

Competency Framework for Master Yacht <24m Near-coastal

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Function: Navigation and Safety at the Management level (RYA Yachtmaster Offshore certificate)

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
International Regulations for Preventing Collisions at Sea	<p>General rules (1-3)</p> <p>Steering and sailing rules (4-19).</p> <p>Lights and shapes (20-31).</p> <p>Sound and Light signals (32-37).</p> <p>Signals for vessels fishing in close proximity (annex II).</p> <p>Distress signals (annex IV)</p>	<p>Practical and oral assessment conducted by an RYA-appointed Examiner at sea aboard a sailing vessel.</p>	<p>Questions will be confined to the International Regulations and, although candidates must be aware of the existence of local regulations, they will not be expected to memorise specific local regulations.</p>
Safety	<p>Safety harnesses</p> <p>Lifejackets. Distress flares</p> <p>Fire prevention & fighting. Liferrafts, actions to be taken when abandoning to the liferaft and during</p>		<p>Candidates will be expected to know what safety equipment should be carried on board a yacht as well as being familiar with its operation, based either on the recommendations in the RYA Boat Safety Handbook, the ISAF special Regulations or the Codes of Practice for the Safety of Small Commercial Vessels.</p> <p>In particular, candidates must know the responsibilities of a skipper, including awareness of the hazards of fire, the precautions necessary to prevent fire and the action to be taken in the event of fire.</p>

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	<p>helicopter and lifeboat rescues. Knowledge of rescue procedures</p> <p>Helicopter rescue</p>		
Boat Handling	<p>Coming to and weighing anchor under power or sail in various conditions of wind and tide. All berthing and un-berthing situations in various conditions and tide.</p> <p>Recovery of man overboard. Towing under open sea conditions and in confined areas. Boat handling in confined areas under sail. Boat handling in heavy weather. Helming and sail trim to sail to best advantage.</p> <p>Use of warps for securing in an alongside berth and for shifting berth or winding</p>	<p>Practical and oral assessment conducted by an RYA-appointed Examiner at sea aboard a sailing vessel.</p>	<p>Candidates will be expected to answer questions and demonstrate practical skills in a variety of situations and will also be expected to show a high level of expertise.</p>
General	<p>Properties, use and</p>	<p>Practical and</p>	<p>Demonstrates knowledge of all common rope fibres, knots, use of deck</p>

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seamanship, including maintenance	<p>care of synthetic fibre ropes. Knots.</p> <p>General deck-work at sea and in harbour. Engine operations and routine checks including changing fuel and oil filters, impellers and bleeding the fuel system, batteries, electrical and bilge pumping systems.</p> <p>Improvisation of jury rigs following gear failure</p>	<p>oral assessment conducted by an RYA-appointed Examiner at sea aboard a sailing vessel.</p>	<p>equipment and deck-work, engine operations and action in case of gear or machinery failure.</p>
Responsibilities of skipper	<p>Can skipper a yacht and manage a crew</p>		<p>Demonstrates competence as skipper in a wide variety of situations and conditions including: communication with crew, delegation of responsibility and watch-keeping, preparing yacht for sea and for adverse weather, tactics for heavy weather and restricted visibility, emergency and distress situations including MOB, fire, collision, grounding & abandonment, victualing for a cruise and feeding at sea, Customs procedures, standards of behaviour and courtesy.</p>
Navigation	<p>Charts, navigational publications and sources of navigational information, chartwork, tides, buoyage, instruments, passage planning and</p>		<p>Demonstrates practical techniques in:</p> <ul style="list-style-type: none"> • chartwork including position fixing and shaping course to allow for tidal stream and leeway, tide and tidal stream calculations • buoyage and visual aids to navigation • instruments including compasses, logs, echo sounders, radio nav aids and chartwork instruments

