, who is in distress, and speaks English poorly. You are the only ship in close proximity.
- You are in disagreement with an observation made by an inspector during the closing meeting following a navigational audit. The inspector has recorded that the magnetic compass deviations recorded in the compass error book are excessive; you believe this is not the case.

Format
You should submit your account in essay format with arial font 12 and spacing 1.5 lines and it should be no longer than 800 words.

Suggested resources and references
- Mentoring at Sea, the Ten-Minute Challenge (Nautical Institute)
- Mentoring at Sea – Learning the ropes (Nautical Institute You Tube Channel) youtube.com
- The Human element, a guide to human behaviour in the shipping industry (UK MCA)
- TED talks "The language of being human" Poet Ali

Subject
1. 5 Commercial awareness

Description
Your company would expect you, as master, to deal with the commercial aspect of your role in a manner meeting the expectations of the company and customers. There are times when, as master, you will need to deal with unfamiliar situations involving the commercial aspects of your role that may result in an outcome that is less than ideal for the company or the customer. What is important is how the issue is handled and that the decision taken results in an acceptable outcome for all concerned consistent with safe operations.

For the purpose of this assignment, you need to research and identify an actual commercial issue or situation that needs to be dealt with by you, as master.

A suitable issue or situation might be obtained from historical records on board or you may wish to ask someone in the commercial department of your company to assist you.

The issue or situation might be:

- Issues regarding bills of lading that you may be asked to sign but might not be in the required form or may contain information you believe to be incorrect
- The vessel is late and might not arrive and tender notice of readiness before end of laycan according to the charter party.
- There may be an issue regarding quality or damage to the cargo before, after or during loading or on passage
- Dealing with a serious passenger complaint or passenger issue (sickness for example)
- You are unable or unwilling to carry out the charterer's instructions (if they conflict with safe operation)
- Speculate the implication of the issue from the viewpoint of the various stake holders, not just how it affects you as master
- Identify various courses of action you could take and consider how the situation might develop
- Describe how you might resolve the issue and explain what you would require from your office contact or other support arrangements if you had to call them to assist.
- Provide examples of any email correspondence

You should not provide individuals', organisations' or ships' real names.

Format
You should submit your account in essay format with arial font 12 and spacing 1.5 lines and it should be no longer than 800 words.

Suggested resources and references
- Commercial Management for Shipmasters (1996) published by the Nautical Institute
- Discussions with other masters and superintendents and those involved in commercial operations

Practical Task

1. 6 Taking over command/handing over command

Description

1.6.1 Taking over command

Write a full description of:

- how you would take over command of a busy ship with which you are unfamiliar
- how you would conduct yourself during the first week of being in command

You should not provide individuals', organisations' or ships' real names.

1.62 Handing over command

- Describe how you would prepare for handing over on being informed you are to be relieved. Assume the joining master is unfamiliar with the vessel.
- Prepare handover notes or record for the relieving master who is new to the company.

You should not provide individuals', organisations' or ships' real names.

Format

You should submit TWO accounts in essay format with arial font 12 and spacing 1.5 lines and each should be no longer than 500 words.

Resources and references

- The Nautical Institute on Command, 3rd edition published by the Nautical Institute
- Your Shipboard management system

THE NAUTICAL INSTITUTE

Command Diploma Scheme

Unit 1 – Understanding the role of an effective master

Record of evidence

Use this table to record your completion of each assessment task and submit it with your portfolio of evidence. Insert the name of the document that you have uploaded to show you have completed the assignment and uploaded it. The date of completion is for your own records.

Assignment	Name of Document (s) uploaded	Completed	Date uploaded (DD/MM/YY)
1.1 Relationship with those you will interact with			
1.2 The attributes required of an effective Master			
1.3 Decision-making			
1.4 Communications			
1.5 Commercial awareness			
1. 6 Taking over command and handing over			
1.6.1 Taking over command			
1.6.2 Handing over command			

Unit 2 – Onboard leadership and management

Introduction and aim of the unit
To develop your understanding of leadership and management.

Content of the unit and approach
This unit consists of a series of assignments, each designed for you to investigate the role of an effective master as a manager and leader.

The first assignment asks you to consider different management styles and when they might be used.

The other assignments require you to investigate different aspects of leadership and management (planning, organising and communicating, for example) based upon scenarios you might be faced with.

These aspects are:

- managing people
- managing challenging situations (planning and organising)
- managing communications
- managing safe operations

You are required to consider each assignment in turn and carry out some reflection based on your own experience and observations and then carry out an investigation into leadership and management as they apply to your role as master, appropriate to each situation.

Finally, there is a case history for you to consider with regard to the management and leadership issues applied to a fictitious but plausible event.

Your research and any references should not necessarily be limited to resources from the maritime industry but may include wider consideration of management and leadership more generally.

Learning outcomes
On completion of this unit, you will be able to:

- Identify the different leadership and management styles required of a master and recognise the situations where they need to be applied
- Demonstrate the ability to manage shipboard issues onboard based upon principles of best management and leadership practice
- Recognise examples of poor leadership and management

Assignment assessment method and criteria

The assessors will consider evidence of the learning outcomes having been met based upon the following criteria.

Assessment Criteria Table		
Criteria	**Learning outcomes not met**	**Learning outcomes met**
Choice of researchmaterial	Evidence is based on material that is either outdated, cursory or basic. Typically, from websites or sources that are not authoritative.	Evidence is valid and appropriate. Material is from authoritative sources (industry publications or websites, Nautical Institute publications, etc.).
Quality of evidence submitted	Evidence is not well structured or detailed. Assessors find difficulty in understanding what has been submitted. It is cursory without any depth or based on poor accepted practice. Style of account is inconsistent suggesting 'cut and pasting'.	The evidence is detailed and presented in a well-structured manner and can be easily understood and followed. The subject area is covered in some depth. Account is supported by illustrations where appropriate.
Evidence of learning and understanding	Candidate uses the same language as that in research documents rather than own words. There is no evidence of applying knowledge learnt that would provide evidence of meeting learning outcomes.	Candidate provides evidence of a clear understanding of what is required by each assignment. The terms used and language, and practical examples to support their accounts, where appropriate, are seen by the assessors as convincing that the learning outcomes have been met.

Approximate timescale for completing the assignments

75 hours.

Assignments

Subject area
2. 1 Managing people

The leadership style you adopt to deal with people is dependent upon the situation.

Assignment tasks or activities

2.1.1 Identifying leadership and management styles

For each of the following situations, identify the qualities and characteristics of leadership and management required when dealing with the following situations. Briefly describe the consequences of using an inappropriate style in each case. You are not required to explain how you would resolve the situations.

- The third officer, new in rank and to the ship, calls you to the bridge and informs you that during testing of the GMDSS systems he accidently sent a distress alert on the HF GMDSS Digital Selective Calling frequencies.
- During a long river pilotage, an argument occurs between the pilot and the second officer regarding changing the settings of the ARPA radar used by the pilot.
- A fire alarm has been activated and there is a smell of smoke. There is general confusion as to what is occurring.
- The crewing manager phones you and asks to speak urgently to the fitter due to a family bereavement. After the conversation the fitter informs you that his wife has died.
- During clearing the ship on arrival at a port with which you are unfamiliar, the agent advises you that that the wrong form has been used for the crew customs declaration and the customs officer attending requires you to provide this on the correct form, supplied by the agent, and to provide six photocopies. At the same time the same customs official advises you that they need to inspect the accommodation and engine room now.
- The cook advises you that he has had to dump some rice that he found to be not edible. There is enough remaining on board, but it will require rationing until more provisions can be obtained. Rice is a staple food for officers and crew and the next storing opportunity is three weeks away, the officers and crew are far from happy.
- During mooring, the agitated pilot keeps telling you to ask the officer in charge of the aft mooring crew to hurry up and secure the back springs as quickly as possible, due to the wind and current. The ship is being held alongside with pushing tugs. You can see that the aft mooring crew are struggling.
- The ship is due to sail in six hours. After unberthing there will be a six-hour river passage before reaching open sea. You strongly suspect that the inexperienced Chief Engineer and Second Engineer have had little rest in the last 24 hours while in port due to conducting engine room repairs and bunkering.

Assignment tasks or activities

2.1.2 Dealing with disciplinary issues

Describe in detail how you would deal with the following situation.

You become aware that a deck rating has been persistently late for work and has failed to carry out his duties diligently. You have observed that the Chief Officer has become ever more exasperated by his behaviour and reports that he has given him many verbal warnings.

2.1.3 Dealing with conflict between two people

Describe how you would deal with the following situation.

During a safety meeting there is an argument between the Chief Officer and the Chief Engineer. The Chief Engineer reports that several of the deck ratings have not been wearing goggles while scaling the deck. The Chief Officer says that this is not true and that it is none of the Chief Engineer's business. The Chief Officer and Chief Engineer do not get on and are of different nationalities.

Method

Your account can be in brief notes, bullet points or table format. An essay format is not necessarily required, but you may submit in this form if you wish.

Suggested resources and references

Publications

- The Human Element, a guide to human behaviour in the shipping industry (UK MCA)
- Leadership Throughout: How to Create Successful Enterprise Richard Jeffrey MA MNI
- The Nautical Institute on Command, 3rd Edition. The Nautical Institute
- Mentoring at Sea: The Ten-Minute Challenge. Nautical Institute
- Human Performance and Limitations for Mariners. London: The Nautical Institute
- Your company Shipboard Management System

Websites

- Improving safety and organisational performance through a just culture. (UK MCA)
- Measuring Safety Culture on Ships Using Safety Climate: A Study among Indian Officers
- The puzzle of motivation (Ted Talk) Dan Pink
- Other relevant TED talks on management and motivation and behaviour

Subject
2. 2 Planning and Organisation

One of the skills required of a master is managing and leading when planning and organisation is required to deal with challenging situations.

Describe, in detail, how you would manage each of the following situations. You should add your own detail to help illustrate your account. Your account should be practical or plausible, give reasons for your actions

Assignment tasks or activities

2.2.1 Managing a temporary large increase in compliment

At the next port, the ship's superintendent plans to place a large number of contractors on board your vessel for one month as a riding gang/repair team to carry out major upgrade work.

The numbers proposed will far exceed the available lifeboat capacity, as shown on the vessel's safety equipment certificate.

- Provide details of this scenario that might be appropriate to your vessel (and would help to illustrate your account)
- Identify the major issues that need to be addressed
- Describe the practical planning and organisation you will undertake to:
  - prepare for arrival of the contractors
  - facilitate the working arrangements and ensure the well-being of contractors
  - maintain the well-being, welfare and morale of your officers and crew
  - ensure that your vessel continues to comply with the vessel's flag Administration statutory requirements regarding SOLAS

2.2.2 Managing high workload in port

You arrive in port or at an anchorage where the following activities will take place within a very limited time frame.

