**Assessment Plan**

**Operation of a Small Boat Coming Alongside**

**Learning Outcomes**

**LO 1** - The student will know all of the steps necessary to conduct the operation of having a small boat come alongside the vessel

**LO 2** - The student will know all safety concerns and safety precautions which are associated with the operation of a small boat coming alongside the vessel

**LO 3** - The student will understand the different positions and responsibilities of each position. The student will also understand how all of the positions interact with each other and how the various steps of each position rely upon the others.

**Required items within each Learning Outcome which must be demonstrated**

**LO 1: Steps necessary to conduct the operation of having a small boat come alongside the vessel include**:

Bridge:

* Check area for traffic or navigation issues
* Come to a steady course and speed which creates a lee for the vessel
* Give small boat permission to come alongside
* Maintain course and speed
* Once small boat is away, you may alter course and/or speed

Small Boat

* Radio permission to come alongside
* Approach from astern
* Identify point on vessel you wish to come alongside at (pilot ladder or painter)
* Slowly move forward on the vessel until you are online with the intended point (pilot ladder or painter)
* Be careful of the vessel’s wake
* Adjust speed to match vessel’s speed alongside the intended point
* Slowly move in towards the intended point, be careful of the vessel suction, it should pull you into the side of the vessel and hold you there
* If using a painter, attach the painter to the forward point of your vessel
  + Slowly reduce speed of small boat until the painter is pulling you alongside the vessel
  + Attach other lines moving forward to aft

Bow

* Lower painter down to small boat
* Pay out line as small boat moves down side of vessel
* When small boat is appropriate location, hold painter and make off
* Pay attention to information coming from small boat, if they say to stop the operation and bail out, release all tension on the painter

**LO 2: Safety Concerns for operation of a small boat coming alongside**

* Snapback – lines under extreme tension can snap with extreme force, easily killing anyone nearby. Make sure no one is standing in snapback zones. Inspect the lines for signs of line rot, sun damage, or excessive wear which will increase the risk of the line snapping. Be aware of excessive tension, if the line looks like it will snap, let people know and ease the line.
* Small Boat Motion due to weather/seas – Create a lee to help reduce the amount of motion for the small boat. If the small boat is rolling or pitching excessively, people can be thrown out of the small boat causing them to potentially drown or be crushed by the small boat. If weather is too severe, do not conduct the operation.
* Vessel Suction – This is an interaction between the vessel and the small boat which occurs due to physics and the principles associated with a vacuum. It can pull the small boat into the vessel. Try to let the bow of the small boat touch the vessel first so that the stern is sucked in by the vessel suction last. This will allow more control of your small boat.
* Vessel Wake – The vessel will create a significant wake or wave from the vessel pushing through the water. If you get caught on top of the wake, it is difficult to steer. Try keeping on one side or the other.
* Vessel Safety – The vessel must maintain their course and speed through the entire operation. If the vessel alters their course or speed, the small boat could be crushed by the vessel. This makes checking the vessel’s surroundings critical. Look ahead for any potential traffic issues as well as any navigation issues which may be experienced in the future.

**LO 3: Interaction between positions**

* Vessel must maintain course and speed – communication between the vessel and the small boat is critical. Small boat cannot approach the vessel until the vessel has granted permission
* Small boat must attach painter and the movement of the ship can make this dangerous as a hand can be crushed if it caught between the painter and the forward point of the small boat if there is too much tension. Communication between the bow and the small boat is critical. The bow cannot take tension on the painter until the small boat has attached the painter.
* Small boat can be pulled under the vessel or flipped due to instability of the small boat and tension of the painter – if anyone yells bail out or stop operation, tension must be released on the painter and then painter released
* Snapback occurs under extreme tension – snapback can kill anyone on the small boat or the bow. If anyone yells bail out or stop operation, tension must be released on the painter and then painter released

**Assessment Steps**

1: **Classroom Discussion** (Formative Assessment) – Students discuss their understanding of the operation of a small boat coming alongside.

2: **Lesson Worksheet** (Formative Assessment) – Students will read the Lesson Worksheet prior to using the 360 Degree Videos. They should watch each video all the way first, and then answer the questions. If they cannot remember any of the answers, they may go back to the videos to find the information. They can also discuss amongst other classmates what they are experiencing and what they are learning to help reinforce learning through social interaction and communication.

3: **Quizzes (Formative Assessment)** – Students will take the quizzes which are posted on the website after completing each video. This will allow the student to identify their own gaps of knowledge and review material if they need to.

4: **Classroom Discussion (Formative Assessment)** – Students will review the answers they had on the lesson worksheet along with any other questions or comments they may now have after using the 360 Degree Videos

5: **Final Test (Summative Assessment)** – Students will take the final test to identify their resulting understanding and knowledge having completed the lesson. This test is in a short essay format and will use the attached rubric.