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| Title: | Stability for marine engineers |
| Level: | 3 |
| Credit value: | 4 |
| Learning outcomes  *The learner will:* | Assessment criteria  *The learner can:* |
| 1. Be able to describe the effect of a fluid at rest | * 1. Calculate the pressure in a liquid   2. Calculate the thrust exerted, at different depths, on a horizontally and vertically immersed surface with liquid on one side only.   3. Describe Archimedes principle   4. Apply Archimedes principle to floating bodies of simple geometrical form. |
| 1. Be able to describe stability terms and definitions | * 1. Describe the following * Centre of gravity * Centre of buoyancy * Metacentric height (box shape only) |
| 1. Be able to complete basic transverse stability calculations | * 1. Describe the characteristic of KG   2. Complete measurements of KG   3. Calculate the change in stability when a mass is added to a vessel   4. Calculate the change in stability when a mass is moved transversely across the deck of a vessel. |
| **Additional information about the unit** |  |
| Unit aim(s) | *To provide the basic knowledge and understanding of stability in an marine engineering context* |
| Unit expiry date |  |
| Details of the relationship between the unit and relevant national occupational standards (if appropriate) | MNTB NOS (Jan 2006) – C11 Prepare and operate propulsion machinery and ancillary systems  C12 Operate vessel auxiliaries and service machinery  C34 Carry out maintenance of vessel mechanical machinery and systems |
| Details of the relationship between the unit and other standards or curricula (if appropriate) | Maritime and Coastguard Agency Marine Guidance Notice regarding Certificates of Competency – Engine Department, |
| Assessment requirements specified by a sector or regulatory body (if appropriate) | Maritime Skills Alliance Assessment Strategy  MCA certification requirements |
| Endorsement of the unit by a sector or other appropriate body (if required) | MCA…. |
| Location of the unit within the subject/sector classification system | Transportation |
| Name of the organisation submitting the unit | Scottish Qualifications Authority |
| Availability for use |  |
| Availability for delivery |  |
| Guided Learning Hours | 35 |