

1. Title	Strength calculation of ships
2. Code	EMSRDE501A
3. Range	Apply methods of strength calculation to tasks in design studio and preparations for engineering calculations related to ship design.
4. Level	5
5. Credit	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Methods of calculating ship design loads</p> <ul style="list-style-type: none"> ◆ Be familiar with various methods of calculating ships' still water loads <ul style="list-style-type: none"> • wave loads • local loads • hull girder loads <p>6.2 Methods and techniques of simulating, analyzing and optimizing the design of ship strength</p> <ul style="list-style-type: none"> ◆ set the conditions for ships' structural loads, including: deck structure, double bottom, yardstick for minimum materials for ship base, bulkhead dimensions and steel plate and pillar ◆ Analyze and calculate to see if the ship system or model meets the strength requirement <p>6.3 Professionalism in calculating ship strength</p> <ul style="list-style-type: none"> ◆ Follow requirements of the design code and in-house guidelines to ensure that the ship strength meets the standard
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to apply different loading conditions to analyzing and calculating hull strength required; and</p> <p>(ii) Capable to calculate total amount of ship materials required.</p>
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of physics, and be familiar with the related codes of ship design (such as: EMSRDE301A "Basic calculations for ship design" and EMSRDE401A "Calculation of ship buoyancy").