

Proposal to modernise the Methodology of Teaching, Assessment/ Examination

Nautical - STCW II/2 CoC	Name of respondent, role and organisation:		
Competency/ Module: Applied Marine Meteorology	Competency: A-II/2 Plan a voyage and conduct navigation		
Knowledge, understanding and proficiency	Recommendation of working group regarding the outcome and objective.	Rationale	Action required
Outcome 1: Analyse the major features of surface synoptic charts.	Modernise	Contextualisation is required to show how the outcome is relevant to work at sea	Contextualise to include actual weather routing based on a given prognosis (24, 48-hour etc)
1.1 Major features of surface charts	Keep	Relevant	None
1.2 Development of surface pressure systems	Keep	Relevant	None
1.3 Movement of surface pressure systems	Keep	Relevant	None
1.4 Decay of surface pressure systems	Keep	Relevant	None
1.5 Weather conditions associated with types of surface pressure systems	Keep	Relevant	None
Outcome 2: Analyse the features of the major global climate zones.	Keep	Relevant	None
2.1 Major global climate zones (e.g., what happens at a low-pressure zone (equator)).	Keep	Relevant	None
2.2 Weather conditions associated with the major climate zones	Keep	Relevant	None

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Outcome 3: Analyse surface oceanographic processes and data	Keep	Relevant	None
3.1 Oceanographic processes that drive surface ocean currents	Keep	Relevant	None
3.2 Oceanographic data	Keep	Relevant	None
3.3 Oceanographic conditions that may be encountered during a voyage	Keep	Relevant	None
Outcome 4: Evaluate the effect of meteorological and climatological processes on passage planning.	Modernise	<p>Weather is changing globally - and historical weather data cannot always be relied on.</p> <p>In the past, historical weather data charts were used when passage planning - while weather forecasts have improved, Cadets should be made aware of the changes occurring in global weather patterns.</p>	Include changing weather trends within this module.
4.1 Ocean weather routeing of ships	Modernise	Contextualisation is required to show how the outcome is relevant to work at sea	<p>Include Case studies and simulator time</p> <p>Contextualise with the impact on work planning, Crew safety, Cargo care and handling and Energy/ Fuel efficiency while on voyage</p>
4.2 Presentation of meteorological and climatological data	Keep	Relevant	None

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4.3 Weather and sea conditions that may be encountered during a voyage	Modernise	Contextualisation is required to show how the outcome is relevant to work at sea	Contextualise to consider delays and damage which could impact on other modules such as stability, passage planning, cargo, etc...
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	Modernise to include electronic resources	Electronic resources are regularly used at sea	Update to reflect that the weather reports are electronically sent to vessels. Should contain analysis of electronic weather reports and comparing with synoptic charts and actual weather conditions experienced by the vessel.
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	A specific topic will need to be introduced to improve Cadets' Data Science skills. Practical application of

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		<p>already required within much of the syllabus. A further, specific focus on these skills needs to be taught where relevant.</p>	<p>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.</p>
<p>Cadet Training & Modernisation Working Group</p>	<p>Ensure all outcomes are contextualised to help Cadets understand what they are learning in relation to what they will experience at sea.</p>	<p>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.</p>	<p>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.</p>