

Proposal to modernise the Methodology of Teaching, Assessment/ Examination

| Nautical - STCW II/1 CoC | Name of respondent, role and organisation: | | |
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| Competency/ Module: Marine Meteorology | <i>Plan and conduct a passage and determine position</i> | | |
| Knowledge, understanding and proficiency | Recommendation of working group regarding the outcome and objective. | Rationale | Action required |
| Outcome 1: Describe meteorological observing methods, use of meteorological instruments, use of world meteorological organisation (WMO) codes and weather services available to shipping. | Keep | Essential | None |
| 1.1 Meteorological instruments | Modernise | More practical use of equipment required. | Include practical experience of using the equipment |
| 1.2 Beaufort scale | Keep | Essential | None |
| 1.3 The organisation of the WMO | Keep | Essential | None |
| 1.4 Weather services available to shipping | Keep | Essential | None |
| 1.5 Non-instrument meteorological observations | Keep | Essential | None |
| Outcome 2: Explain meteorological processes. | Keep | Essential | None |
| 2.1 Meteorological characteristics of the troposphere | Modernise | Seafarers need to understand how this impacts their work. | Contextualise this to explain how the troposphere impacts the weather forecast |

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| 2.2 Characteristics and causes of geostrophic and surface winds | Keep | Essential | None |
| 2.3 Processes of formation of cloud and precipitation | Keep | Essential | None |
| 2.4 Causes of reduced horizontal visibility | Keep | Seafarers need to understand how the reduction of visibility will impact other operations. | Contextualise this with the impact of reduced visibility on the application of COLREG. |
| Outcome 3: Identify and describe the weather associated with the main features of a synoptic chart. | Keep | Essential | None |
| 3.1 Surface charts | Keep | Essential | None |
| 3.2 Main synoptic patterns | Keep | Essential | None |
| 3.3 Air masses | Keep | Essential | None |
| 3.4 Weather associated with the main synoptic patterns | Keep | Essential | None |
| Outcome 4: Describe the general circulation of the atmosphere, the main climatic zones over the oceans and the ocean currents of the world. | Keep | Essential | None |
| 4.1 General circulation of the atmosphere | Modernise | Seafarers need to understand how this impacts operations onboard | Simplify to include the basic pressure system diagram, focussing on practical application of knowledge and understanding for weather routing |
| 4.2 Main climatic zones over the oceans | Modernise | Seafarers need to understand how this impacts operations onboard | Focus on practical application of knowledge and understanding for weather routing |
| 4.3 Ocean currents of the world | Modernise | Seafarers need to understand how this impacts operations onboard | Focus on circulation rather than naming specific currents focus on practical application of knowledge and understanding for weather routing |

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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: | | |
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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 | 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 |

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| | | <p>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>shipping context. Not every template has contextualisation recommendations but please do add any you feel may have been missed.</p> |
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