

Consultation Report: Cadet Training & Modernisation Programme Syllabus Review – Fifth Group of Consultation Templates



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Foreword

The Maritime and Coastguard Agency (MCA), an executive Agency of the Department for Transport (DfT), carried out a public consultation on behalf of the Cadet Training and Modernisation (CT&M) Programme from 20th March to the 17th April 2023 regarding the Cadet Training Syllabus Review. The consultation was published on 20th March 2023 and notification of the consultation was sent to all participants of the CT&M Programme for wider dissemination through the maritime industry. This was also promoted on social media platforms and maritime news outlets.

The proposed amendments to the Cadet training syllabus were published in multiple formats and feedback on these amendments was gathered through surveys hosted on Smart Survey.







1 Key Findings

1.1 Introduction

1.1.1 Through the process of the consultation, it has been found that the majority of survey respondents agreed with the changes suggested by CT&M Sub-Group 1.2.



1.2 Consultation

- 1.2.1 The fourth consultation was carried out between 20th March and 17th April 2023 and can be found at: <u>www.gov.uk</u>
- 1.2.2 A total of 57 responses were received across the seven templates. With all respondents answering every question posed on their survey. A summary of consultee responses and the action taken by CT&M Sub-Group 1.2 as a result can be found in **Annex A**. A more detailed summary can be found in the accompanying 'Detail of feedback received' section of the consultation page. The answers given have been fully and carefully considered.
- 1.2.3 This consultation has been completed in order to ensure best practice has been followed and provide the opportunity for feedback from the entire maritime industry. There was no legal requirement to undertake this consultation.



Consultation Outcome



2 Summary of responses

2.1 Introduction

- 2.1.1 A total of 30 outcomes over eight templates were posed in the fifth consultation.
- 2.1.2 These outcomes, together with the consultees comments and the Cadet Training & Modernisation Sub-Group 1.2's response, are shown in detail in the accompanying 'Detail of feedback received' section of the consultation page. However, the main points are summarised below at Annex A.
- 2.1.3 Finalised versions of each module can also be found in the 'Detail of outcome' section of the consultation page.



3 Our response

3.1 What happens next?

- 3.1.1 The MCA will make the appropriate amendments to the syllabus templates. These will then be used to create academic modules that will form the new Cadet training syllabus with a view to complete this process by the end of 2023.
- 3.1.2 Once these academic modules have been created, it will take approximately 12 to 18 months to implement the new syllabus.
- 3.1.3 Cadet Assessment and the Training Record Book will also be amended to reflect these changes.



ANNEX A

SUMMARY OF THE CONSULTATION OUTCOMES, CONSULTEE FEEDBACK AND SUB-GROUP 1.2 RESPONSES TO THE FEEDBACK

Each module had its own survey which included the recommendations of Sub-Group 1.2:

Deck - Ship Stability: An Introduction			
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback
Outcome 1: Apply the basic principles of hydrostatics to load line calculations.	Кеер	100%	Added, "Link this module with the "Marine Cargo Operations" module to give practical examples of where these principles apply."
1.1 Vessel displacement	Кеер	100%	None
1.2 Mass, volume, density and relative density	Кеер	92%	None
1.3 Archimedes principle, hydrostatic data, displacement volume, displacement, buoyancy	Кеер	92%	None
1.4 Waterline length, breadth, draught, LBP, AW, CW, CB, and freeboard	Кеер	92%	None
1.5 TPC, FWA and dock water allowance	Кеер	92%	None
1.6 Displacement, deadweight and TPC tables	Кеер	100%	None
1.7 Load line and draught marks	Кеер	100%	None
1.8 Load line calculation	Кеер	92%	None
1.9 Hydrometer use	Кеер	85%	None
Outcome 2: Apply the principles of statical stability to interpret GZ curves.	Кеер	92%	Added, "Feedback from industry to, "Add context to GZ curves making them more relevant in practice".

