Proposal to modernise the Methodology of Teaching, Assessment/ Examination

Nautical - STCW II/2 CoC			
Competency/ Module: Passage Planning	*Competency: Plan a voyage and conduct navigation*		
Knowledge, understanding and proficiency	**Recommendation of working group regarding the outcome and objective.**	**Rationale**	**Action required**
Outcome 1: Appraise the intended passage	**Modernise**	**Electronic resources must be covered in this outcome in more depth.** **Paper charts do still have a place within this module. They can still be used as a contingency while at sea.**	**Focus shift towards using electronic resources as primary. However, paper must continue to be covered but with a reduced focus. Review how e-Navigation concept is being dealt with at IMO.**
1.1 Principles of passage planning	Keep	Relevant	None
1.2 Passage planning legislation	Keep	Relevant	None
1.3 Charts and publications	Modernise	Electronic resources must be covered in this outcome in more depth. Paper charts do still have a place within this module. They can still be used as a contingency while at sea.	Include the future standards of electronic charts and publications (S-100 Series)
1.4 Sailings, great circle sailings and tidal calculations	Remove tidal calculations from this outcome	Tidal calculations are already covered in more detail in outcome 2.3 of this module.	Remove the duplication of tidal calculations
1.5 Availability of navigational aids	Keep	Relevant	None
1.6 Ship reporting and weather routeing	Keep	Relevant	None

1.7 Landfall and confined water procedures	Contextualise	It is important to make sure seafarers 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 the context of landfall in a modern context is covered, including the changes brought about by the changeover from ocean to coastal passage.
Outcome 2: Prepare and document a passage plan.	**Modernise**	**Electronic resources must be covered in this outcome in more depth.** **Paper charts do still have a place within this module. They can still be used as a contingency while at sea.**	**Focus shift towards electronic resources as primary. However, paper must continue to be covered but with a reduced focus.**
2.1 Great circle, composite great circle and rhumb line routes	Modernise	Electronic resources must be covered in this outcome in more depth. Paper charts do still have a place within this module. They can still be used as a contingency while at sea. As such, manual calculations will continue to be taught.	Include the use of ECDIS and calculation software.
2.2 Distance and courses on great circle, composite great circle and rhumb line route	Keep	Relevant	None
2.3 Use, and the understanding of the implication, of Tidal heights, times, and streams to ensure the passage is made safely	Modernise	Electronic resources must be covered in this outcome in more depth. Manual calculation of tides will continue to be taught, to be used as a contingency.	Include the use of tidal software and cover the new standard of ENCs (S-100 Series).
2.4 Co-tidal/co-range charts	Remove	These are no longer relevant	Remove this outcome
2.5 Landfall and port approaches	Keep	Relevant	None

2.6 No go areas and navigational hazards	Keep	Relevant	None
2.7 Accuracy of position fixing	Modernise	Spoofing/ jamming of electronic position fixing systems is becoming a more prevalent issue, this should be covered within this outcome.	Include how to determine your position in a spoofing/jamming situation and how to tell you are being spoofed/jammed.
2.8 Wheel over positions	Keep	Relevant	None
2.9 Document the passage plan	Keep	Relevant	None
Outcome 3: Evaluate a completed passage plan.	**Modernise**	**Electronic resources must be covered in this outcome in more depth.** **Paper charts do still have a place within this module. They can still be used as a contingency while at sea.**	**Focus shift towards electronic resources as primary. However, paper must continue to be covered but with a reduced focus.**
3.1 Factors affecting the execution of the passage plan including:	Amend	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.	(For all sub-outcomes, where applicable) Add human factors to consider when evaluating a passage plan, including: - Situational awareness - Responding to the unexpected - Competency - Familiarity/complacency - Performance influencing factors/mitigation - Cognitive underload/overload - Human – machine interface
3.2 Tidal considerations for underkeel and air draft clearance_	Keep	Relevant	None
3.3 Traffic considerations	Keep	Relevant	None
3.4 Navigational accuracy	Amend	To provide seafarers with a contextualised understanding of the	Discuss problems with, and examples of, over reliance on navigational aids.

		Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea.	Include how to determine your position in a spoofing/jamming situation and how to tell you are being spoofed/jammed.
3.5 Meteorological conditions	Keep	Relevant	None
3.6 Condition of the vessel	Keep	Relevant	None
3.7 Vessel traffic systems and reporting schemes	Keep	Relevant	None
3.8 Monitoring the passage plan	Keep	Relevant	None
Outcome 4: Implement and monitor appropriate solutions for situations which arise during a passage.	**Modernise**	**Electronic resources must be covered in this outcome in more depth.** **Paper charts do still have a place within this module. They can still be used as a contingency while at sea.**	**Focus shift towards electronic resources as primary. However, paper must continue to be covered but with a reduced focus.**
4.1 Contingency plans for critical navigational areas	Keep	Relevant	None
4.2 Adjustments to the passage plan for routine changes	Keep	Relevant	None
4.3 Adjustments required to the plan for adverse environmental conditions	Keep	Relevant	None
Outcome 5: Perform calculations relating to a vessel's position	**Modernise**	**Electronic resources must be covered in this outcome in more depth.** **Paper charts do still have a place within this module. They can still be used as a contingency while at sea.**	**Focus shift towards electronic resources as primary. However, paper must continue to be covered but with a reduced focus.**

5.1 Solution and evaluation of astronomical observations including resolution of the 'cocked hat' problem	Remove the requirement to assess this outcome.	This only needs to be covered as a recap, there is no need to assess at this point, resolving a cocked hat is already taught at the operational level.	Remove the requirement to assess this outcome.
5.2 Adjustments required to the plan to comply with Search and Rescue (SAR) or medical emergencies	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 understand what	While some outcomes are intrinsically linked to work carried out at sea, some need to be contextualised to	Where outcomes do not specifically cover a topic which relates to work carried out at sea, more must be done to

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