Proposal to modernise the Methodology of Teaching, Assessment/ Examination

Nautical - STCW II/1 CoC			
Competency/ Module: Naval Architecture: Ship Construction	***Competency: Maintain seaworthiness of the ship***		
Knowledge, understanding and proficiency	**Recommendation of working group regarding the outcome and objective.**	**Rationale**	**Action required**
Outcome 1: Identify the significant features of a ship's structure	Contextualise	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.	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	Keep	Relevant	None
1.2 Framing systems	Keep	Relevant	None
1.3 Structural features with regard to keel, side shell and decks	Keep	Relevant	None
1.4 Structural features with regard to holds, cargo, double bottom and peak tanks	Keep	Relevant	None
1.5 Structural arrangements to ensure the vessel's watertight integrity	Keep	Relevant	None

1.6 Structural arrangements in areas liable to damage in heavy weather	Keep	Relevant	None
1.7 Structural arrangements with regard to openings in the hull or deck	Keep	Relevant	None
1.8 Structural arrangements to ensure continuity of strength	Keep	Relevant	None
1.9 Piping and pumping systems	Keep	Relevant	None
Outcome 2: Describe the salient features of a range of ship types	Keep	Relevant	None
2.1 Tankers (oil, gas and chemical tanker)	Keep	Relevant	None
2.2 Cargo ships (general cargo, ro-ro, container, bulk carrier)	Keep	Relevant	None
2.3 Passenger ships	Keep	Relevant	None
2.4 Support vessels (supply, stand-by vessel and tugs)	Modernise	We must cover all modern vessel types, vessels carrying Renewable energy structures and vessels operating in energy farms are not currently included	Include vessels carrying Renewable energy structures and vessels operating in energy farms.
2.5 Specialist vessels (surface effect vessels, high speed craft)	Keep	Relevant	None
Outcome 3: Explain ship stresses and use ship stress calculating equipment.	Modernise	It is important to make sure Cadets clearly understand how the outcome relates to work at sea and it is	Include the use of ship stability software and relate this outcome to “Ship Stability

		essential to make sure that this context is given with reference to current and future seagoing technologies and practices.	Introduction" module to provide more context.
3.1 Causes and effect of stresses in still water	Keep	Relevant	None
3.2 Causes and effect of stresses in a seaway	Keep	Relevant	None
3.3 Structural features to resist shearing and bending	Keep	Relevant	None
3.4 Stress calculating machines	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:**		
	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	While some outcomes are intrinsically linked to work carried out at sea, some	Where outcomes do not specifically cover a topic which relates to work carried out at

	understand what they are learning in relation to what they will experience at sea.	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.	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.