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	navigation, pilotage, limits of navigational accuracy and margins of safety, lee shore dangers, use of waypoints and electronic routing.		<ul style="list-style-type: none"> • passage planning and navigational tactics • pilotage techniques • navigational records • use of electronic navigation aids for passage planning and passage navigation
Position fixing	Dead reckoning, satellite-derived position, techniques of visual fixing		Demonstrates practical techniques in; <ul style="list-style-type: none"> • use of waypoints to fix positions • radar fixes • fixes using a mixture of position lines • relative accuracy of different methods of position fixing • areas of uncertainty
The Magnetic Compass	Allowance for variation. Allowance for deviation. Different types of compass		Demonstrates practical techniques in; <ul style="list-style-type: none"> • change of variation with time and position • causes of deviation • compass Swinging
Tides	Causes of tides – springs and neaps. Tide Tables – sources. Tidal Levels and datum. Standard and		Candidates will be required to complete a tidal height calculation.

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	secondary ports		
Tidal Streams	<p>Sources of information.</p> <p>Tidal stream information in sailing directions and Yachtsmen's Almanacs.</p> <p>Allowance for tidal streams in computing a course to steer.</p> <p>Tide rips, overfalls and races.</p> <p>Tidal observation buoys, beacons etc</p>		Candidates will be required to complete a tidal stream calculation.
Buoyage	IALA system of buoyage in Regions A and B		Full knowledge of IALA buoyage system
Lights	<p>Characteristics.</p> <p>Ranges – visual , luminous and nominal.</p> <p>Rising and dipping distances.</p> <p>Lights list.</p>		Full understanding of definitions and characteristics of lights.
Pilotage	Harbour regulations		The candidate will be required to complete a pilotage plan and then execute a

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	and control systems. Methods of pre-planning. Clearing lines. Use of soundings. Transits and leading lines.		port entry with that plan.
GPS and Chart Plotters	Principles of operation and limitations of use		Raster and vector charts. Datum. Importance of confirmation of position by an independent source and keeping separate record of position Importance of paper charts.
Echo Sounders	Operation & use		Principles of operation and limitations of use
Logs (speed and distance measuring)	Principles of operation and limitations of use		Use of log for a variety of tasks throughout the exam.
Deck Log	Importance of log as yacht's official document		Layout of log, hourly and occasional entries
Meteorology	Definition of terms Sources of weather forecasts Weather systems and local weather effects		Interpretation of weather forecasts, barometric trends and visible phenomena Ability to make passage planning decisions based on forecast information <ul style="list-style-type: none"> • Basic terms, the Beaufort scale • Air masses • Cloud types • Weather patterns associated with pressure and frontal systems • Sources of weather forecasts • Land and sea breezes

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			<ul style="list-style-type: none"> • Sea fog • Use of barometer as a forecasting aid • Ability to interpret a shipping forecast, weatherfax and weather satellite information
Signals	Candidates must hold as a minimum the Restricted (VHF only) Certificate of Competency in Radiotelephony		Questioning on means of emergency signalling.

Function: Electronic navigation at the Management level

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Knowledge of electronic navigational systems		1: Practical 1A: On board 2: Knowledge	
<i>Electronic aids and navigation systems</i>	1. Principles of operation, controls and terminology of GPS / Chart Plotters	2	Explains: <ul style="list-style-type: none"> • equipment set-up • satellite geometry • accuracy and errors • initialisation • controls • screens, and • terminology to use paper charts. <p>Purpose, limitations and precautions when using the global positioning system (GPS) are explained, including; speed over ground, course over ground and waypoints.</p>
	2. Electronic charts.	2	Describes differences between an approved ECDIS and a non-approved chart plotter. <p>Explains:</p> <ul style="list-style-type: none"> • scale & detail • over-zooming • vector versus raster

