Proposal to modernise the Methodology of Teaching, Assessment/ Examination

Nautical - STCW II/2 CoC	Name of respondent, organisation and role:		
Competency/ Module: Management of Vessel Operations (management level)	***Competency: A-II/2 Monitor the loading, stowage, securing, care during the voyage and the unloading of cargoes***		
Knowledge, understanding and proficiency	**Recommendation of working group regarding the outcome and objective.**	**Rationale**	**Action required**
Outcome 1: Analyse and plan cargo operations for dry cargoes, including loading, discharging, securing and cargo handling equipment and safe operating procedures.	Keep	Relevant	See sub-outcome actions
1.1 Dry cargo operations and legislative requirements	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools have at sea. Ensure covered for multiple vessel types.	Use of loading computers, relevant software and/or simulators Include the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention)
1.2 Cargo operation management and control	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools have at sea. Ensure covered for multiple vessel types.	Use of loading computers, relevant software and/or simulators
1.3 Cargo stowage and securing legislation	Keep	Relevant	None
1.4 Cargo handling equipment	Modernise	We must ensure students are up to date with current requirements and best practice	Include statutory requirements and industry guidelines
Outcome 2: Analyse and plan cargo operations for bulk liquid cargoes, including loading, discharging and cargo handling equipment and safe operating procedures.	Keep	Relevant	See sub-outcome actions
2.1 Liquid cargo operations and legislative requirements	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools	Use of loading computers, relevant software and/or simulators

		have at sea. Ensure covered for multiple vessel types. We must ensure students are up to date with current legislative requirements	Include the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention)
2.2 Liquid cargo operation management and control	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools have at sea. Ensure covered for multiple vessel types. We must ensure students are up to date with current legislative requirements	Use of loading computers, relevant software and/or simulators Include statutory requirements and industry guidelines (ICS/ Intertanko/ OCIMF publications).
Outcome 3: Analyse the planning and operational procedures for passenger operations.	Keep	Relevant	See sub-outcome actions
3.1 Passenger operations to meet legislative requirements	Keep	Relevant	None
3.2 Passenger operations: control and monitoring	Modernise	Relevant	Include greater emphasis on emergency operations Include case studies of successful emergency passenger operations.
Outcome 4: Calculate cargo quantity within the constraints of prevailing legislations and contact of carriage.	Keep	Relevant	See sub-outcome actions
4.1 Load line zone calculation	Modernise	Contextualise to emerging high latitude sea routes	Include calculations for emerging area of trade. E.g., Northern Sea route, NW Passage etc.

4.2 Quantity on board (bulk liquid calculations)	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools have at sea. Ensure covered for multiple vessel types.	Use of loading computers, relevant software and/or simulators
4.3 Quantity to load to fill the hold using stowage factor and broken stowage	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools have at sea. Ensure covered for multiple vessel types as it is important to understand the characteristics of different cargo.	Use of loading computers, relevant software and/or simulators
4.4 Draught surveys	Modernise	Contextualise in a shipping context, to apply their knowledge using the tools have at sea. Ensure covered for multiple vessel types.	Use of loading computers, relevant software and/or simulators
Proposal submitted by:	**Any other outcomes for this competency, above and beyond STCW which would be needed due to use of modern technology and impact of future fuels onboard:**		
	Objective	**Reason Why**	**Action required**
Cadet Training & Modernisation Working Group	Introduce an outcome on liquid hydrogen cargo.	This learning related to liquid hydrogen cargo carriers needs to be introduced due to their presence in the industry.	Group to confer with relevant experts for feedback and introduce outcome.
Cadet Training & Modernisation Working Group	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.

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Cadet Training & Modernisation Working Group	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.
Cadet Training & Modernisation Working Group	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.