- Major crew change (50% of the crew will change) .
- A classification society surveyor is to conduct annual statutory surveys.
- The operator's representative will attend to carry out an internal audit of the safety management system.
- The ship will undergo major storing, including supply of provisions.
- The software for the radars and ECDIS is to be updated .
- Divers are to inspect the hull and polish the propeller.

Considering the high workload:

- Identify the major issues of concern to you and explain why
- Describe your approach to dealing with these events
- Prepare a detailed, workable plan that you could implement to ensure a safe and efficient port visit. Your plan should identify which tasks can be safely delegated and to whom. It is not necessary to identify those onboard by name, but you should attach a redacted version of crew-list and watchkeeping rota

Method

Your account can be in brief notes, bullet points or table format. An essay format is not necessarily required, but you may submit in this form if you wish.

Your plan should be detailed, clearly understandable and workable.

Suggested resources and references

Publications

- The Human Element, a guide to human behaviour in the shipping industry (UK MCA)
- Leadership Throughout. London. The Nautical Institute
- The Nautical Institute on Command, 3rd Edition. The Nautical Institute

Websites

- Seafarer Fatigue – Project HORIZON (MCA UK)
- HUMAN ELEMENT GUIDANCE – PART 1 Fatigue and Fitness for Duty: Statutory Duties, Causes of Fatigue And Guidance On Good Practice
- HUMAN FACTORS: Workload (UK HSE)

Subject

2. 3 Managing Communications

One of the most important management aspects of being a master is communication within the vessel and with others.

Assignment tasks or activities

2.3.1 Managing internal communications

After discussion with the Chief Engineer, it is clear there is a general problem with teamwork and communication. There have been several occasions when there has been confusion between officers and crew and misunderstanding between departments. Describe how you would improve teamwork and communication onboard your vessel.

2.3.2 Managing external communications

Consider an event when you need to communicate an unexpected but developing situation to the appropriate person in your organisation (DPA, superintendent, for example).

The following are just examples, they could be actual events that have occurred or plausible fictitious events).

- A serious accident onboard
- A major breakdown of main engine
- A serious disciplinary issue
- In port, significant findings have been reported during a vetting or Port State Control inspection, that must be corrected before the ship sails

- Describe who you would contact initially and how would you contact them or communicate with them
- Describe what information you would prepare in advance of making contact
- Reporting this unexpected event is likely to result in others being alerted. As a result, you might expect further communications and requests (demands) for further information. Describe how you might manage the information flow while ensuring accurate and consistent accounts

Method

Your account can be in brief notes, bullet points or table format. An essay format is not necessarily required, but you may submit in this form if you wish.

Resources and references

Publications

- The Human Element, a guide to human behaviour in the shipping industry (UK MCA)

Websites

- Leadership and worker involvement toolkit: Communication skills for safety briefings and toolbox talks (UK HSE)
- Effective Communication: The People, The Message and The Media (UK HSE)

Subject
2. 4 Safety Management

Assignment tasks or activities

2.4.1 Exercise: Write a report for Safety Management Ashore (practical task)

Your organisation's management has appointed you to take over command of a vessel of concern to them because of poor safety performance.

The situation should not necessarily reflect a real situation, but one you might discover by researching accident reports from (MAIB or CHIRP Maritime, for example)

A series of near-misses and minor accidents have been reported and minor deficiencies in fire-fighting equipment and life-saving appliances have been discovered during previous port state control inspections and internal safety audits.

During your tour of duty, the Fleet Safety Manager has asked you to write a report:

- Describing the issues on board in relation to the Shipboard Management System
- Describing the wider view of safety issues within the organisation (you should not necessarily restrict the issues to only those onboard the ship)
- Propose how you intend to improve safety performance and standards onboard

Method
Your account should not focus on blame but root causes and substandard conditions that lead to active failures.

Your report should include an executive summary, analysis of the situation onboard, your plans to improve safety performance onboard, and a conclusion.

Resources and references

Publications
- Reducing error and influencing behaviour (UK HSE)

Other
- Safety material onboard (Safety bulletins, Fleet safety notices)
- Your company's Shipboard Management System

Subject area
2.5 Case History

Assignment tasks or activities
2.5.1 Change in the Cleaning Schedule?

Captain Jon Rollinson has been a tanker Master for 15 years. He prides himself on managing a ship well and ensures that the ship fully complies with the requirements of the shipboard safety management system and all relevant rules and regulations. He believes the chief officer should run the non-technical areas of the ship under to his direction. He is a stickler for tidiness and keeping paperwork up to date and ensuring that everything is in good order. He has a reputation for running his ship well and is well known and respected in the office.

When Captain Rollinson is around there is no doubt who is in charge, he exudes confidence and reassurance, and he expects his orders or instructions to be followed without question. He has clear views about how a ship should be run. Generally, he is a quiet man and rarely engages anyone other than the chief engineer in general conversation

Captain Rollinson's typical day would involve desk-based work involving administration with regular visits to the bridge while at sea.

One Sunday morning, Captain Rollinson, the Chief Officer, Sanjiv and the Bosun, James, meet on the bridge prior to carrying out the weekly inspection of store spaces and accommodation. When they reach the cargo control room Captain Rollinson becomes slightly frustrated, commenting that this is the second time in a row that the cargo control room has been not cleaned properly. Waste bin overflowing with rubbish, floor and surfaces greasy and not properly cleaned and general untidiness are his observations. He comments that this is unacceptable and there is no reason for it.

The Chief Officer, Sanjiv, advises the Master that he will sort this out, once and for all, however, Captain Rollinson instructs Sanjiv to make Danilo, the mess man, responsible for the daily cleaning of the cargo control room. Captain Rollinson explains to Sanjiv that Danilo cleans the Master's accommodation dutifully and leaves it in an immaculate condition; he can be relied upon to do a good job.

Two days later the Chief Officer reports that Danilo has struck the pumpman during an altercation in the alleyway outside the cargo control room.

A disciplinary hearing is held by Captain Rollinson, in accordance with the company disciplinary code. The hearing is a short affair as it was a clear breach of the code of conduct. Danilo is dismissed and replaced.

Background information

- Cleaning of spaces and accommodation is carried out by various personnel according to a cleaning schedule. According to the cleaning schedule the cargo control room is cleaned by the pumpman.
- The pumpman Rodrigo has recently been promoted from AB. He is unlucky in some ways to be on a very intensively traded, old tanker where a lot of maintenance is involved, much of it delegated to him. While he will get experience and plenty of overtime, he has a hectic working day and little rest. Rodrigo is not the tidiest or most organised of crew members, and his boiler suit is often dirty, and the chief officer has often reprimanded him for leaving oily rags around. He can't understand why Danilo the messman is so miserable and thinks that is affecting crew morale. Rodrigo keeps a supply of clean rags and tools in a drawer in the cargo control room and is in and out throughout the working day.

- Danilo has been a messman for four years and has been with the company all this time. He has a family he supports at home and is keen to be promoted to cook. Recently he has been having money problems and the bosun and others in the crew have noticed his change in mood and have offered to help him. The master is concerned about the overtime budget and has decided to reduce the working hours for the catering staff. Danilo is a quiet individual but has shown he has a temper when he was blamed by the cook for leaving the dairy provisions store door open. Something he strongly denied.

Note: The names used are fictitious.

Questions

- Describe Captain Rollinson's management strengths and weaknesses.
- Identify the aspects of leadership and management that may have resulted in a better outcome?
- What were the consequences of changing the cleaning schedule?
- Do you think that the fact that Danilo cleans Captain Rollinson's accommodation is a good indicator of performance, justify your answer?
- Captain Rollinson was unaware of the issues Danilo was having until they were raised as mitigating factors during the disciplinary interview (and even then, they were not really considered), why do you think that was?

Method

Your account can be in brief notes, bullet points or table format. An essay format is not necessarily required, but you may submit in this form if you wish.

Your plan should be detailed, clearly understandable and workable.

THE NAUTICAL INSTITUTE

Command Diploma Scheme

Unit 2 – Management and Leadership

Record of evidence

Use this table to record your completion of each assessment task and submit it with your portfolio of evidence. Insert the name of the document that you have uploaded to show you have completed the assignment and uploaded it. The date of completion is for your own records.

Assignment	Name of Document (s) uploaded	Completed	Date uploaded (DD/MM/YY)
2.1 Managing people			
2.1.1 Identifying leadership styles			
2.1.2 Dealing with disciplinary issues			
2.1.3 Dealing with conflict between two people			
2.2 Planning and Organisation			
2.2.1 Managing a temporary large increase in compliment.			
2.2.2 Managing a high workload in port			
2.3 Managing communications			
2.3.1 Managing internal communications			
2.3.2 Managing external communications			

2.4 Managing safety			
2.4.1 Exercise: Write a report for safety management ashore (practical task)			
2.5 Case History			
2.5.1 Change in the cleaning schedule?			

Unit 3 – Ship handling and navigation

Introduction and aim of the unit

To develop the managerial role of the master in regard to navigation and shiphandling.

To apply what you have learned in Units 1 and 2 to develop your ability to direct your bridge team in safe navigation and recognise poor navigational practice.

To facilitate developing your shiphandling skills.

Content of the unit and approach

This unit consists of a series of assignments, each requiring you to apply your understanding of different aspects of navigation and shiphandling in relation to the management of these functions.

They cover:

- Passage planning
- Monitoring the vessel's position and progress
- Ensuring the integrity of navigation equipment and systems
- Watchkeeping arrangements and bridge management
- Application of the Convention on the International Regulations for Preventing Collisions at Sea (COLREGS)
- Managing the voyage with regard to weather

In this unit, you are also required to keep a ship handling log in which you will record details of some basic manoeuvres you need to be able to perform to a standard that meets the (onboard) assessing master's approval.

You are also required to critically analyse a manoeuvre conducted by a pilot, in less-than-ideal conditions, during berthing.

Finally, there are two case histories to consider involving accidents resulting from inadequate navigational practices.

Learning outcomes

On completion of this unit, you will be able to:

- Describe how to ensure bridge navigation systems and personnel are effective in the safe navigation of the ship
- Provide the guidance necessary for junior officers to conduct safe navigation and to be effective members of the bridge team
- Write standing orders and night orders that can be clearly understood and followed by the bridge team members
- Analyse adverse weather information when conducting a voyage and identify and explain actions to mitigate damage to people, the ship's structure and fittings and cargo
- Provide evidence of your skill in conducting key manoeuvres
- Demonstrate application of knowledge when determining whether manoeuvres conducted by a pilot are adequate

Assignment assessment method and criteria

The assessors will consider evidence of the learning outcomes having been met based upon the following criteria.

