1. Title	Ship's stability design	
2. Code	EMSRDE502A	
3. Range	Apply calculations for ship stability design and other methods of analyzing stability to tasks of ship design so as to assess whether the ship stability meets the requirements of International Maritime Organization.	
4. Level	5	
5. Credit	3	
6. Competency		<u>Performance Requirements</u>
	6.1 Knowledge of ships' stability design	♦ Master the knowledge of ships' stability design, including: • Free surface effect • Weight transfer effect • Concept of stability design, such as lateral inclination difference • Wind effect • Importance of damage stability
	6.2 Methods and procedures of designing ship stability	♦ Set loading conditions for ships and simulate, analyze and assess ship stability, including: • Deducing the static water curve and cross curve • Estimating the longitudinal inclination difference of ships according to load change ♦ Apply relevant knowledge to stability assessment • Lateral stability design for ships under the special condition of longitudinal inclination difference • Impact of ballast water or liquid cargoes on stability
	6.3 Professionalism in ships' stability design	♦ Assess ship stability according to the requirements of International Maritime Organization
7. Assessment Criteria	The integrated outcome requirements of this unit of competency are: (i) Capable to analyze the information on ship stability and perform relevant design tasks; and (ii) Capable to assess whether the ship stability meets the requirements of International Maritime Organization.	
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of calculation and physics, and understands the international requirements on ship stability (such as EMSRDE301A "Basic calculations for ship design" and EMSRDE402A "Calculation of ship stability").	