Proposal to modernise the Methodology of Teaching, Assessment/ Examination

Nautical - STCW II / 2 CoC			
Competency/ Module: Marine Vessels - Structures and Maintenance	Competency: Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment.		
Knowledge, understanding and proficiency	Recommendation of working group regarding the outcome and objective.	Rationale	Action required
Outcome 1: Analyse the structural requirements and features of a vessel.	Modernise	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.	Ensure this outcome is linked with "Ship Stability Theory and Practical Application" to provide proper context and a complete view of structure and stability, including of appropriate simulation software.
1.1 Structural requirements for vessels with respect to:Assignment of loadlinesRequirements and codes for the construction of specialised vessels	Кеер	Relevant	See outcome actions above
1.2 Ship construction features and systems that may be used to limit damage	Кеер	Relevant	See outcome actions above
1.3 Fire protection, fire detection and fire extinction on ships	Кеер	Relevant	See outcome actions above
Outcome 2: Analyse maintenance requirements, methods and procedures.	Modernise	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	Include the latest design and construction practices.

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		current and future seagoing technologies and practices.	
2.1 Properties of materials	Кеер	Relevant	See outcome actions above
2.2 Steelwork processes	Кеер	Relevant	See outcome actions above
2.3 Corrosion and material failure	Modernise	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.	Include stress concentration on the vessels structure and inspection for fractures/failures.
2.4 Planned maintenance systems	Кеер	Relevant	See outcome actions above
2.5 Safe use of maintenance equipment and material	Кеер	Relevant	See outcome actions above
Outcome 3: Explain how to prepare for dry dock and for the survey of hull, fittings and equipment.	Modernise	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.	Ensure this outcome is linked with "Ship Stability for Management Level" to provide proper context and an understanding of the real life process, including of appropriate simulation software.
3.1 Ships plans	Кеер	Relevant	See outcome actions above
3.2 Ship dry-docking requirements	Кеер	Relevant	See outcome actions above
3.3 Survey requirements	Кеер	Relevant	See outcome actions above

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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	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.	