Assessment Criteria Table		
Criteria	**Learning outcomes not met**	**Learning outcomes met**
Choice of research material	Evidence is based on material that is either outdated, cursory or basic. Typically, from websites or sources that are not authoritative.	Evidence is valid and appropriate. Material is from authoritative sources (industry publications or websites, Nautical Institute publications, etc.).
Quality of evidence submitted	Evidence is not well structured or detailed. Assessors find difficulty in understanding what has been submitted. It is cursory without any depth or based on poor accepted practice. Style of account is inconsistent suggesting 'cut and pasting'.	The evidence is detailed and presented in a well-structured manner and can be easily understood and followed. The subject area is covered in some depth. Account is supported by illustrations where appropriate.
Evidence of learning and understanding	Candidate uses the same language as that in research documents rather than own words. There is no evidence of applying knowledge learnt that would provide evidence of meeting learning outcomes.	Candidate provides evidence of a clear understanding of what is required by each assignment. The terms used and language, and practical examples to support their accounts, where appropriate, are seen by the assessors as convincing that the learning outcomes have been met.

Approximate timescale for completing the assignments

95 hours.

Assignments

Subject area
3.1 Passage Planning

While passage planning is the responsibility of the designated watchkeeping officer, it is important that they understand what is expected of them when producing a usable port to port passage plan and if necessary, they should be given guidance.

It is appreciated that your company might have clear instructions and requirements regarding navigational practice with respect to use of ECDIS and passage planning, however for assignments 3.1.1 and 3.1.2, you should assume that there is not.

Assignment tasks or activities

3.1.1 Providing guidance on passage planning

Select a short coastal voyage that will make particular demands on an inexperienced officer responsible for passage planning.

The voyage route should include:

- area(s) of restricted navigation involving large alterations of course
- restricted depth of water
- strong current or tidal conditions
- local regulations and VTS reporting system
- possibility of poor visibility
- high concentrations of traffic (including crossing traffic)
- traffic separation systems

Two obvious examples are transits of the Dover Strait and Singapore Strait.

Provide an outline of the selected voyage. State the starting point, end point and the route taken. You should submit screen shots from the ECDIS display to support your account if possible.

Describe the conversation you would have with the officer responsible during the appraisal stage of the passage planning process. Include in your description the practical guidance you would give to ensure that the officer is clear about your requirements for the voyage and that they are able to produce an appropriate and usable passage plan.

Explain how you would determine that the completed passage plan is comprehensive and suitable for all stages of the voyage.

3.1.2 Providing guidance on the use of ECDIS during passage planning

With reference to the voyage route described in assignment 3.1.1, explain in detail the guidance you would give to an inexperienced passage planning officer with regard to:

- applying ECDIS settings that are necessary for monitoring the vessel's movement but do not overload the bridge team with unnecessary information and alerts
- selection of appropriate ENCs and scaling issues
- applying settings of ECDIS features that will alert the bridge team of entering shallower water, grounding and contact with fixed and floating objects
- recognising and verifying accuracy and reliability of information displayed (Use of CATZOCs)

Description of the documents to be submitted

3.1.1 Providing guidance on passage planning
Account in essay or note form which includes as an attachment or incorporated in the account, a brief description of the area under consideration, illustrated with ECDIS screenshot(s) if possible and where appropriate.

3.1.2 Use of ECDIS during passage planning
Account in essay or note form, when appropriate use ECDIS screen shots to illustrate your account.

Suggested resources and references

Publications
- The Admiralty Manual of Navigation Vol 1: Principles of Navigation
- Bridge Team Management. Nautical Institute
- Bridge watchkeeping a Practical Guide. Nautical Institute
- Integrated Bridge Systems Vol 2: ECDIS and Positioning. Nautical Institute
- From Paper Charts to ECDIS
- Onboard nautical publications
- Your company's navigation procedures

Websites
https://www.nautinst.org/resource-library/technical-library/ecdis.html

Subject area

3.2 Monitoring the vessel's position and progress

While ECDIS will provide continuous and usually accurate position of the ship with a functional GNSS receiver, it is essential that your watchkeeping officers understand what is required of them with regards to cross-checking the position displayed on ECDIS.

Assignment tasks or activities

3.2.1 Guidance on cross checking GNSS derived position displayed on ECDIS

Select a small, but restricted area within your normal trading area through which your vessel might transit. This may be the same area you selected in assignment 3.1.1 on passage planning or another of your choice.

The selected area should (if at all possible):

- include hazards and be close to buoys, lighthouses, oil rigs and other structures. It might be a narrow channel, fairway or the lane of a TSS, for example
- make intense demands upon your bridge watchkeeping team with regard to position monitoring
- involve strong currents and/or leeway caused by strong prevailing winds
- require a major alteration of course

Once you have selected an appropriate area.

- Prepare a screenshot(s) of ECDIS or scanned copies of chart areas and this(these) is(are) to be used to illustrate your account and as reference material.
- Describe in detail the briefing you would give to your navigating officers before entering such an area with particular regard to cross checking the ECDIS displayed GNSS derived position. Your briefing should include:
    - Guidance on use of different methods of position cross-checking or verification. For example, the use of Radar Information Overlay (RIO) and manual fixing function on ECDIS
    - Guidance on the errors that might be expected if taking visual or radar bearings and radar distances, and advice on the selection of navigation marks
    - Position cross-checking intervals, if manual fixing used
    - Guidance on the use of parallel index techniques in a navigationally restricted area where there is course alteration with a strong cross current with reduced speed
    - Guidance on the systematic approach required when a large discrepancy is noted between ECDIS derived position and that from another source

3.2.2 Guidance on operating with GNSS denial

Describe the briefing you would give the bridge team with regard to GNSS failure. Your account should include:

- An explanation of the different types of GNSS denial (jamming, spoofing, equipment failure)
- An explanation how GNSS failure would become apparent
- The impact GNSS failure would have on main ship systems
- The instructions you would give the bridge team on how they are to set up the ECDIS to display continual position information during GNSS denial and guidance on the accuracy of the position displayed by ECDIS

Describe the training required to ensure deck officers are proficient in accurately and quickly plotting the ship's position on ECDIS using manual fixing or LOP function in event of such a failure.

Description of the documents to be submitted

3.2.1 Guidance on cross checking GNSS derived position displayed on ECDIS
Account in essay or note form, whenever necessary use ECDIS screen shots to illustrate your account as attachments or included in your account.

3.2.2 Guidance on operating with GNSS Denial
Account in essay or note form, whenever necessary use ECDIS screen shots to illustrate your account as attachments or included in your account.

Suggested resources and references

- Position Cross-Checking on ECDIS in View of International Regulations Requirements and OCIMF Recommendations
- TRANSNAV The International Journal on Marine Navigation and Safety of Sea Transportation

Subject area

3.3 Integrity of navigation equipment and systems

With the complexity of navigational systems on the modern bridge, it is important that you and your bridge team are aware of the functionality and accuracy of bridge systems.

Assignment tasks or activities

3.3.1 Functionality of navigational aids

Prepare a comprehensive checklist or procedure to cover the testing of all the electronic and non-electronic navigational aids available to your bridge team. This checklist or procedure should include:

- a list of the navigational aids that need to be checked
- method and frequency of checking
- acceptable errors or level of performance; explain where you might find this information
- action required when errors are discovered that are outside acceptable limits, or when alerts are generated, the system is in alarm condition or does not function as designed

Note: In your answer, list the make and model of each navigational aid.

3.3.2 Understanding the limitations of navigational aids

Using the list prepared in 3.3.1, identify the capabilities and limitations of navigational equipment, including sensors and their power sources.

3.3.3 Guidance on the operation of ECDIS

Prepare concise brief instructions for the management of ECDIS, covering operational procedures, system and backup files, ENCs and updates. Ensure that you address the following points:

- Identification and procurement of ENCs from chart supplier
- Maintaining an ENC catalogue
- Installing permit files
- Installation and updating of ENCs
- Setting and testing of alerts and alarms
- Use of route verification (safety check)
- Creation and maintenance of system configuration and backup files
- Creation and storage of log files
- Creation and storage of route files

Description of the documents to be submitted

3.3.1 Functionality of navigational aids
Checklist with explanatory notes, if required.

3.3.2 Understanding the limitations of navigational aids
Notes in table detailing limits and capabilities of identified navigational aids.

3.3.3 Guidance on operation of ECDIS
Account showing guidance on ECDIS procedures in note form.

Suggested resources and references

- Navigational equipment handbooks
- IMO Resolutions regarding navigational equipment performance standards

Subject area

3.4 Watchkeeping arrangements and bridge management

When you are about to take command for the first time you need to think about the watchkeeping and manning arrangements on your vessel during various situations and your expectations of the navigational watch officers.

Assignment tasks or activities

3.4.1 Planning bridge manning arrangements

List all of the factors you need to consider when planning the watchkeeping arrangements for your vessel.

Create comprehensive watchkeeping plans for your vessel, based on the available manning on board, covering the following situations as they apply to your vessel:

- a coastal passage
- open sea conditions
- periods of reduced visibility
- heavy weather
- periods of restricted navigation without a pilot during pilotage
- at anchor
- mooring and anchoring operations
- helicopter arrangements (if appropriate)
- embarking and disembarking the pilot or officials

Justify your choice of personnel for each of your plans. Detail the manning level for your vessel.

Outline the arrangements you would include to prevent errors or omissions that could result in grounding or collision if your manning arrangements include times when a single officer of the watch is the only person on the bridge while at sea.

Note: If your vessel has training software used for recording work and rest hours, such as ISF Watchkeeper, you may wish to use this resource.

Note: You should not use actual names of personnel on board.

3.4.2 Bridge manning arrangements during high workload

Select and outline an operation of your vessel that would make the maximum demand on manpower requirements on board while at sea. It could be that some deck operation is being carried out during a transit of a navigationally restricted area.

Demonstrate how your watchkeeping plan meets STCW and MLC 2006 rest hours requirements.

Describe a plan that you would implement to prevent the risk of fatigue amongst officers and crew.

3.4.3 Calling the Master to the Bridge

Describe the briefing you would give to a deck officer who has just joined the vessel as regards your presence on the bridge.

Describe the instructions and your requirements regarding:

- calling you to the bridge when your presence is urgently required
- your arrival on the bridge before taking over the conduct of the vessel
- your routine arrival on the bridge
- calling you when restricted visibility is suddenly encountered
- arrival on the bridge after the emergency or fire alarm has been activated

3.4.4 Write standing orders (practical task)

Write standing orders giving guidance to your watchkeeping officers on how they are to conduct navigation on board the vessel.

Consider the following elements:

- general conduct of officers
- what OOW needs to be familiar with
- conduct of navigation
- application of collision regulations (COLREGS)
- verbal communication, including use of VHF radio collision avoidance, limits of CPA to avoid a close quarters situation
- what to do in an emergency
- calling the master
- navigation with pilot embarked
- use of personal electronic devices (e.g., cell phones, laptops, etc)

3.4.5 Write night (or daily) orders

Prepare actual night orders for the following situations (ensure you have the master's permission to do this):

- during a coastal passage with light to medium traffic
- the night before an early morning arrival at a pilot station or anchorage
- when heavy weather or poor visibility is expected
- at an anchorage in heavy weather or when heavy weather is expected
- navigation with pilot on board

3.4.6 Exercise: Master's dilemma – second officer's high workload

The Second Officer advises you that due to the intensive trading pattern there is a backlog of ENC updates and corrections to nautical publications required following recent delivery of the vessel from the builder's yard.

