

NATIONAL CERTIFICATE IN BOATBUILDING

MARINE RIGGING (Level 4)

150 CREDITS Version 5

An apprentice completing this NZQA registered qualification will gain the knowledge and skills required to be Marine Industry recognized and qualified as a competent **Marine Rigger**.

This qualification recognises the skills and knowledge required for apprentices working in the marine rigging sector of the Marine Industry, specifically in the assembly, fitting and tuning of rigging systems to support masts, spars and ancillary equipment. There is some commonality with the National Certificate in Boatbuilding with strands in Composite Sparmaking and Metal Sparmaking.

In this qualification, apprentices receive an overview of the boatbuilding sector of the Marine Industry, gain a detailed knowledge of design drawings and calculations, and learn to install fittings and to rig spars.

Marine riggers are responsible for the ropes, chains and tackle used to support and control the masts, sails and yards of a sailing vessel. This is a very specialised area of the industry and employers often recommend a strong interest in sailing to keep up with this constantly evolving part of the industry.

Apprentices involved in this area will install and remove rigs on a regular basis and are likely to work on a range of projects from Olympic racing dinghies through to New Zealand's growing superyacht industry.

This qualification takes, on average 2 to 3 years to complete.

Scott Randell



Scott Randell is in the process of completing his National Certificate in Boatbuilding, Level 4 in two strands, metal sparmaking and marine rigging. These two qualifications complement each other and are often done together.

Scott works at Mast and Spar Services, a unique on-the-water facility in the centre of Auckland's marine precinct.

He owns and races his own 9m race yacht, 'Overload', and set records in the 2009 Coastal Classic. He hopes to compete in the two-handed, around New Zealand race in 2011.

"The diversity of skills and knowledge I have learnt provides me with the opportunity to turn my hand to most metal-based aspects of the industry"
– Scott Randell

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Unit Standard Content

Unit Number	Unit Title	Level	Credit Value
414	Demonstrate knowledge of the distribution environment	2	4
5433	Demonstrate knowledge of electrical and electronic applications for marine use	4	8
9913	Demonstrate knowledge of the New Zealand marine industry	2	3
18158	Select, use and care for hand tools used in boat building	2	5
18159	Select, use and care for portable power tools used in boat building	2	5
18160	Operate mechanical plant used in boatbuilding	2	12
18162	Calculate quantities and costs for boatbuilding projects	3	4
18163	Demonstrate knowledge of boatbuilding construction drawings and produce related freehand sketches	3	2
18165	Demonstrate knowledge of computer technology used in the boating industry	3	6
18166	Participate in a project team in the boating industry	2	4
18170	Contribute to project team in the boating industry	3	3
18171	Demonstrate knowledge of spars and rigging	3	5
23039	Demonstrate knowledge of the transportation of spars and rigging	3	4
23040	Demonstrate knowledge of yacht spar and rigging systems	4	8
23243	Identify, explain and prevent material deterioration in the marine environment	4	8
23244	Identify and apply health and safety procedures for the boatbuilding industry	3	4
25119	Describe and safely control work aloft on yacht rigs	4	4
25120	Demonstrate knowledge of the design and specifications for yacht spars and rigging	4	4
25121	Maintain yacht spars, rigging and hardware	4	4
25122	Install and remove yacht spars and rigging	4	8
25123	Interpret, select and assemble components of yacht spars and rigging	4	6
25151	Fabricate yacht rigging	4	10
25343	Identify boat fittings and fastenings	2	4
25344	Demonstrate knowledge of marine trades and expectations of employees	2	3
25345	Demonstrate knowledge of terminology used in the marine industry	2	6
26542	Demonstrate basic knowledge of the operation of recreational craft by day	2	6

Elective Unit Standard Content Plus at least **10** credits from the following list:

Unit Number	Unit Title	Level	Credit Value
9917	Demonstrate knowledge of boatbuilding methods.	2	4
9944	Identify the characteristics of aluminium alloys relevant to boatbuilding	2	2
11661	Produce components by performing basic engineering drilling operations	2	5
11662	Produce components by performing basic engineering turning operations	2	12
11663	Produce components by performing basic engineering milling operations	2	12
23049	Demonstrate knowledge of composite technology for boatbuilding	4	6
25152	Apply 2D CAD/CAM in boatbuilding	4	5