			Practical examples of the impact of the GZ curve should be used."
2.1 Centre of buoyancy, centre of gravity, initial transverse metacentre, righting lever, righting	Кеер	100%	Added, "Industry suggestion to include examples of MAIB reports on vessels which have experienced incidents related to initial unstable equilibrium."
2.2 Moment, metacentric height	Кеер	100%	Added, "Industry suggestion to include examples of MAIB reports on vessels which have experienced incidents related to metacentric height."
2.3 Stable, neutral and unstable conditions of stability at small angles of heel	Кеер	100%	None
2.4 GZ curves	Кеер	92%	None
2.5 Stiff and tender vessels	Кеер	100%	None
2.6 Angle of Ioll	Кеер	100%	Added, "Industry suggestion to include examples of MAIB reports on vessels which have experienced incidents caused by angle of Ioll."
Outcome 3: Apply the principles of transverse stability to list calculations	Кеер	92%	None
3.1 Effect on G of loading, discharging and moving weights	Кеер	100%	None
3.2 List	Кеер	100%	None
3.3 Difference between list and loll and the methods of correction	Кеер	100%	Added, "Industry suggestion to include examples of MAIB reports on vessels which have experienced incidents caused by angle of list/ Ioll."
3.4 Changes in stability during the voyage	Кеер	100%	None

3.5 Free surface and the dangers and effect at small angles of heel	Кеер	100%	None
3.6 Effect of tank subdivision and density on free surface	Кеер	100%	None
3.7 Allowance for the effect of free surface	Кеер	100%	Added, "Industry suggestion to include examples of MAIB reports on vessels which have experienced incidents caused by free surface effect."
Outcome 4: Apply the principles of longitudinal stability to draught calculations	Кеер	100%	None
 4.1 True Mean Draught (TMD), Longitudinal Centre of Flotation (LCF), Longitudinal Centre of Gravity (LCG), Longitudinal Centre of Buoyancy (LCB), Trimming Moment and Moment to Change Trim 1 cm (MCTC) 	Кеер	100%	None
4.2 Apply the principles of longitudinal stability to calculations involving the inter- relationship of draught, trim, weight and their positions	Кеер	100%	None
Outcomes for this competency, above and beyond STCW which would be needed due to use of modern technology and impact of future fuels onboard:			
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %

Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given with reference to current and future seagoing technologies and practices.	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has contextualisation recommendations but please do add any you feel may have been missed.	100%
Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	100%
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	85%

Deck - Ship Stability (Theory and Practical Application)			
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback
Outcome 1: Apply the theories affecting ship's stability, trim and stability calculations.	Modernise	86%	Added, "Include contextualised data interpretation, analysis and presentation."
1.1 Stability information required to be carried on board ship	Modernise	86%	None
1.2 Loading, discharging, shifting weights, effect on a vessel's transverse stability	Modernise	86%	None
1.3 Loading, discharging, shifting weights, effect on a vessel's longitudinal stability	Modernise	86%	None
1.4 Stability and trim worksheets	Modernise	86%	None
Outcome 2: Analyse the factors and calculations concerning stability at large angles of heel.	Кеер	100%	Added, "Include contextualised data interpretation, analysis and presentation."
2.1 Compliance with IMO (International Maritime Organisation) intact stability requirements 2008 as amended and load line rules	Modernise	100%	None
2.2 Compliance with IMO (International Maritime Organisation) grain code requirements	Modernise	100%	None
2.3 Factors affecting GZ curves	Кеер	100%	None
2.4 Changes in stability at large angles of heel	Кеер	100%	None
2.5 Effect of damage and flooding on stability	Кеер	86%	Added, "Suggestion from industry to incorporate classification society/ shoreside assistance services into damage stability/bilging lessons.

			Include the impact of the type of stability computer on its ability to calculate damage stability. Include Safe Return to Port. Include contextualised data interpretation, analysis and
			presentation."
2.6 Effect of turning on a vessel's stability	Кеер	86%	None
2.7 Effect of rolling, parametric rolling and synchronous rolling on a vessel's stability	Кеер	100%	None
Outcome 3: Analyse and use stability/stress diagrams and stress calculating equipment.	Кеер	100%	Added, "Include contextualised data interpretation, analysis and presentation."
3.1 Types of shipboard stress	Кеер	100%	None
3.2 Shear force and bending moments curves for box shaped vessels	Кеер	100%	None
3.3 Stress calculating equipment	Кеер	100%	None
Outcomes for this competen	cy, above and beyond STCW w impact of future	hich would be needed due to us fuels onboard:	e of modern technology and
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %
Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has	100%

	with reference to current and future seagoing technologies and practices.	contextualisation recommendations but please do add any you feel may have been missed.	
Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	100%
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	86%