- Describe the action you would take to (a) deal with the second officer's concerns and (b) ensure that the charts and nautical publications are brought up to date as soon as possible and in a way that safety of navigation is not compromised.
- Her workload is particularly high at this time and the voyage orders have been received which requires passage planning for the next voyage.
- The second officer is also responsible for routine checking of SCBA as part of looking after fire-fighting equipment on board.
- You are mindful of a forthcoming internal SMS audit and likely Port State Control inspection at the next port.

Description of the documents to be submitted

3.4.1 Planning bridge manning arrangements
Watchkeeping schedule with notes.

3.4.2 Bridge manning arrangements during high workload
Account in note form.

3.4.3 Calling the master to the Bridge
Account in note form or essay.

3.4.4 Write standing orders
Standing orders.

3.4.5 Write night (or daily) orders
5 sets of night orders (can be hand-written).

3.4.6 Exercise: Master's dilemma – second officer's high workload
Account in note form or essay.

Suggested resources and references

Publications

- The Admiralty Manual of Navigation Vol 1: Principles of Navigation
- Bridge Team Management. Nautical Institute
- Bridge watchkeeping a Practical Guide. Nautical Institute
- Integrated Bridge Systems Vol 2: ECDIS and Positioning. Nautical Institute
- Onboard nautical publications
- Your company's navigation procedures
- From Paper Charts to ECDIS
- Guidelines on Fatigue, 2019 Edition (IMO)

Subject area

3.5 Application of the Convention on the International Regulations for Preventing Collisions at Sea (COLREGS)

The officers of the watch must know and apply the COLREGS

As master you must be able to assess the OOWs' proficiency in the application of COLREGS and, if necessary, help further develop their skills.

Assignment tasks or activities

3.5.1 Developing junior watchkeeping officers in use of COLREGS in high traffic density areas

Select an area where there is high traffic density and proximity of navigational hazards that would make demands on your deck officers when applying COLREGS (it might be the area you chose in assignments 3.1.1 or 3.1.2).

Explain why you believe the area you have chosen might make particular demands on the skills of your watchkeeping officers when applying the COLREGS. Illustrate your account with a screenshot(s) of ECDIS display or ARPA with ECDIS overlay showing displayed targets (from ARPA and AIS).

Describe a training session that you could run to assess and help develop your deck officers' skills in applying the COLREGS (for example discussion of a recent difficult or memorable manoeuvre or review of ECDIS playback information or VDR data, if company's instructions allow the use of VDR information for training).

3.5.2 Instructing inexperienced officers on safe passing distances of vessels in the chosen area

Describe in detail the guidance, regarding traffic movements, you would give to officers who are not used to transiting the area chosen.

Specify the distance of closest point of approach you would require for transit vessels in this area (bow and stern crossing, overtaking and passing on a reciprocal course) and the action you would require if such distances cannot be achieved.

Justify your reasons for the distances you have selected, appropriate to your vessel.

Describe the guidance you would give to officers when they encounter concentrations of fishing vessels or other small vessels drifting or proceeding at slow speed.

3.5.3 Directing safe navigation of the vessel in restricted visibility

List the factors you would consider regarding bridge management in the following scenario.

You have been called to the bridge because the visibility has been reduced due to fog. This is a coastal area with high traffic density and proximity of navigational hazards and fishing boats. According to the local weather reports, the fog is widespread and likely to persist for some time.

Discuss each factor in turn and explain the measures you would take to ensure that the vessel is properly navigated in compliance with COLREGS during the time the visibility is restricted.

Method

3.5.1 Developing junior watchkeeping officers in use of COLREGS in high traffic density areas
Account with ECDIS screen shots showing traffic movements.

3.5.2 Instructing officers on safe passing distances of vessels in the chosen area
Account in note or table form.

3.5.3 Directing safe navigation of the vessel in restricted visibility
Account in note form or essay.

Resources and references

Publications

- Convention on the International Regulations for Preventing Collisions at Sea (COLREGS).
- Bridge Team Management. Nautical Institute
- Bridge watchkeeping a Practical Guide. Nautical Institute
- Your company's navigation or bridge procedures

Subject area
3.6 Dealing with adverse weather events

As an effective master, you will be expected to interpret weather information and use it to make decisions regarding the safe navigation of the vessel.

Assignment tasks or activities

3.6.1 Understanding the importance of accurate weather reports

Discuss the importance of weather and accurate weather information in the following situations:

- in port
- at anchor
- at sea (coastal or inshore)
- deep sea (ocean)

Your account should be in the context of the vessel type on which you are currently serving, the trading area and commercial operation (of which you should give details).

3.6.2 Dealing with a severe weather event

Create a detailed weather forecast, or synoptic situation based upon an extreme weather event that could occur in an area of your choice and which might be familiar to you. You may choose a historical actual weather forecast or synoptic weather chart from research.

The following should be clearly shown:

- wind direction
- wind speed,
- significant wave height
- swell height and period
- position and movement of the system affecting the situation
- and general weather (rain, fog, etc.) if appropriate

An extreme weather event is one where action is required by the master to avoid injury to crew or passengers, damage to the ship, fittings, cargo, loss of cargo, or stability problems.

Identify the issues that would concern you regarding the safety of the crew, ship, cargo or passengers when considering such a forecast.

Describe the decision-making process you would go through when considering action to mitigate the adverse effects on the vessel, cargo and those onboard the vessel, taking into account the commercial considerations of your actions.

Prepare the text of an email that you would send to the appropriate person/department in your organisation explaining your actions, the reasons for those actions and their commercial consequences.

Method

3.6.1 Understanding the importance of accurate weather reports
Account in note form or essay.

3.6.2 Dealing with a severe weather event
- Weather forecast or synoptic weather chart
- Account in note form or essay
- Email text

Suggested resources and references

Publications
- Numerical Weather Prediction: A Practical Guide For Mariners, 1st Edition 2013. Nautical Institute
- Mariners handbook NP 100
- Guide to ocean passage for the world
- Admiralty sailing directions

Subject area

3.7 Practical shiphandling

You are required to provide evidence of your shiphandling skills by uploading reports of your conduct of the navigation of the vessel during the following scenarios:

- Approaching a pilot station to embark a pilot or pilot(s)
- Approaching an anchorage and anchoring the vessel where there are other vessels in proximity
- Raising the anchor and manoeuvring away from an anchorage with ships in proximity
- Proceeding along a buoyed channel or river where alteration of course is required
- Maintaining position for some time while conducting some operation with a launch (storing, embarkation of personnel, for example)
- In each case you are to provide evidence that you have successfully completed each manoeuvre by:
- Submitting suitably annotated ECDIS screen shot(s) showing ships track, proximity of vessels and other data you feel will support your account (VDR data, for example, if readily accessible and use allowed by your company)
- Asking the master to verify that the manoeuvres were successfully performed by signing and commenting in the ship-handling log
- Submitting notes that show your understanding of the manoeuvres you carried out
- Reflection on the manoeuvre and what you may do differently in the future

Assignment tasks or activities

3.7.1 Approaching a pilot station to embark a pilot or pilot(s)

With evidence of successfully completing the manoeuvre, you should provide notes with:

- explanation of approach and slow down
- details of communications with pilot station and pilot launch/tug/cutter
- details of creating a lee and speed of ship when the pilot boards
- wind direction and speed, current/tidal conditions and swell height and direction if significant
- Details of pilot boarding position with weather and current/tidal information

3.7.2 Approaching an anchorage and anchoring the vessel where there are other vessels in proximity

With evidence of successfully completing the operation, you should provide notes with:

- an explanation of approach, slowdown and stopping at intended anchor position
- wind direction and speed, current/tidal conditions and swell height and direction if significant
- a choice of anchor and amount of cable used with reasons
- draft, depth of water and nature of bottom at anchor position
- anchoring method (dropping anchor or lowering using windlass in gear and method of laying out cable)
- recognising when the vessel is 'brought up' to the anchor
- status of engine after vessel is anchored

3.7.3 Raising the anchor and manoeuvring away from an anchorage with ships in proximity

With evidence of successfully completing the operation, you should provide notes with:

- reasons for use of main engine, thruster and rudder movements during heaving the anchor
- wind direction and speed, current/tidal conditions and swell height and direction if significant
- draft, depth of water and nature of bottom at anchor position
- details of main engine and rudder movements during leaving and clearing the anchorage area

3.7.4 Proceeding along a buoyed channel or river where alteration of course is required

With evidence of successfully completing the operation, you should provide notes with:

- details of speed changes and heading changes
- details of turn: rudder angle and speed
- wind direction and speed and current/tidal conditions at various stages
- details of any transiting vessels
- method of monitoring position within the channel

3.7.5 Maintaining position for some time while conducting some operation with a launch (storing, embarkation of personnel, for example)

With evidence of successfully completing the operation, you should provide notes with:

- wind direction and speed, current/tidal conditions and swell height and direction if significant
- details of heading and speed changes during transfer operation
- use of engine, rudder and thrusters to maintain position
- distance drifted from position where transfer commenced

Subject area

3.8 Berthing and unberthing with pilot onboard

When the vessel is being manoeuvred under the advice of a pilot, it is important that you have an understanding of the effectiveness of engine, rudder, thruster or tug directions given and whether they are correct in your opinion.

You need to be able to understand the reason for the pilot's actions and if they don't make sense, or are inadequate or incorrect, you need to be able to confidently, tactfully and professionally challenge the pilot to clarify your understanding in a way that doesn't affect the safety of the ship.

The assignment below is an exercise enabling you to provide evidence of your understanding of an actual operation requiring ship handling under the direction of a pilot.

Assignment tasks or activities

3.8.1 Berthing: understanding forces on the hull

Select a port where the vessel will be (or was) manoeuvred and berthed under pilotage, but in under less than ideal conditions.

