BoatSafe RMDL Competency Standard

1 July 2019

Queensland Government

Creative Commons information

Contents

Effective date

This policy will take effect from the 1 July 2019.

Introduction

The *BoatSafe RMDL training and assessment requirements* (requirements) is a competency based training and assessment course. These requirements outline the skills, knowledge and assessment requirements a candidate must attain to obtain a Recreational Marine Driver Licence (RMDL) to operate certain powered recreational vessels in Queensland.

The requirements state what evidence should be observed by the BoatSafe Training Provider (BTP) when assessing competency of the candidate, what the candidate must be able to demonstrate and how well it must be done.

A BoatSafe Training Organisation (BTO) must comply with the *BoatSafe RMDL training and assessment requirements* when developing and delivering a BoatSafe course. During the competency assessment, or a Recognised Prior Learning (RPL) assessment, all of these competencies must be assessed.

RMDL Introduction

Learning outcomes

At the completion of this unit, the learner will understand:

a) The course is competency based training and assessment.

b) The candidate will be required to manoeuvre a vessel on the water.

c) The candidate will be required to demonstrate all the required skills to be assessed as competent.

Explain the RMDL course outline
Introduce the RMDL course.
Provide a course overview, including the expected duration.
Explain the requirements needed to be attained to successfully complete the competency based training and assessment course.

1. Unit 1 – Trip planning

Learning outcomes

At the completion of this unit, the learner will be able to:

a) Understand the important aspects of safety equipment and maintenance.

b) Understand the law as it relates to carrying safety equipment and the legal obligations of the ship's master.

c) Ensure the vessel is seaworthy and suitably equipped for a trip.

Assessment criteria

Understand the important aspects of safety equipment and maintenance	
1.1	Explain ship master's obligation and the application of standard road rules, including drugs and alcohol.
1.2	Identify the main parts of a recreational vessel and its equipment.
1.3	Explain the importance of maintenance to vessel safety.
1.4	List the safety equipment required.
1.5	Determine the serviceability of safety equipment.
Understand the law as it relates to carrying safety equipment and the legal obligations of the ship's master	
1.6	Identify suitable lifejackets and their location on board the vessel.
1.7	Understand the obligations of operating a recreational vessel in Queensland.
1.8	Determine if the vessel is fitted in accordance with the provisions of the *International Regulations for Preventing Collisions at Sea* (COLREGS).
Ensure the vessel is seaworthy and suitably equipped for its intended operation	
1.9	Inspect vessel for seaworthiness.
1.10	List the tools, spares and equipment required for the vessel for its intended operation.
1.11	Calculate the fuel required for a particular trip.
1.12	Inspect the vessel's battery for useability.

Teaching and learning strategy

This unit is concerned with the safety aspects of the vessel that should be considered in the planning stage of a trip. The three elements are essentially about the equipment you need to take, the legislation that covers the equipment and the master's obligations and the seaworthiness of the vessel.

The consequences of not being prepared should be stressed and reference should be made to real life tragedies and incidents to reinforce the theme.

Any equipment demonstrated in the theory component training environment should be reinforced by viewing the same equipment and its placement on the vessel. This will contextualise the theory and increase the apparent relevance of the material. A discussion on-board relating to this unit is required.

Content outline

Content	Time (see note *)
Obligations of a ship's master • general safety obligation • obligations of ship's master • application of standard road rules: DUI and drugs.	60 mins*
The main parts of a small recreational vessel and why they are there: • hull (shape and depth) • motor • controls • steering • fuel tank • anchor well. • battery • safety equipment stowage • bow • stern • deck	
Parts of the vessel that require maintenance, what maintenance should be performed and how often: • motor pivot • motor hydraulics • control cables • electrical cables • ignition switch • motor control unit and cables • shackles • ropes.	
Safety equipment – recommended items: • EPIRB • Lifejackets (types and where they are appropriate) • V-sheet • flares • bilge pump/bailing buckets (and lanyard) • anchor • paddles • lights • fire extinguisher	
Seaworthiness of the vessel: • what is seaworthiness • Australian Builders Plate (ABP) • hull integrity • engine reliability • freeboard • positive flotation • common tools and spares carried on board • serviceability of motor, battery, safety equipment.	
Fuel consumption: • relationship between engine speed and fuel used • approximate fuel use rate figures for a range of engines • simple calculations involving fuel, distance and time.	