Naval Architecture: Ship Construction			
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback
Outcome 1: Identify the significant features of a ship's structure	Кеер	100%	 Feedback from industry to include the following requirements: 1) More practical exercises should be included (example: "View this video of a tank entry and identify the longitudinals, transverse frames, lightening holes and web frames in it") otherwise the topic ends up being too theoretical without the real world connect required. 2) The use of models of framing. This will help enable cadets to visualise what they are being taught - especially those cadets who have not been on a ship / not been inside a tank
1.1 Standard terminology pertaining to ship construction	Кеер	100%	None
1.2 Framing systems	Кеер	100%	None
1.3 Structural features with regard to keel, side shell and decks	Кеер	100%	None
1.4 Structural features with regard to holds, cargo, double bottom and peak tanks	Кеер	100%	None
1.5 Structural arrangements to ensure the vessel's watertight integrity	Кеер	100%	None

1.6 Structural arrangements in areas liable to damage in heavy weather	Кеер	100%	None
1.7 Structural arrangements with regard to openings in the hull or deck	Кеер	100%	None
1.8 Structural arrangements to ensure continuity of strength	Кеер	100%	None
1.9 Piping and pumping systems	Кеер	88%	None
Outcome 2: Describe the salient features of a range of ship types	Кеер	88%	None
2.1 Tankers (oil, gas and chemical tanker)	Кеер	88%	None
2.2 Cargo ships (general cargo, ro-ro, container, bulk carrier)	Кеер	88%	None
2.3 Passenger ships	Кеер	75%	None
2.4 Support vessels (supply, stand-by vessel and tugs)	Modernise	100%	None
2.5 Specialist vessels (surface effect vessels, high speed craft)	Кеер	75%	None
Outcome 3: Explain ship stresses and use ship stress calculating equipment.	Modernise	100%	None
3.1 Causes and effect of stresses in still water	Кеер	100%	None
3.2 Causes and effect of stresses in a seaway	Кеер	100%	None
3.3 Structural features to resist shearing and bending	Кеер	100%	None
Outcomes for this competency, above and beyond STCW which would be needed due to use of modern technology and impact of future fuels onboard:			
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %

Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given with reference to current and future seagoing technologies and practices.	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has contextualisation recommendations but please do add any you feel may have been missed.	100%
Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	88%
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	88%

Deck - Marine Vessels: Structures and Maintenance			
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback
Outcome 1: Analyse the structural requirements and features of a vessel.	Modernise	100%	None
1.1 Structural requirements for vessels with respect to:			
Assignment of loadlines Requirements and codes for the construction of specialised vessels	Кеер	100%	None
1.2 Ship construction features and systems that may be used to limit damage	Кеер	100%	None
1.3 Fire protection, fire detection and fire extinction on ships	Кеер	100%	None
Outcome 2: Analyse maintenance requirements, methods and procedures.	Modernise	100%	None
2.1 Properties of materials	Кеер	100%	None
2.2 Steelwork processes	Кеер	100%	None
2.3 Corrosion and material failure	Modernise	100%	None
2.4 Planned maintenance systems	Кеер	100%	None
2.5 Safe use of maintenance equipment and material	Кеер	100%	None
Outcome 3: Explain how to prepare for dry dock and for the survey of hull, fittings and equipment.	Modernise	100%	None
3.1 Ships plans	Кеер	100%	None
3.2 Ship dry-docking requirements	Кеер	100%	None
3.3 Survey requirements	Keep	100%	None

Outcomes for this competency, above and beyond STCW which would be needed due to use of modern technology and impact of future fuels onboard:				
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %	
Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given with reference to current and future seagoing technologies and practices.	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has contextualisation recommendations but please do add any you feel may have been missed.	100%	
Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	100%	
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	100%	

Deck - Marine Law and Management: An Introduction			
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback
Outcome 1: Explain the systems of law and guidance operating at national and international level.	Кеер	88%	None
1.1 The English legal system including statute law, common law and application of international law	Кеер	88%	None
1.2 Criminal and civil law including examples and court procedures	Кеер	88%	None
1.3 Legal and non-legal regulations and compliance	Кеер	88%	None
1.4: Awareness of legal and practical implications of working on a foreign flagged vessel.	Add	88%	None
1.5 Awareness of progressive development of national and international standards.	Add	88%	None
1.6 Awareness of Human Rights legislation applicable on board	Add	75%	None
Outcome 2: Describe the legal and guidance regulations relating to different areas of operations and safe practices on-board a ship	Кеер	88%	None
2.1 Content and application of current maritime legislation relating to safety, environmental protection and quality	Кеер	88%	None