Create a sketch or annotate a chart extract of the important or critical stage of the operation with reference to following information sources:

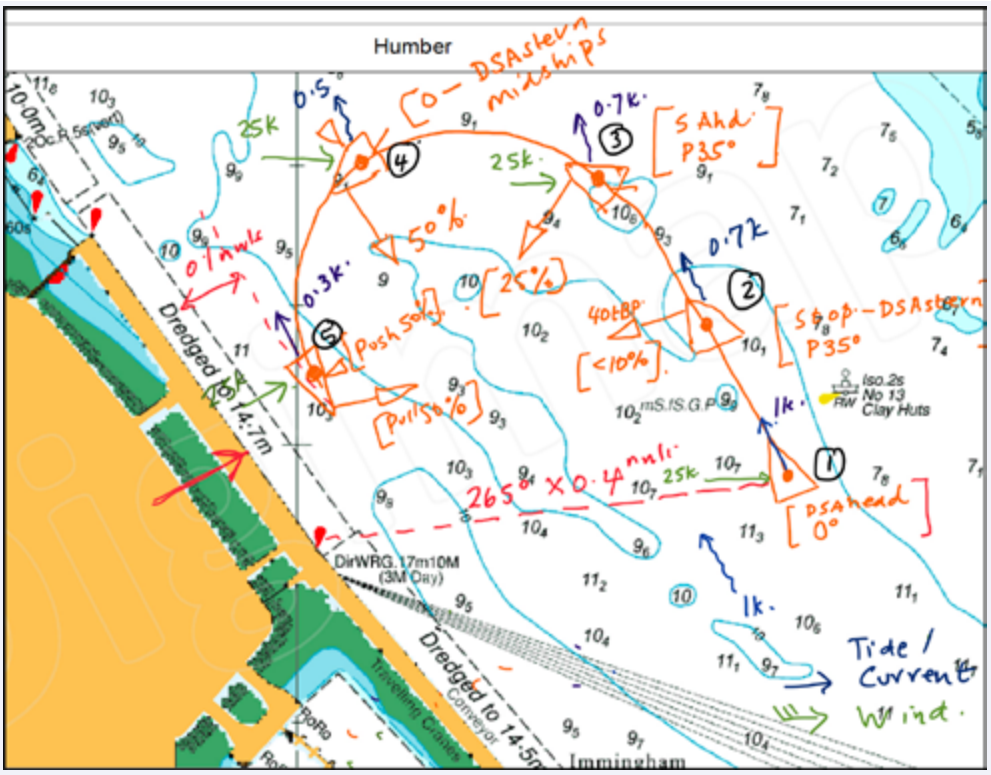
- VDR data (if data available and use permitted)
- ECDIS playback feature
- Information from course recorder/engine movement recorder/Bridge Movement book/ GNSS log

Identify FIVE (or more) positions during the operation which are key to the operation, e.g., starting a turn, tug starts to tow, stern movement, going astern, letting go anchor.

For each position identify the different forces (and some measure of magnitude, if known e.g., wind speed and tidal strength) and engine movement/revolutions, rudder angle, thruster movement and tug(s) power*, if used.

*Percentage of maximum effective bollard pull (if known). Specify maximum effective bollard pull of tugs used.

Below is an example of what the sketch might look like.



Create a document (or table) which describes how the manoeuvre was carried out that supports your sketch. It should include:

- use of main engine(s), rudder(s), thruster(s)
- use of tugs
- use of mooring lines
- use of anchor and cable

Explain the reasons for particular commands for each of the key positions with respect to:

- the various forces acting on the hull
- environmental forces (wind and current/tide)
- hydrodynamic interaction
- distance from salient fixed or floating features
- vessel's manoeuvring characteristics/limits

Method

3.8.1 Berthing: understanding forces on the hull
- Sketch or chart extract
- Account in notes or table form

Subject area
3.9 Case study

It is often quite easy to describe what you might have done after being presented with the facts following an accident, as contained in an incident report for example.

It is important to remember that accidents are undesirable outcomes as a result of some error, mistake or violation, but rarely as a result of malice.

The main purpose of case histories is to learn from them.

For each case history, try to put yourself in the position of the master onboard and think about and answer the questions asked.

Assignment tasks or activities

3.9.1 MV *RENA* grounding on Astrolabe Reef, 5th October 2011

New Zealand Transport Accident Investigation Commission

- According to 4.2.9 there was pressure from the charterer to arrive by 0300 hours local on 5th October, if you believe this is the case, why do you think the master gave such an unrealistic ETA?
- Some masters, knowing that the ETA limit for berthing was 03:00 on 5th October and that adverse coast currents would likely delay ETA until after this time, would have slowed down to arrive at the earliest time for berthing after 03:00. Why do you believe this master didn't do that?
- What was the general approach to navigation on the *RENA* prior to the incident? What is the evidence for your opinion?
- According to 4.4 of the incident report, there was some evidence that both the Master and second officer were experiencing the cumulative effects of fatigue. Looking at the facts in the report, how would you have approached the issue of minimising the risk of fatigue while the vessel was on the New Zealand coast?
- Do you think that design of the company's passage planning form was adequate? If not, why and how might you improve it?

3.9.2 Grounding of the *MAERSK KENDAL* on Monggok Sebarok reef, Singapore Straits, 2009

UK Marine Accident Investigation Branch

- Obviously, speed is an issue. Provide details of what you consider a suitable speed for transiting SINGAPORE STRAIT VTIS sectors 7 and 8 on this type of ship and why. If you believe the speed was appropriate, what manoeuvres could have been carried out to deal with traffic in the area of the Singapore Southern boarding ground?
- Considering the overview of plot of all vessels between 0700 and 0716 (Figure 7 of the report). What might have been a better manoeuvre to avoid the *KOTA DELIMA, BRIGHT PACIFIC* and *SAMHON JEWELRY*?
- What is the evidence of lack of situational awareness? Considering the high workload on the bridge team, how might you have organised the bridge team and navigational instruments to maintain adequate situational awareness while maintaining control of the vessel's navigation?
- The report makes mention of lack of use of ARPA trail manoeuvre. How important do you believe this is when in a heavy traffic situation?

Method

3.9.1 MV *RENA* grounding on Astrolabe Reef, 5th October 2011
Note form.

3.9.2 Grounding of the *MAERSK KENDAL* on Monggok Sebarok reef, Singapore Straits, 2009
Note form.

Resources and references

- New Zealand Transport Accident Investigation Commission
- UK Marine Accident Investigation Branch

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Unit 3 – Navigation and Ship Handling

Record of evidence

Use this table to record your completion of each assessment task and submit it with your portfolio of evidence. Insert the name of the document that you have uploaded to show you have completed the assignment and uploaded it. The date of completion is for your own records.

Assignment	Name of Document(s) uploaded	Completed	Date uploaded (DD/MM/YY)
3.1 Passage planning			
3.1.1 Providing general guidance on passage planning			
3.1.2 Providing guidance on the use of ECDIS during passage planning			
3.2 Monitoring the vessel's position and progress			
3.2.1 Guidance on cross checking GNSS derived position displayed on ECDIS			
3.2.2 Operating with GNSS Denial			
3.3 Integrity of navigation equipment and systems			
3.3.1 Ensuring functionality of navigational aids (Practical Task)			
3.3.2 Understanding the limitations of navigational aids			
3.3.3 Guidance on operation and of ECDIS			

3.4 Watchkeeping arrangements and bridge management			
3.4.1 Planning bridge manning arrangements			
3.4.2 Bridge manning arrangements during high workload			
3.4.3 Calling the Master to the Bridge			
3.4.4 Writing Standing Orders (Practical Task)			
3.4.5 Writing night orders (Practical Task)			
3.4.6 Exercise: Master's dilemma – Second Officer's high workload			
3.5 Application of the Convention on the International Regulations for Preventing Collisions at Sea (COLREGS)			
3.5.1 Developing junior watchkeeping officers in use of COLREGS in high traffic density areas			
3.5.2 Instructing inexperienced officers on safe passing distances of vessels			
3.5.3 Directing safe navigation of the vessel in restricted visibility			
3.6 Weather			
3.6.1 Understanding the importance of accurate weather reports			
3.6.2 Dealing with a severe weather event			

3.7 Ship Handling			
3.7.1 Approaching a pilot station to embark a pilot or pilot(s)			
3.7.2 Approaching an anchorage where other vessels in proximity and anchor the vessel			
3.7.3 Raising the anchor and manoeuvring away from an anchorage with ships in proximity			
3.7.4 Proceeding along a buoyed channel or river where alteration of course is required			
3.7.5 Maintaining position while conducting some operation with a launch			
3.8 Berthing and unberthing with pilot onboard			
3.8.1 Berthing: understanding forces on the hull			
3.9 Case History discussion			
MV *RENA* grounding on Astrolabe Reef, 2015			
Grounding of the *MAERSK KENDAL*, Monggok Sebarok reef, Singapore Straits 2009 on 6 January 2018			

Unit 3 – Ship Handling and Navigation

Ship Handling Record

Ref	Manoeuvre Description	Document file name	Date completed	Masters Comments and name and signature
3.7.1	Approaching a pilot station to embark a pilot or pilot(s)			
3.7.2	Approaching an anchorage where other vessels in proximity and anchor the vessel			
3.7.3	Raising the anchor and manoeuvring away from an anchorage with ships in proximity			
3.7.4	Proceeding along a buoyed channel or river where alteration of course is required			
3.7.5	Maintaining position while conducting some operation with a launch			

Unit 4 – Ship's commercial business

Introduction and aim of the unit

To develop the managerial role of the master in a commercial context.

It is essential for you, as an effective master, to recognise the commercial implications of decisions you make during the performance of a contract of carriage.

In both normal operations and in emergency situations, these decisions can have profound financial consequences. Recognising the consequences of actions taken can help limit potential financial losses to shipowner, charterer and cargo owner when making important decisions.

Content of the unit

This unit consists of a series of assignments in which you will be asked to apply your understanding of the master's role as a commercial manager.

The first two assignments are aimed at developing your understanding of 'trading documents' and procedure on entering port, important aspects of the commercial operation that you need to be familiar with.

The next three assignments are aimed at developing your knowledge of marine insurance to the extent that you can recognise the implications of your decisions on your insurance cover. Understanding this will allow you to speak with some authority when dealing with surveyors in the event of any incident that might result in an insurance claim.

The remaining assignments require you to apply investigation and research to various scenarios in which your decisions may have significant commercial consequences.

You are required to consider the situation described in each assignment and then:

- conduct some reflection based on your own experience and observations
- discuss with others e.g., the master, superintendent or other subject matter expert within your company or other organisation
- carry out research to consider the commercial effect on the different stakeholders appropriate to each situation

Only then are you to plan and write your account. On completion you should review your work and be content that it provides evidence that will satisfy the assessors that you have met the required learning outcomes.

Once all assignments have been completed, you need to upload them to your Estech shared folder as a folio together with your Record of Evidence.

On completion of this unit, you will be able to:

- Recognise the managerial role of the master in relation to a commercial venture
- Describe an approach to making the decisions, required of an effective master, in operational and emergency situations as they affect the commercial venture and safeguard the owner's commercial interests and those of others (such as charterers, cargo owners, passengers etc)
- Predict the effect of the master's commercial decisions on the commercial venture based on given scenarios

Assignment assessment method and criteria

The assessors will consider evidence of the learning outcomes having been met based upon the following criteria.