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			<ul style="list-style-type: none"> • updating • layers • interrogation and data boxes • screen selection and orientation, and • emphasizing the limitations of electronic charts.
	3. GPS/Chart plotter functions and tools.	1A	Demonstrate use of MOB, Mark, and safety margin alarms.
	4. Route planning.	1	Passage is planned using approved paper charts and transferred to an electronic navigation system. Hazard identification, waypoint placement, position monitoring, bearing to way point & cross track error, waypoint realisation & abeam passage.
	5. Principles of operation, components, controls and displays of vessel marine radar.	2	Magnetron and solid state, basic components, common controls , functions and their use. Over-lays, north-up, head-up, off centre, true motion, stabilised & un-stabilised and the set-up procedure is described.
	6. Target discrimination, collision avoidance, use and limitations of radar navigation.	2	Bearing, range and effect of change. Effect of poor weather and sea conditions, radar reflectors. Use of RACONs & SARTs, EBL, VRM & parallel index, plotting. Knowledge of requirements of Maritime Rule Part 22.19.
	7. Radar is used to position vessel and avoid collision	1A	Radar is used in accordance with Maritime Rule Part 22.

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	8. Echo sounder	2	Describe principles of operation and use as a navigational aid.
	9. Automated Identification System	2	Describe principles of operation and use in collision avoidance.

Function: Manage Vessel Safety and Compliance

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Management of the vessel, legal compliance and emergencies		1: Practical 1A: On board 2: Knowledge	
<i>Maritime Transport Act and Maritime Rules</i>	1. Duties of the master of a vessel.	2	Responsibilities and authority for safety and compliance are explained in accordance with sections 19 & 65 of the Maritime Transport Act.
	2. Collision Prevention Rules.	2	Rules are explained and applied in accordance with Part 22 of the Maritime Rules.
	3. Navigation Safety Rules and Regional By Laws.	2	Rules are explained and applied in accordance with Part 91 of the Maritime Rules.
	4. Pollution Prevention Regulations & Local Bylaws.	2	Rules are explained and applied in relation to discharge and disposal of oil, sewage, and garbage in accordance with the Maritime Transport Act, Marine Protection Rules and the Resource Management Act.
<i>Lifesaving and safety equipment</i>	1. Lifesaving appliances required to be carried.	2	Explained in accordance with Maritime Rules 42A and 42B and N25 5823 for a restricted limit vessel.

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	2. The purpose/use and maintenance of personal flotation devices.	1	Use of demonstrated, including man overboard equipment, floatation devices and inflatable life rafts.
<i>Fire on-board, fire prevention techniques, and fire extinguishers</i>	1. Purpose, limitations, use and servicing / maintenance requirements for different types of fire extinguishers.	1A	Explained in accordance with Maritime Rules and New Zealand Standards 4503. Including: dry powder, carbon dioxide, aqueous film forming foam, and water extinguishers
	2. Fire fighting appliances.	1	Use of demonstrated in accordance with Maritime Rules for a restricted limit vessel.
	3. Fire prevention.	1A	The common locations of equipment, maintenance of equipment and causes and prevention of fire on-board vessels are identified and described, including: Locations: <ul style="list-style-type: none"> • machinery space • galley • wheelhouse • accommodation. Causes: <ul style="list-style-type: none"> • electrical • fuel and refuelling • LPG, and • smoking hazards. Extinguishing a fire using a fire extinguisher and/or fire blanket is explained.

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<i>Enclosed spaces</i>	1. Dangers of enclosed and confined spaces.	2	The dangers of entering enclosed and confined spaces are understood. Procedures are described for entry, rescue and safe working.
<i>International distress signals</i>	1. Limitations and effectiveness of international distress signals.	2	Described in accordance with industry practice. Obligations to assist in a distress explained. All international distress signals listed. Use of: <ul style="list-style-type: none"> • pyrotechnics /EPIRB/ VHF described • knowledge of actions to be taken if distress signal sighted/heard understood.
	2. The activation process of manual and float-free EPIRBs.	2	Described in accordance with manufacturer's specifications.
	3. Activation process of distress pyrotechnics	2	Including red parachute flares, red hand-held flares, buoyant and hand-held orange smoke signals; explained in accordance with manufacturers' instructions.
	4. The meaning and format of radio telephone signals including: distress, urgency & safety calls.	2	Described in accordance with the current MNZ Radio Handbook for Coastal Vessels.
	5. Cellular phones in distress situations at sea.	2	Uses and limitations are described.
<i>Emergencies, accidents and</i>	1. Reporting	2	Maritime New Zealand requirements for accident and incident reporting process are understood and described