2.2 Content and application of current maritime legislation relating to employment, certification and training of seafarers	Кеер	88%	None
2.3 The source and content of legislation and guidance concerning operational procedures and practices	Modernise	75%	None
2.4 Implementation of standards through port and flag state control	Кеер	88%	None
2.5 Record keeping and providing evidence on occurrence of incidents	Modernise	100%	None
2.6 Awareness of the commercial role and legal responsibility of the master in vessel operations	Add	75%	None
Outcome 3: Analyse leadership and management techniques used on-board and explain factors affecting management of personnel on-board at the operational level.	Кеер	88%	None
3.1 Shipboard and shoreside management structures	Кеер	88%	None
3.2 Principles of management adopted on-board ship	Modernise	88%	Added, "Industry feedback to ensure authority and assertiveness included in the academic guidance document for this module."
3.3 Applying management techniques in the workplace	Modernise	88%	Added, "Industry feedback to ensure authority and assertiveness included in the academic guidance document for this module."
3.4 The importance of a safety conscious, communicative environment	Modernise	88%	None

3.5 Awareness of requirements for response to bullying, harassment, Sexual Assault and Sexual Harassment (SASH)	Add	88%	None
3.6 Awareness of the concept of Psychological Safety	Add	88%	None
Outcomes for this competen	cy, above and beyond STCW w	hich would be needed due to us	e of modern technology and
	impact of future	e fuels onboard:	
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %
Outcome required to expand seafarer's knowledge of the wider industry and how they gain transferable skills.	To broaden the candidate's understanding of the maritime industry as a whole and how their role impacts other areas. This will also help candidates understand potential career paths they could follow within the industry, using the technical and soft skills gained while at sea.	Introduce a new outcome to cover the knowledge of the wider maritime industry and the transferable skills seafarers gain. This could include talks from maritime industry representatives.	88%
Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given with reference to current and future seagoing technologies and practices.	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has contextualisation recommendations but please do add any you feel may have been missed.	100%

Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	100%
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	100%

Deck - Shipmaster's Law and Business				
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback	
Outcome 1: Evaluate the principles and application of UK legislation and international treaties applicable to the shipping industry.	Кеер	100%	None	
1.1 International law and its transition into UK national law applicable to the shipping industry	Кеер	100%	None	
1.2 United Nations Convention on the Law of the Sea	Кеер	100%	None	
1.3 Flag and port state legislation	Modernise	89%	Added examples of sources of further guidance, "Include importance of going beyond minimum standards, e.g. building safety culture, sources of further guidance (e.g. IMCA, OCIMF, CDI, etc)"	
1.4 Classification societies	Кеер	100%	None	
1.5 Health, safety, human rights and employment legislation applicable to the shipping industry	Modernise	100%	None	
Outcome 2: Analyse international requirements to ensure safety of ship, life, cargo and the protection of the marine environment.	Кеер	100%	None	
2.1 Requirements of international conventions; Safety of Life at Sea (SOLAS), Marine Pollution (MARPOL) and the International	Add	100%	None	

Convention for the Control and Management of Ships' Ballast Water and Sediments, 2007.			
2.2 Standard of Training Certification and Watchkeeping (STCW) convention on seafarers and marine industry in general	Кеер	100%	None
2.3 Maritime Labour Convention 2006	Кеер	100%	None
Outcome 3: Analyse UK legislation with regard to the laws of contract, torts and maritime liens applicable to the Merchant Navy.	Кеер	100%	None
3.1 The law of contract, including how contracts are formed, the use of conditions and warranties and the breach of a contract	Кеер	100%	None
3.2 The law of torts applicable to the marine industry with emphasis on the tort of negligence.	Кеер	100%	None
3.3 The law and rules of agency, including the master as agent of necessity.	Кеер	100%	None
3.4 The law of possessory and non-possessory maritime liens	Кеер	100%	None
Outcome 4: Analyse the application of commercial law to ship operations and the role of Master in its application.	Кеер	100%	None
4.1 International conventions and UK national law on maritime contracts of carriage of goods	Кеер	100%	None

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4.2 Maritime insurance and the roles of underwriters and P&I clubs in accordance with the Maritime Insurance Act 1906	Кеер	100%	None
4.3 Commercial role and legal responsibility of the master in vessel operations	Modernise	100%	None
4.4 Commercial role and legal responsibility of the master in emergencies and incidents	Кеер	100%	None
4.5 Legal procedures on arrival at, and on departure from, a port	Кеер	100%	None
4.6 Legal implications of Migrant Rescue/ Mass Casualty situation	Add	89%	None
Outcomes for this competen	icy, above and beyond STCW w impact of future	hich would be needed due to us e fuels onboard:	e of modern technology and
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %
Add the legal implications of innovative technologies, including autonomous vessels.	Legislation is constantly evolving regarding autonomy and innovative technologies, so we should ensure this syllabus is future-proofed.	Include "Awareness of the legal implications of vessels operating with innovative technologies" as a separate outcome.	100%
Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has	100%

Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	100%
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	100%

Deck - Shipboard Management			
Outcome	Sub-Group 1.2 Recommended Action	Consultation Support %	Changes made as a result of industry feedback
Outcome 1: Analyse personnel management theory as it applies to the role of a senior officer.	Кеер	100%	None
1.1 Concepts of personnel management theory	Modernise to include new HELM requirements	100%	Amended the action required to, "Explore the concept of management vs leadership vs command"
1.2 Methods of implementing management theory	Кеер	100%	None
1.3 Methods of guidance and counselling, discipline and appraisal	Кеер	100%	None
1.4 Methods of compliance with the requirements for response to bullying, harassment, Sexual Assault and Sexual Harassment (SASH)	Add	100%	None
1.5 Methods for ensuring Psychological Safety	Add	100%	None
Outcome 2: Apply budgetary control in a shipboard context.	Кеер	86%	Feedback from industry to ensure this outcome "covers cost codes, forecasting, basic book balancing, how to use excel as a budgeting and cost tracking tool and, awareness of other budgeting tools." Highlight the practical use of data analysis skills in this outcome.
2.1 Budgetary control theory methods	Кеер	100%	None

2.2 Basic financial information	Кеер	100%	None
Outcome 3: Interpret and apply employment law, quality assurance legislation and safety management systems to shipboard operations.	Кеер	100%	None
3.1 Legislation regarding employment of seafarers	Remove	86%	None
3.2 Purpose of quality assurance, codes and guidance	Кеер	100%	None
3.3 Methods of developing safety cultures and the role of safety management systems	Modernise to include new HELM requirements	100%	None
3.4 Auditing procedures	Кеер	100%	None
Outcomes for this competency, above and beyond STCW which would be needed due to use of modern technology and impact of future fuels onboard:			
How would you deliver this outcome/ objective?	How would you assess this outcome/ objective?	Action required	Consultation Support %

Include facilitation of a learning journey, from law (bare minimum requirements), through shipboard policies/the SMS, and on towards safety culture, self-regulation and continuous improvement	Seafarers need to be able to: Understand how to develop operating procedures that take the human element into consideration. Identify how policies and procedures can impact individuals differently. Identify the benefits of considering who will be using policies and procedures, as well as when, why and how, when designing or reviewing policies and procedures. Identify best practice in developing procedures e.g., consulting with staff it applies to, risk assessments etc. Continually improve	Add an outcome to this module, covering the details of this proposal.	100%
	Continually improve procedures e.g., reporting processes, toolbox talks.		

Include an outcome on Seafarer Wellbeing, Suicide Awareness, Equality, Diversity and Inclusion.	 Seafarers need to be able to: Consider 'suicide alertness' as an alternative to going in to the complex issue of mental health. It is more practical. Identify people thinking of suicide. Overcome barriers in talking about suicide. Identify reasons we may miss, dismiss or avoid suicide. Practice using the 4-step model of suicide alertness: Tell, Ask, Listen and Keep-safe Connect people at risk of suicide with further appropriate help. Understand the managers role in promoting wellbeing, ensuring welfare (including fair employment) and in managing atmace 	Add an outcome covering seafarer wellbeing and suicide awareness. This could be similar to a suicide alertness course such as SafeTALK.	86%
Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to show how they apply to work on board. Where this is the case, it is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is essential to make sure that this context is given	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to contextualise the outcome and make it relevant to the maritime industry, giving specific shipping examples of how the outcome may be applied in a modern shipping context. Not every template has	100%

	future seagoing technologies and practices.	recommendations but please do add any you feel may have been missed.	
Include Human Element Factors throughout the syllabus	To provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Raise awareness throughout the Cadet's training of the areas in which human element factors will have an impact. Recommendations on where this can be included have been noted throughout the entire syllabus. Not every template has Human Element Factor recommendations but please do add any you feel may have been missed.	100%
Include Data Science skills throughout the syllabus	Data Science Skills (Comprehension, Analysis, Presentation, etc) are already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of data science skills should be highlighted throughout the syllabus. Not every template has Data Science recommendations but please do add any you feel may have been missed.	86%





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