Assessment Criteria Table		
Criteria	**Learning outcomes not met**	**Learning outcomes met**
Choice of research material	Evidence is based on material that is either outdated, cursory or basic. Typically, from websites or sources that are not authoritative.	Evidence is valid and appropriate. Material is from authoritative sources (industry publications or websites, Nautical Institute publications, etc.).
Quality of evidence submitted	Evidence is not well structured or detailed. Assessors find difficulty in understanding what has been submitted. It is cursory without any depth or based on poor accepted practice. Style of account is inconsistent suggesting 'cut and pasting'.	The evidence is detailed and presented in a well-structured manner and can be easily understood and followed. The subject area is covered in some depth. Account is supported by illustrations where appropriate.
Evidence of learning and understanding	Candidate uses the same language as that in research documents rather than own words. There is no evidence of applying knowledge learnt that would provide evidence of meeting learning outcomes.	Candidate provides evidence of a clear understanding of what is required by each assignment. The terms used and language, and practical examples to support their accounts, where appropriate, are seen by the assessors as convincing that the learning outcomes have been met.

Approximate timescale for completing the assignments

75 hours.

Assignments

Subject area

4.1 Ships Documentation

As a Master you will need to have an intimate understanding of the ship's trading documents and their importance when authorities, surveyors or inspectors board the vessel.

In these two assignments you will be required to demonstrate your knowledge of the trading documents onboard and the port clearance procedures that are an important part of the commercial business in which you will be involved.

Assignment tasks or activities

4.1.1 Ship's documentation

You are master of a new ship that is about to be delivered, you will be required to work with various bodies such as Classification Society surveyors and representatives from the flag Administration regarding the issue, correctness and completeness of what is referred to as "trading certificates".

As master you will need to be familiar with these. The following is a quiz which will test your knowledge on these documents, which might require you to carry out research.

- What certificates need to be carried under the MARPOL convention?
- What documents are issued by the ship's flag Administration (you should specify under which flag your ship is registered)?
- What other document would you expect to accompany the safety equipment certificate (if carried)?
- What is the Continuous Synopsis Report or CSR and what detail would you check to ensure it is accurate?
- On the load-line certificate the ship type will be specified as either type "A" or type "B" with increased or reduced freeboard. What are type "A" and type "B" ships?
- Convention certificates issued for cargo ships (i.e., those issued under SOLAS, MARPOL and the International LOADLINE convention) have a five-year validity. Why might only short term or provisional certificates be issued for new ships? How long are they typically valid for?
- Under the SOLAS convention, there must be arrangements in place for maintenance of GMDSS equipment. If your company is dependent on outside contractors, what certificate would you wish to see?
- Which trading certificate would you expect to accompany either of the following documents: FORM A-Record of Construction and equipment for ships other than oil tankers or FORM B-Record of Construction and equipment for tankers.
- What is the significance of the IMO number seen on many of the trading certificates?
- Which certificate, required to be onboard, needs to be issued by a port health authority as evidence of hygiene on the ship? How long would you expect this certificate to be valid?

Describe how you would check the validity, accuracy and completeness of these documents.

4.1.2 Port formalities

- Describe the preparations of the required documentation for arrival at a port which you may not have visited before. Specify the port.
- Describe the typical port formalities you would expect to go through after a long ocean passage and before departure.
- Identify the typical documents required and state their purpose.

Method

4.1.1 Ship's documentation
Account in essay or note form accompanied by other documents to support your account.

4.1.2 Port formalities
Account in essay or note form accompanied by other documents to support your account.

Suggested resources and references

- Port information
- Your company's commercial procedures
- Your vessel's trading certificates
- Discussion with master

Subject area

4.2 Marine Insurance

While there are those in your organisation who will deal with insurance matters, as master, you would be expected to have some understanding of the Hull and Machinery and Protection and Indemnity Insurance arrangements and to have knowledge of the meaning of some insurance related terms.

Assignment tasks or activities

4.2.1 Hull and Machinery Insurance – general knowledge

The following is a quiz which is likely to relate to your Hull and Machinery Insurance cover. You may need to do some research.

- Describe the difference between general average and particular average.
- There is an insuring condition or implied warranty in any marine insurance policy that requires the ship to be 'seaworthy at the start of the voyage'. What does this mean?
- Outline the risks covered by Hull and Machinery Insurance.
- Outline or list what is excluded from hull and machinery cover.
- To what extent would hull and machinery insurers compensate an insured ship owner in the event of a general average or salvage claim?
- What governs the geographical limits of your hull and machinery cover? What are these limits referred to as?
- What marine insurance arrangements will your company have in place if it is necessary to operate in areas of conflict?
- Under what conditions might Hull and Machinery Insurance be:
  - automatically terminated
  - restricted
  - suspended
- What do the following clauses, usually found in a hull and machinery policy, mean?
  - Pollution hazard
  - ¾ Running Down Clause (RDC)
  - Duty of the assured (Sue and Labour)

4.2.2 Protection and Indemnity Insurance – general knowledge

The following is a quiz which is likely to relate to your Protection and Indemnity Insurance cover. You may need to do some research.

- Describe the concept of Protection and Indemnity Insurance. How does it differ from Hull and Machinery Insurance?
- What is essentially covered by Protection and Indemnity Insurance?
- In what circumstances might your P&I cover be:
  - automatically terminated
  - restricted
  - suspended
- What are the Protection and Indemnity Insurance cover arrangements in place in areas of conflict?
- Shipowners have a statutory obligation to:
  - provide evidence of funds available to pay compensation in the event of oil pollution (cargo and bunkers fuel) and,
  - funds available to remove a wreck

Describe what these arrangements are, what is the documentary evidence ships are required to carry and what is the involvement of the P&I club?

4.2.3 Damage to ship and ship's equipment (scenario)

You are on a container vessel which has landed very heavily on the quay during berthing, there is significant damage to the ship, damage to containers, the berth and cargo handling equipment ashore. Two shore-based personnel are reported to have been injured.

- Identify the different claim types and which would be covered by Hull and Machinery and which Protection and Indemnity.
- Discuss how you would deal with the different surveyors who can be expected to board when the vessel berths.
- Discuss the action you would take to protect the shipowner's interest and to mitigate the size of any claim.

Method

4.2.1 Hull and Machinery Insurance – general knowledge
Account with answers to the quiz in sufficient detail to confirm a general understanding of Hull and Machinery Insurance.

4.2.2 Protection and Indemnity Insurance – general knowledge
Account with answers to the quiz in sufficient detail to confirm a general understanding of Protection and Indemnity Insurance.

4.2.3 Damage to ship and ship's equipment (scenario)
Account as an essay or notes.

Suggested resources and references

Publications
- Hull and Machinery insurance Policy
- Protection and Indemnity Association Rule Book
- The Mariner's Guide to Marine Insurance Paperback (1999) Nautical Institute

Websites

- The interface between hull and machinery insurance and P&I from the P&I claims handler's perspective (Gard)
- Gard Guidance on Maritime Claims and Insurance

Subject area

4.3 Dealing with unexpected events from a commercial viewpoint

The assignments in this subject area require you to provide evidence that you are able to apply knowledge to address the issue specified in each of the following scenarios from the point of view of protecting the shipowners and other's commercial interests.

Your account needs to be in the context of:

- a ship type with which you are familiar, you should state type of vessel and size (gross tonnage, deadweight, length and draft, as appropriate)
- an appropriate voyage, location, or port with which you might be familiar
- payload as appropriate (cargo details and passenger numbers, contract of cargo, time charter)

Note: Where necessary you should add plausible detail, to illustrate your accounts and help you demonstrate understanding of what is being asked.

Assignment tasks or activities

4.3.1 Emergency towage

You are on a coastal passage where there is other traffic in the area and shallow areas in the vicinity where the vessel could ground.

You should identify the area for the scenario, but it should:

- be close to land
- have shallow water areas, where you could ground
- show underwater obstructions including pipelines and cables on the ECDIS ENC or chart
- be in reasonably close proximity to other vessels including fishing vessels
- have ports or VTIS services in the area within VHF range

Your vessel suffers a serious failure of either the propulsion or steering system, that cannot be resolved quickly.

There is significant current and wind speed is 20 knots (you should specify the direction depending on the area you choose).

- Describe the situation and area in proximity to navigational hazards and environmental conditions.
- Describe your immediate action.
- Discuss the option of drifting and identify the risks involved.
- Discuss the course of action open to you and the implications with regard to taking the services of a tug under the following circumstances:
- After reporting the situation to VTIS, you are contacted by VHF radio and offered towage to a safe anchorage under Lloyds Standard Form of Salvage Agreement (LOF)
- You can ask the company to arrange a towage contract
- Describe how you would deal with this situation in a way that protects the interests of the shipowner and other stakeholders.

4.3.2 Main Engine Failure (Place of refuge)

You are on passage, with cargo, from a port in the Caribbean to a port in the Mediterranean.

Three days after clearing the Caribbean, you feel the ship slowing down and are called to the bridge. The chief engineer informs you that the engine has cracked a cylinder head, which has started to self-destruct in the engine casing. He can make a temporary repair isolating the affected unit.

The repair will take about 10 hours to complete, after which the engine power will be limited, and the chief engineer is not confident the repair will last more than a few days.

- Identify the stakeholders* involved.
- Identify the different options available to you.
- Assess the risks of each and identify the implications for the ship operator and stakeholders and explain how this affects any contract of carriage.
- Discuss your options with regard to identifying a suitable place of refuge.
- Identify the marine insurance implications.

* By stakeholders we mean those with an interest in the voyage being successful e.g., shipowners, voyage charterers, time charters, cargo owners, consignees, insurers etc.

4.3.3 Collision

During a coastal passage while transiting an area of high traffic density at full speed, your vessel is in a collision with another vessel.

The incident involved a handy size bulk carrier which was crossing at right angles from your port side. Your vessel has sustained significant damage midships. No one on your vessel is injured and damage appears to be limited to above the water line.

Based on the above:

- Describe your immediate reaction to such an event
- Describe the action you would now take regarding the reports that must be made to comply with national and international requirements
- What are the marine insurance implications for such an incident?
- Identify the information or evidence you would collect to assist in the mitigation of any third-party claims

Method

4.3.1 Emergency towage
Account in essay or note form accompanied by other documents to support your account (chart extracts, completed forms etc).

4.3.2 Main Engine Failure (Place of refuge)
Account in essay or note form accompanied by other documents to support your account.

4.3.3 Collision
Account in essay or note form accompanied by other documents to support your account.

Suggested resources and references

Publications
The Mariner's Role in Collecting Evidence, Nautical Institute

Subject area
4.4 Dealing with disputes

Assignment tasks or activities

4.4.1 Bunker disputes and performance claims

Your ship has called at an anchorage, within the limits of a port, to bunker 2,000 tonnes of IFO 380cst by barge, before proceeding on a long ocean passage. Your vessel is on time charter.

The chief engineer advises you of a significant difference between the quantity received and the quantity on the bunker delivery note.