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<i>Incidents.</i>	2. Collision.	2	Actions to take in the event of an accident or incident and the responsibilities of the master of a vessel involved in a collision are explained in terms of safety considerations regarding own vessel and crew and other vessel and its crew.
	3. Fire	2	Preventative fire measures are understood and explained including fire drills, fire detectors and fire patrols. Actions to be taken in event of fire aboard the vessel are explained including fire fighting systems and equipment and operation and crew duties.
	4. Grounding.	2	Actions to be taken in the event of grounding of a vessel are explained in accordance with best seamanship and industry practises.
	5. Man Overboard.	1A	Actions in the event of, a “Man Overboard” incident are demonstrated in terms of techniques and equipment to aid the location, approach and recovery of a person in a simulated situation including: life rings, vessel handling and approach. Prevention actions described
	6. Engine and steering failure.	1A	Actions to be taken in the event of propulsion engine failures in vessels are demonstrated.
	7. Controlling water ingress	1A	Causes of, and methods of, controlling water ingress of water in a vessel are described.
	8. Towing.	2	Equipment, techniques, safety issues and legal responsibilities associated with towing another vessel, and being towed, are described including: the advantages and dangers of spring and/or stretch in the tow line, setting up and adjusting the tow for prevailing sea conditions and trimming the towed vessel.
	9. Abandon-ship.	1A	The procedure for abandoning ship is understood and explained.
	10. Medical emergencies, care and equipment.	2	The equipment to be carried on-board vessels and the procedures in the following medical emergencies are described.
	11. Hypothermia and seasickness.	2	The cause, prevention, signs and treatment of hypothermia and seasickness are explained.

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	12. Radio medical advice.	2	The procedure for obtaining radio medical advice is explained in accordance with the current Maritime New Zealand Radio Handbook for Coastal Vessels.
<i>Safety Drills.</i>	Conduct safety drills.	1A	Safety drills are conducted in accordance with the vessels safety system. MOB, fire, collision and abandon ship.
<i>Search and rescue (SAR)</i>	1. New Zealand search and rescue system.	2	SAR organisation roles are explained including Maritime New Zealand/Rescue Coordination Centre New Zealand, Police and Coastguard.
	2. SAR / EPIRB registration and reporting.	2	The importance of correct recording of all details which may be used in a SAR are explained including EPIRB registration, MMSI number, call sign, trip report and emergency contact details.
<i>Hazard management.</i>	Conduct hazard identification.	1A	Hazard identification is conducted and a vessel hazard register maintained.

Function: Manage Legal Compliance

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Legal requirements for operation of a commercial vessel		1: Practical 1A: On board 2: Knowledge	
<i>Meet legislative requirements</i>	Vessel operation and applicable legislation	2	Identifies the operations of a commercial vessel as conforming to all applicable legislation including operational limits, qualifications, crewing and watch keeping, minimum personnel, all applicable maritime rules, guidance notices and safety bulletins.
<i>Maritime Operator Safety System</i>	1. Maritime Operator Safety System (MOSS)	2	Understands and describes the requirements of MOSS, consistent with Maritime Rules Parts 19 and 44
	2. Maritime Transport Operator Plan (MTOPlan)	2	Understands and describes the requirements for development of an MTOPlan, consistent with rule requirements, including requirements for a Fit and Proper Person
	3. Maritime Transport operator Certificate (MTOC)	2	Understands and describes the requirements for issue of an MTOC, consistent with maritime rules
<i>Integrated compliance</i>	Integrate compliance within vessel operation	1A	Integrates vessel safety management system into the operation and management of the vessel. Demonstrates on-going continuous improvement by evolving safety system and documentation and review.