*** Note:** Minimum training time

Assessment strategy:

This unit is assessed by written assessment using the Common Assessment Tool (CAT) (i.e. BoatSafe Assessment sheets provided by the Department of Transport and Main Roads (TMR).

2. Unit 2 – Navigation

Learning outcomes

At the completion of this unit, the learner will be able to:

a) Apply International Association of Lighthouse Authorities (IALA) buoyage system 'A' and use aids to navigation not covered by IALA.

b) Use a GPS navigation system.

c) Identify and apply collision and water traffic regulations relevant to the activity area.

d) Understand the impact and related laws of marine pollution.

Assessment criteria

Understand the IALA buoyage system 'A' and use aids to navigation not covered by IALA	
2.1	Knowledge of the following buoys, markers and beacons and how they are applied to safe navigation: • lateral and cardinal marks • isolated danger marks • special marks • safe water marks • middle channel marks • leads • speed signs • cable crossings.
2.2	Recognition of lights used for navigation at night and how these are identified on a chart.
2.3	Problems associated with lights at night in a metropolitan area.
Use a GPS navigation system	
2.4	Briefly describe how the Global Positioning System (GPS) system works.
2.5	Operate a chart plotter and determine position.
2.6	Describe the limitations of a GPS installation.
Apply the COLREGS to ensure safe navigation	
2.7	Recall the main COLREGS.
2.8	Apply the COLREGS when navigating a recreational ship.
2.9	Recall the rules for speed.

Pollution	
2.10	Define pollutants.
2.11	State the rules relating to marine pollution.
2.12	Understand the effects of pollution on the marine environment.

Teaching and learning strategy

This unit relates to the safe operation of a recreational ship. To operate a ship safely the 'rules of the road' need to be known and understood. While these are largely based on common sense, the buoyage system is counter-intuitive requiring a person to apparently drive on the wrong side of the road. This needs to be stressed during the learning process.

The content is directly relevant to vessel operation.

Models and photographs of buoys and beacons are invaluable aids and can effectively be used to present the reality of navigational marks to the learner.

Safer Recreational Boating produced by Maritime Safety Queensland (MSQ) or a suitable equivalent visual presentation, must be shown to all candidates and will cover the specific topics of night navigation and the use and limitations of a GPS navigation system.

Resource requirements

The following resources must be available as a minimum:

- Photos of displays from chart plotters
- MSQ charts that show navigational buoys and beacons
- MSQ DVD – Safer Recreational Boating
- Slides or pictures of actual buoys and beacons
- Models of ships to demonstrate COLREG requirements.

Content outline

Content	Time (see note *)
COLREGS: • responsibility • power • sail • underway • proper look out • safe speed • risk of collision • action to avoid collision • narrow channels. • sailing vessels • overtaking • head-on situation • crossing situation • restricted visibility • lights and shapes – power, sail, fishing and so on • sound signals • distress signals	
Obligations • rules for drugs and alcohol • rules for speed limits. • pollution	
The IALA buoyage system: • lateral marks • cardinal marks • special marks • safe water marks • night aspects of lights and how these relate to the chart (MSQ video).	105 mins*
Other navigational directions: • middle channel marks • lead lights • speed signs. • cable crossing • anchorage	
Use and limitations of a GPS navigation system (MSQ video): • How the GPS system works – satellites • Modes of operation of a chart plotter and suitability of use – compare with an in-car installation: – highway mode – course deviation index (road width and error) – chart mode. • Importance of up to date electronic charts • Use and abuse of zoom • Datum checking – fixed points at boat ramps.	

* **Note:** Minimum training time

Assessment strategy

This unit is assessed by written assessment using the CAT. It must also be assessed on water by reference to appropriate buoys and beacons or in an appropriate simulation.

Practical assessment

The theory from this unit can be verified on water where marks and buoys are present; however this will not always be the case. To overcome this, a number of scenarios need to be posed to the candidates in the training room based on actual charts where such navigational aids will be seen. This can be further enhanced by using an oversized chart and models of boats and marks to demonstrate the rules.

During the practical training component, floating debris may be designated by the instructor as an appropriate mark or buoy and require the candidate to respond accordingly.

3. Unit 3 – Weather and tides

Learning outcomes

At the completion of this unit, the learner will be able to:

a) Access, interpret and apply weather information

b) Access and interpret and apply tidal information.