The ships figure is:	1,797 tonnes
The bunker barge figure is:	1,998 tonnes

The representative from the supplier is adamant that the chief engineer should sign the bunker delivery note. The chief engineer refuses to sign, and the bunker supplier will not accept or sign a letter of protest.

- Explain the consequences of accepting the bunker supplier figure.
- Describe how you would deal with this issue in a manner that protects the interests of the ship owner/operator and the time charter.

4.4.2 Disputes regarding passengers or cargo

Using historical records, identify an issue or dispute that you need to deal with that requires you to protect the interests of your company and those of the customer (passenger, cargo owner, voyage or time charterer).

The situation you select is up to you. Examples of situations could be:

- Loading a bulk cargo when, from inspection, you believe the cargo does not meet that specified in the shipper's declaration as required by the IMSBC code). (Bulk carrier)
- A shortfall in cargo loaded by an oil terminal which means the cargo quantity loaded is less than the minimum stated in the voyage charter party or there is a substantial difference between the bill of lading quantity and the quantity according to the ship's calculations. (Tanker)
- A batch of reefer containers, with frozen meat, to be loaded, appear to be in very poor condition. (Container ship)
- A group of passengers complain about the change of schedule due to weather forecast conditions at the next port (passenger ship)

4.4.3 Unsafe ports or berths

The time charterer orders you to a Far East port, which is newly constructed and has been open for only two months.

From port information and soundings on the ECDIS ENCs you discover that there is insufficient depth of water in the approach channel and alongside for your vessel's draft.

There is sufficient depth only one hour either side of high water, however this would be insufficient to comply with your company's under keel policy.

- Develop a fictitious or actual scenario for such a situation.
- Detail the communication you would have with the parties concerned.
- Explain how you would deal with this situation if the time charterer confirms that the port and approaches are safe and the vessel should berth on arrival, if required to do so by the port authority.

4.4.4 Crew arrest in foreign port

Choose a port with which you are familiar. After completing discharge and just before you are due to sail the chief officer reports that two ABs and a motorman are still ashore. The agent tells you that all three crew members have been arrested. None of the crew members is a national of the country in which the port is situated and none is carrying a passport, although they do all have photo ID as required for port security.

- Describe the actions you would take to minimise delay to the ship and how these actions will affect the outcome.
- Describe the actions you would need to take to sail the ship without the full crew on board.
- How could this affect the terms of a charter?
- What arrangements can you make to ensure the safety, wellbeing and, if necessary, repatriation of the arrested crew members?

Method

4.4.1 Bunker disputes and performance claims
Account in essay or note form accompanied by other documents to support your account.

4.4.2 Disputes regarding passengers or cargo
Account in essay or note form accompanied by other documents to support your account.

4.4.3 Unsafe ports or berths
Account in essay or note form accompanied by other documents to support your account.

4.4.4 Crew arrest in foreign port

Account in essay or note form accompanied by other documents to support your account.

Suggested resources and references

Publications
- The Mariner's Role in Collecting Evidence. Nautical Institute
- The Nautical Institute on Command. Nautical Institute
- Your company's emergency procedures

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Unit 4 – Ship's commercial business

Record of evidence

Use this table to record your completion of each assessment task and submit it with your portfolio of evidence. Insert the name of the document that you have uploaded to show you have completed the assignment and uploaded it. The date of completion is for your own records.

Assignment	Name of Document(s) uploaded	Completed	Date uploaded (DD/MM/YY)
4.1 Documentation and port formalities			
4.1.1 Ship's documentation			
4.1.2 Port formalities			
4.2 Marine Insurance			
4.2.1 Hull and Machinery Insurance - general knowledge			
4.2.2 Protection and Indemnity Insurance - general knowledge			
4.2.3 Damage to ship and third-party claims (scenario)			
4.3 Commercial implication of emergency procedures			
4.3.1 Emergency towage			
4.3.2 Main engine failure (Place of refuge)			
4.3.3 Collision			

4.4 Dealing with disputes and problems			
4.4.1 Bunker disputes and performance claims			
4.4.2 Disputes regarding passengers or cargo			
4.4.3 Unsafe ports or berths			
4.4.4 Crew arrest in foreign port			

Unit 5 – Emergencies and drills

Introduction and aim of the unit

To develop the master's strategic role in preparing for and dealing with an emergency or crisis onboard ship.

Content of the unit

In this series of assignments, you are asked to apply your understanding of the master's role in emergency preparedness on board, and to develop the leadership and mentorship skills required to deal safely with an emergency.

The unit covers:

- Planning a fire drill
- Planning an abandonment drill
- Planning a security drill
- Dealing with an oil pollution incident
- Dealing with a medical emergency
- Man overboard
- Search and rescue

You are required to consider the situation described in each assignment and then:

- conduct some reflection based on your own experience and observations
- discuss with others e.g., the master
- consider the important commercial implications, where applicable

Only then are you to plan and write your account. On completion you should review your work and be content that it provides evidence that will satisfy the assessors that you have met the required learning outcomes.

Once, all assignments have been completed, you need to upload them to Estech as a folio together with your Record of Evidence.

Learning outcomes

On completion of this unit, you will be able to:

- Plan realistic emergency drills and practise crew reactions as preparation in the event of emergencies on board
- Describe an approach to deal with unexpected situations

Assignment assessment method and criteria

The assessors will consider evidence of the learning outcomes having been met based upon the following criteria.

Assessment Criteria Table		
Criteria	**Learning outcomes not met**	**Learning outcomes met**
Choice of research material	Evidence is based on material that is either outdated, cursory or basic. Typically, from websites or sources that are not authoritative.	Evidence is valid and appropriate. Material is from authoritative sources (industry publications or websites, Nautical Institute publications, etc.).
Quality of evidence submitted	Evidence is not well structured or detailed. Assessors find difficulty in understanding what has been submitted. It is cursory without any depth or based on poor accepted practice. Style of account is inconsistent suggesting 'cut and pasting'.	The evidence is detailed and presented in a well-structured manner and can be easily understood and followed. The subject area is covered in some depth. Account is supported by illustrations where appropriate.
Evidence of learning and understanding	Candidate uses the same language as that in research documents rather than own words. There is no evidence of applying knowledge learnt that would provide evidence of meeting learning outcomes.	Candidate provides evidence of a clear understanding of what is required by each assignment. The terms used and language, and practical examples to support their accounts, where appropriate, are seen by the assessors as convincing that the learning outcomes have been met.

Approximate timescale for completing the assignments

55 hours.

Assignments

Subject area

5.1 Organising drills and emergency preparedness

Part of your responsibility in command at sea is the emergency preparedness of the officers, crew and the ship's equipment.

Practicing the correct and effective use of the equipment in carefully considered scenarios and under conditions where officers and crew are put under some psychological disadvantage, such as time pressure, is the essence of ensuring your officers and crew are able to face an emergency situation.

While some companies might require officers and crew to plan drills, it is in the master's interest to ensure that officers and crew are able to react, perform and recognise their limits in an emergency.

Assignment tasks or activities

5.1.1 Planning a fire drill

Plan a realistic emergency drill, involving an accommodation fire. Identify the particular demands this would place on your officers and crew. The scenario should include trapped personnel.

- Provide a detailed description of the scenario and illustrate with drawings. Explain why this drill would be demanding.
- Describe the safety measures you would put in place to ensure that the drill is conducted safely.
- Provide a list of resources and personnel available to you to deal with this emergency.
- Include copies of relevant sections of the fire plan and muster list (with names redacted).
- Devise a strategy for dealing with the emergency. Explain your priorities.
- Having run the above drill (either in practice or as a table-top exercise), write a report that includes:
    - A definition of the purpose of the drill – for example, testing emergency procedures, testing competence in the use of SCBA, testing the effectiveness of crew training
    - Realistic and measurable objectives for this drill (e.g., rescue of trapped personnel within 15 minutes, start boundary cooling within 10 minutes)
    - Measurable performance indicators, e.g., reaction times for correctly donning SCBA, rigging charged fire hoses, correctly adjusting ventilation, rescue of personnel, effective use of SCBA command and control; communication and reporting methods
- Discuss how you would conduct a debrief where teams, and individuals, could be made aware of their strengths and weaknesses in a helpful way.
- Give a description of how the lessons learned could be converted into either a procedural or an equipment change.

Method

5.1.1 Planning a fire drill
Account in essay or note form accompanied by other documents to support your account.

Subject area

5.2 Dealing with emergency situations

Part of your responsibility in command at sea is to react to unexpected situations. Your actions should result in mitigating the effects of an undesirable situation, such as a distress or other emergency situation.

In such situations your leadership, organisation and communication skills are very important.

Assignment tasks or activities

5.2.1 Dealing with an oil pollution incident

As master you must be able to react quickly to initiate the appropriate action in the event of an oil pollution incident.

Consider the following scenario:

During bunkering, alongside or at anchor from a bunker barge, the chief engineer raises the alarm and informs you that there has been a major bunker spill, with bunker fuel in the water.

Create such a scenario based on a port or anchorage you regularly visit. Use records based on a bunkering operation that has been carried out on your vessel for detail. You should not use names of personnel or the vessel's name.

- Describe the scenario.
- Identify the cause of the pollution (bunker hose split, for example), the type and quantity of fuel spilled, location of the spill and other details relevant to the scenario.
- Give a detailed account of your initial actions, based upon your vessel's emergency procedures, port and port state requirements, as appropriate.
- Describe your strategy for dealing with this incident to prevent further spillage and water pollution.
- You are the person in overall command and the on-scene commander's responsibility to organise clean-up activities is under your direction. Describe how you will organise your team to control, monitor and report to you on the progress of pollution mitigation and clean-up activities.
- How would you reassure those to whom you are required to report that you are controlling the incident and are carrying out the appropriate action?
- Describe the reporting procedures you would develop to keep interested parties updated about actions taken to stop, or reduce the quantity of, oil going overboard; to mitigate the effects of pollution; and to clean up the spill. Your account should include a list of the parties you would advise, details of the information you would report and the frequency of reports.
- Provide an example of reports that you would issue.
- Provide a list of all the documents that you will need to assemble for any subsequent investigation.

Assignment tasks or activities

5.2.2 Dealing with a medical emergency

As master you may be required to take action when a medical emergency occurs on your vessel.

Consider the following scenario:

While at sea, the chief officer reports that a crew member has fallen from a height and has sustained a broken arm and leg but is conscious.

- Describe in detail the instructions you would give concerning this crew member.
- Describe in detail the initial action you would take to assess, as fully as possible, the crew member's condition, including administering any first aid.
- Describe how you would organise ongoing treatment and monitoring.
- Describe how you would obtain medical advice from ashore and what information you would prepare.
- Based on a typical voyage, consider the location where the incident has occurred and any challenging circumstances (weather and remote location, for example) and describe the action you would take to disembark the casualty as soon as possible. Provide examples of any email communications or reports you would send.
- Describe how you would ensure the seafarer's family / next of kin is advised of the accident.
- Describe the records you would need to keep.

