Proposal to modernise the Methodology of Teaching, Assessment/ Examination

Nautical - STCW II/1 CoC	Name of respondent, organisation, and role:		
Competency/ Module: Marine Cargo Operations	*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: Explain the principles and safe working practices for the proper loading, stowage and carriage of dry cargoes and offshore vessel operations.	Keep	Relevant	See sub-outcome actions.
1.1 Loading, discharging, securing and carriage of dry cargoes	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 statutory requirements and industry guidelines (IMO, ICS, etc…)
1.2 Relevant codes for carriage of cargoes	Keep	Relevant	None
1.3 Procedures to ensure efficient cargo operations	Modernise	Current industry best practices must be reflected.	Ensure compliance to industry best practises – for example: OCIMF for oil cargo.
1.4 Care and maintenance of cargo handling equipment	Keep	Relevant	None
1.5 Cargo 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
Outcome 2: Explain the principles and safe methods of arranging for the proper loading, stowage and carriage of bulk liquid and chemical cargoes.	Keep	Relevant	See sub-outcome actions.

2.1 Loading, discharging, securing and carriage of bulk liquid cargoes	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 Reference to standards and quality regimes in place (e.g. OCIMF)
2.2 Tank entry procedures	Keep	Relevant	Ensure update COSWP (Code of Safe Working Practises) is included.
2.3 Inert gas systems	Modernise	We must reflect modern systems found on board and the regulations/ guidelines surrounding them	Include control of greenhouse gas emissions Include IMO/ OCIMF guidelines and Flag State/ Port State requirements
2.4 Crude oil washing and tank/pipeline cleaning	Modernise	We must reflect modern systems found on board and the regulations/ guidelines surrounding them	Include ISGOTT guidelines
2.5 Ballast management	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
2.6 Single/multiple grade cargoes	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
2.7 Liquid cargo 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
Outcome 3: Explain the duties of the Officer of the Watch (OOW) whilst maintaining a deck cargo watch.	Keep	Relevant	See sub-outcome actions.
3.1 Safety and security procedures. Which may arise during a cargo watch	Keep	Relevant	None
3.2 Legislative requirements for safe access as per COSWP	Keep	Relevant	None

3.3 Legislative requirements for lifting appliances as per COSWP	Keep	Relevant	None
3.4 Legislative requirement for cargo documentation and record keeping	Keep	Relevant	None
3.5 Code of safe working practice	Keep	Relevant	None
3.6 Pollution prevention measure during cargo watch	Keep	Relevant	None
3.7 Response to emergencies	Keep	Relevant	None
Outcome 4: Explain the precautions and procedures to be taken to prevent pollution of the marine environment.	Keep	Relevant	See sub-outcome actions.
4.1 International Convention for the Prevention of Pollution from Ships (MARPOL)	Keep	Relevant	None
4.2 Shipboard Marine Pollution Emergency Plans (SMPEP)	Keep	Relevant	None
4.3 Hazardous goods	Keep	Relevant	None
4.4 Bunkering operations	Keep	Relevant	None
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:**		

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	Objective	Reason Why	Action required
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.
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.