Assessment criteria

Access, interpret and apply weather information	
3.1	Locate up to date weather charts and forecasts from a variety of media sources.
3.2	Understand basic weather definitions and terms.
3.3	Identify the main feature of a weather chart.
3.4	Access, interpret and correctly apply the weather information.
3.6	Predict the likely local conditions based on the forecast and local geography.
3.7	Predict the impact the weather conditions will have on the vessel's speed and direction.
3.8	Determine how the weather will impact on trip planning.

Access, interpret and apply tidal information	
3.9	Understand basic tidal definitions and term.
3.10	Understand the basic causes of tides.
3.11	Access tidal information from different media sources.

3.12	Assess, interpret and correctly apply tidal information.
3.13	Estimate the tide height and strength of flow at different times between high and low tide.
3.14	Explain how tidal flow affects handling of small boats and anchorage requirements.
3.15	Predict height of tides and determine under keel clearance.

Teaching and learning strategy

This unit relates to weather and tides. When operating a small vessel it is necessary to be able to access appropriate weather and tidal information. An understanding of how weather and tides are generated and how they affect the marine environment are extremely important aspects to boating safety.

Not all licence candidates will have the tools, ability or the required communication access to obtain information provided electronically, such as on line weather forecasts and tidal information. Therefore, a candidate should be able to locate a current weather chart and interpret it to a level where the main features on the chart are recognised and applied correctly.

Likewise, the nature of tides and how they affect a small vessel, particularly when launching and recovering a vessel at a boat ramp and crossing a coastal bar are important for boating safety. The candidate should practice looking up tidal information and correctly apply the information to ensure that there is sufficient water underneath the vessel keel.

Resource requirements

The following resources must be available as a minimum:

- Weather charts showing the various weather patterns.
- Current tidal information.
- A model to demonstrate the effect of tidal flow on anchoring characteristics.
- Bureau of Meteorology videos:
    - Marine weather safety – 5 vital checks
    - Marine weather safety - Check the forecast first.
- Access to internet to enable candidate to access various online reference material.

Course outline

Content	Time (see note *)
Weather: • Sources of weather information: television, papers, internet sites, BOM or coastal marine radio service. • The main features of a weather chart: – fronts, high and low pressure systems – troughs and ridges. • How to interpret a weather chart: – strength of wind – wind direction – weather associated with troughs and fronts – winds and coastal ridges of eastern Australia. • Effect of a forecasting on trip planning. • Effect of the weather on the boat's capabilities. • Determine how to safely undertake the proposed trip, based on weather forecast. • How weather and waves interact.	50 mins*
Tides: • Determine how to safely undertake the proposed trip, based on tide and wind information. • Sources of tidal information: papers, publications, internet sites, BOM • Basic causes of tides • Spring and neap tides • Looking up various sources of tidal information • How will the tide and wind effect a trip • How tides effect a vessel crossing a coastal bar.	

* **Note:** Minimum training time

Assessment strategy

This unit is assessed by written assessment using the CAT.

Practical assessment

The candidate will use the daily weather chart, to validate the current weather observations and they must be familiar with the current tidal information and be able to look up tides for their operational area.

4. Unit 4 – Emergencies

Learning outcomes

At the completion of this unit, the learner will be able to:

a) Define and report a marine incident

b) Respond to a fire on board

c) Understand the importance of an EPIRB

d) Use appropriate emergency radio calls.

Assessment criteria

Define and report a marine incident	
4.1	Describe a **marine incident** as defined in the *Transport Operations (Marine Safety) Act 1994* (TOMSA) (s123) and what it means.
4.2	List the obligations on ships' masters when a collision occurs (s124).
4.3	Recall that a report must be made, to whom and by when (s125).
4.4	Explain the seriousness of marine incidents and the importance of reporting them.

Respond to a fire on board	
4.5	• List the causes of fire on a small vessel • Things to reduce risk of fire.
4.6	Recall what to do when you abandon vessel.

Understand the importance of an EPIRB	
4.7	Describe the features of a functioning EPIRB.
4.8	Activate a dummy EPIRB.

Use appropriate emergency radio calls	
4.9	Recall the radio frequency to use.
4.10	Simulate a 'securité' call.
4.11	Simulate a 'pan pan' call.
4.12	Simulate a 'mayday' call.

Teaching and learning strategy

The quantity and nature of electrical and mechanical equipment on a recreational vessel will vary considerably so this unit is based on the equipment being available on the 'average' recreational vessel.

Resource requirements

The following resources must be available as a minimum:

- Portable fire extinguisher
- Dummy EPIRB.