5.2.3 Man overboard

Your deck officers must know what to do if a crew member or passenger falls overboard so as to recover them as quickly as possible.

Consider the following scenario:

While at sea, the emergency alarm is sounded with the announcement "man overboard". The sea state is moderate, wind force 4.

Provide detailed accounts of:

- The actions you would expect of the officer of the watch
- The course, manoeuvres and engine alterations you would carry out until you are in a position to launch the rescue craft
- How you would deploy officers and crew
- Procedures you would implement for monitoring the position of the overboard crew member and reporting this to the person conducting the manoeuvre
- Preparations for launching the rescue boat
- Preparations for dealing with the casualty once recovered
- Reports that you would make after the incident

5.2.4 Search and Rescue

You are called to the bridge by the third officer who brings to your attention the following received on GMDSS MF/HF DSC receiver:

RECEIVED MESSAGE
JAN-23-2020 21:45Z. ECC: OK
DISTRESS CALL
SHIP IN DISTRESS: 25000****
NATURE: LISTING
POS: 50°32'N 8°12'W
DSC FREQ: RX 2187.5 kHz
COMM: TELEPHONE/2182.0kHz
25000**** (is the MMSI number for the CELTIC FISHER a 38m long fishing vessel-trawler)
Callsign EI9999

You are on a course 230°T at 16 knots. Your position at the time of the distress message received is 50°29'N 7°53'W.

The weather is: Wind: SSW x 18 knots swell: SW x 2 meters. Visibility good.

While you are on your way to the bridge, the third officer answers a MAYDAY VHF call from a fishing boat 15 miles away. The skipper on the fishing boat has contacted your vessel to say they are taking on water in the engine room and is thinking of abandoning.

Consider the following scenarios:
a. You are the closest ship to the vessel in distress
b. you are aware of an Irish warship in the area, the commander of which has assumed the role of OSC

You are required to:

- Provide relevant details of the vessel type on which your account is based
- Consider how each scenario might develop
- Describe in detail the organisation, planning and communications involved in rendering assistance in both cases
- Describe the manoeuvres, deployment of the ship's officers and crew, communication, and records you would keep when on scene
- Prepare an email you would send to all stakeholders involved in your voyage. Provide a copy of this with your accounts

Method

5.2.1 Dealing with an oil pollution incident
Account in essay or note form accompanied by other documents to support your account.

5.2.2 Dealing with a medical emergency
Account in essay or note form accompanied by other documents to support your account.

5.2.3 Man overboard
Account in essay or note form accompanied by other documents to support your account including details of manoeuvre.

5.2.4 Search and Rescue
Account in essay or note form accompanied by other documents to support your account including copies of emails.

Suggested resources and references

Publications

- IAMSAR Volume III
- Your company's emergency procedures
- Ship Captains Medical Guide (UK MCA) or WHO Medical Guide for Ships 3rd Edition

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Command Diploma Scheme

Unit 5 – Emergencies and drills

Record of evidence

Use this table to record your completion of each assessment task and submit it with your portfolio of evidence. Insert the name of the document that you have uploaded to show you have completed the assignment and uploaded it. The date of completion is for your own records.

Assignment	Name of Document(s) uploaded	Completed	Date uploaded (DD/MM/YY)
5.1 Organising drills and emergency preparedness			
5.1.1 Planning a fire drill			
5.2 Dealing with emergency situations			
5.2.1 Dealing with an oil pollution incident			
5.2.2 Dealing with a medical emergency			
5.2.3 Man overboard			
5.2 4 Search and rescue			

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Command Diploma Scheme

List of Assignments

No.	Ass. Ref.	Unit	Subject area	Topic
1	1.1	Unit 1 – Understanding the role as master	Understanding the role as master	Relationship with those you will interact with
2	1.2	Unit 1 – Understanding the role as master	Understanding the role as master	The attributes required of an effective Master
3	1.3	Unit 1 – Understanding the role as master	Understanding the role as master	Decision–making
4	1.4	Unit 1 – Understanding the role as master	Understanding the role as master	Communications
5	1.5	Unit 1 – Understanding the role as master	Understanding the role as master	Commercial awareness
6	1.6.1	Unit 1 – Understanding the role as master	Taking command and handover	Taking over command
7	1.6.2	Unit 1 – Understanding the role as master	Taking command and handover	Handing over command
8	2.1.1	Unit 2 – Management and Leadership	Managing people	Identifying leadership styles
9	2.1.2	Unit 2 – Management and Leadership	Managing people	Dealing with disciplinary issues
10	2.1.3	Unit 2 – Management and Leadership	Managing people	Dealing with conflict between two people
11	2.2.1	Unit 2 – Management and Leadership	Managing situations	Managing a temporary large increase in compliment.
12	2.2.2	Unit 2 – Management and Leadership	Managing situations	Managing a high workload in port

13	2.3.1	Unit 2 – Management and Leadership	Managing Communications	Managing internal communications
14	2.3.2	Unit 2 – Management and Leadership	Managing Communications	Managing external communications
15	2.4.1	Unit 2 – Management and Leadership	Managing safety	Exercise: Write a report for Safety Management Ashore (Practical task)
16	2.5.1	Unit 2 – Management and Leadership	Case history	Change in the cleaning schedule?
17	3.1.1	Unit 3 – Navigation and ship handling	Passage planning	Providing guidance on passage planning
18	3.1.2	Unit 3 – Navigation and ship handling	Passage planning	Providing guidance on the use of ECDIS during passage planning
19	3.2.1	Unit 3 – Navigation and ship handling	Monitoring the vessel's position and progress	Guidance on cross checking GNSS derived position displayed on ECDIS
20	3.2.2	Unit 3 – Navigation and ship handling	Monitoring the vessel's position and progress	Guidance on operating with GNSS Denial
21	3.3.1	Unit 3 – Navigation and ship handling	Integrity of navigation equipment and systems	Functionality of Navigational Aids (Practical Task)
22	3.3.2	Unit 3 – Navigation and ship handling	Integrity of navigation equipment and systems	Understanding limitations of navigational aids
23	3.3.3	Unit 3 – Navigation and ship handling	Integrity of navigation equipment and systems	Guidance on operation of ECDIS
24	3.4.1	Unit 3 – Navigation and ship handling	Watchkeeping arrangements and bridge management	Planning bridge manning arrangements
25	3.4.2	Unit 3 – Navigation and ship handling	Watchkeeping arrangements and bridge management	Bridge manning arrangements during high workload
26	3.4.3	Unit 3 – Navigation and ship handling	Watchkeeping arrangements and bridge management	Calling the Master to the Bridge
27	3.4.4	Unit 3 – Navigation and ship handling	Watchkeeping arrangements and bridge management	Writing Standing Orders (Practical Task)

28	3.4.5	Unit 3 – Navigation and ship handling	Watchkeeping arrangements and bridge management	Writing night orders (Practical Task)
29	3.4.6	Unit 3 – Navigation and ship handling	Watchkeeping arrangements and bridge management	Exercise: Master's dilemma – second officer's high workload
30	3.5.1	Unit 3 – Navigation and ship handling	Application of the COLREGS	Developing junior watchkeeping officers in use of COLREGS in high traffic density areas
31	3.5.2	Unit 3 – Navigation and ship handling	Application of the COLREGS	Instructing inexperienced officers on safe passing distances of vessels
32	3.5.3	Unit 3 – Navigation and ship handling	Application of the COLREGS	Directing safe navigation of the vessel in restricted visibility
33	3.6.1	Unit 3 – Navigation and ship handling	Weather	Understanding the importance of accurate weather reports
34	3.6.2	Unit 3 – Navigation and ship handling	Weather	Dealing with a severe weather event
35	3.7.1	Unit 3 – Navigation and ship handling	Ship Handling	Approaching a pilot station to embark a pilot or pilot(s)
36	3.7.2	Unit 3 – Navigation and ship handling	Ship Handling	Approaching an anchorage with other vessels in proximity and anchor the vessel
37	3.7.3	Unit 3 – Navigation and ship handling	Ship Handling	Raising the anchor and manoeuvring away from an anchorage with ships in proximity
38	3.7.4	Unit 3 – Navigation and ship handling	Ship Handling	Proceeding along a buoyed channel or river where alteration of course is required
39	3.7.5	Unit 3 – Navigation and ship handling	Ship Handling	Maintaining position while conducting an operation with a launch
40	3.8.1	Unit 3 – Navigation and ship handling	Berthing and unberthing with pilot onboard	Berthing: understanding forces on the hull
41	3.9.1	Unit 3 – Navigation and ship handling	Case histories	MV *RENA* grounding on Astrolabe Reef, 2015

42	3.9.2	Unit 3 – Navigation and ship handling	Case histories	Grounding of the *MAERSK KENDAL* Monggok Sebarok reef, Singapore Straits, 2009
43	4.1.1	Unit 4 – Ship's commercial business	Documentation and port formalities	Ship's documentation
44	4.1.2	Unit 4 – Ship's commercial business	Documentation and port formalities	Port formalities
45	4.2.1	Unit 4 – Ship's commercial business	Marine Insurance	Hull and Machinery Insurance – general knowledge
46	4.2.2	Unit 4 – Ship's commercial business	Marine Insurance	Protection and Indemnity Insurance – general knowledge
47	4.2.3	Unit 4 – Ship's commercial business	Marine Insurance	Damage to ship and third–party claims (scenario)
48	4.3.1	Unit 4 – Ship's commercial business	Commercial implication of emergency procedures	Emergency towage
49	4.3.2	Unit 4 – Ship's commercial business	Commercial implication of emergency procedures	Main engine failure (Place of refuge)
50	4.3.3	Unit 4 – Ship's commercial business	Commercial implication of emergency procedures	Collision
51	4.4.1	Unit 4 – Ship's commercial business	Dealing with disputes and problems	Bunker disputes and performance claims
52	4.4.2	Unit 4 – Ship's commercial business	Dealing with disputes and problems	Disputes regarding passengers or cargo
53	4.4.3	Unit 4 – Ship's commercial business	Dealing with disputes and problems	Unsafe ports or berths
54	4.4.4	Unit 4 – Ship's commercial business	Dealing with disputes and problems	Crew arrest in foreign port
55	5.1.1	Unit 5 – Emergencies and drills	Organising drills and emergency preparedness	Planning a fire drill
56	5.2.1	Unit 5 – Emergencies and drills	Dealing with emergency situations	Dealing with an oil pollution incident

57	5.2.2	Unit 5 – Emergencies and drills	Dealing with emergency situations	Dealing with a medical emergency
58	5.2.3	Unit 5 – Emergencies and drills	Dealing with emergency situations	Man overboard
59	5.2.4	Unit 5 – Emergencies and drills	Dealing with emergency situations	Search and rescue