Content outline

	Content	Time (see note *)
	Define and report a marine incident: • Section 123 of the Act defines what a marine incident is - the list gives a good indication as to what else could be considered a marine incident. • Section 124 describes the duties of the master when an incident happens that involves two or more ships - the reasons for these are fairly obvious when referred to large ships. • Section 125 explains what must be done to report an incident, who the report is to be given to and when it must be made after the incident.	50 mins*
	Respond to a fire on board: • Probable causes of fire: oily rags, short circuits, petrol/engine • When to use a fire extinguisher and when to abandon ship.	
	Understand the importance of an EPIRB: • When an EPIRB must be carried (legislative requirements) • Registration with AMSA (Australian Maritime Safety Authority) • How to activate an EPIRB • When you should activate an EPIRB (circumstances).	
	Use appropriate emergency radio calls: • What the emergency radio calls are: – ‘securité’, ‘pan pan’ and ‘mayday’ • The circumstances under which they should be made. • Demonstrate each emergency radio call • Simulate each emergency radio call	

***Note:** Minimum training time

Assessment strategy

This unit is assessed by written assessment using the CAT.

5. Unit 5 – Manoeuvring

Learning outcomes

At the completion of this unit, the learner will be able to:

- Leave and return to launching facility or berth.
- Bring a recreational vessel alongside a floating object.
- Moor and anchor a recreational vessel.
- Manoeuvre a recreational vessel underway.

Assessment criteria

Leave and return to launching facility or berth	
5.1	Organise the passengers and cargo to maintain stability.
5.2	Control the vessel while departing the launching facility.
5.3	Control the vessel while approaching the launching facility.

Bring a recreational vessel alongside a floating object	
5.4	Control the vessel to approach a floating object from the lee side taking the effects of wind, currents and tide into consideration.

Moor and anchor a recreational vessel	
5.5	Control the vessel on approach to a fixed platform, jetty or pontoon, if practicable, to prevent physical damage to either the vessel or pontoon or distress to passengers.
5.6	Secure the vessel with a bowline.
5.7	Control the vessel to approach a floating mooring to avoid collision.
5.8	Anchor the vessel to prevent drift.

Manoeuvre a recreational vessel underway	
5.9	Engage forward and reverse gears.
5.10	Control power to smoothly accelerate onto the plane.
5.11	Control power smoothly to bring the vessel off the plane.
5.12	Perform an emergency stop.
5.13	Control the trim and tilt of the engine.
5.14	Control the vessel in a figure of eight turn at speed and at low speed.
5.15	Perform a ‘man overboard’ drill and manoeuvre the vessel to collect the person.

Teaching and learning strategy

This is a practical unit that concerns the physical control of the vessel. It requires the candidate to practice those things most necessary when in command of a small vessel. The instructor is to demonstrate all tasks first with an explanation as to why a task is done in a particular way. An example: 'forward gear is engaged quickly to prevent damage to the gearbox and costly repairs'.

Candidates learn in a variety of ways which include doing it themselves and observing others doing it. Both these forms of learning are important in boat handling.

After being shown how to do the task, the candidate is to practice the task themselves a number of times, before then watching other candidates do the same thing.

Tasks should be sequenced so that easier ones precede more difficult ones. This will build the confidence of the candidate and give them a better foundation for the more difficult skills.

Resource requirements

The following resources must be available as a minimum:

- A commercially certified vessel, appropriate for training for a recreational licence (for example a vessel with a Certificate of Operation for a Class 2E).
- Access to a pontoon, jetty or similar platform to moor the vessel, if practicable.
- A spare fender or float to be used as a man overboard.
- A float to use as a fixed mooring or a standard fixed mooring.

Practical assessment

Refer to Maritime Safety Queensland Common Practical assessment tool provided at the time the BTO's authority was issued.

There are time frames for the practical assessment which must be adhered to. These times are minimums and it is expected that practical delivery and assessment may take longer to determine a candidate's competency. These time frames are contained in the *BoatSafe Management Standard*.

6. Alternative training delivery

The department will consider alternative training tools or methods such as on-line delivery, for theory components of the *BoatSafe RMDL Competency Standard* and *BoatSafe PWCL Competency Standard*.

Such alternative tools or methods must be approved by the department prior to its use. In approving an on-line or alternative training delivery package, the department would expect the package to deliver an equal or greater quality training experience than that offered through a face to face training environment.

For further information see section 11 of the *BoatSafe Manual*.

If for example on-line delivery is used, minimum training times will be replaced by the appropriate time it takes to complete the on-line training tool.