

NATIONAL DIPLOMA IN BOATBUILDING - WITH STRANDS IN COMPOSITE, WOODEN AND METAL (Level 5)

242-258 CREDITS Version 1

**DIPLOMA
NEW RELEASE**

A trades-person completing this NZQA registered qualification will gain the knowledge and skills required to be Marine Industry recognized and qualified as a competent **Advanced Composite Boatbuilder or Advanced Wooden Boatbuilder or Advanced Metal Boatbuilder.**

This qualification is for trades people who have attained the National Certificate in Boatbuilding (level 4) who wish to progress their career in the boatbuilding sector of the Marine Industry. Candidates are likely to be responsible for managing people, resources and work operations. They will have technical skills and knowledge relevant to the type of vessels that they are working with, hence the three strands (shown below).

First line management and supervision; leadership; relationships; staff hiring, performance management and exiting; quality control; safety; efficiency through continuous improvement; sustainability; project control; supervision in a variety of specific first line industry situations; industry specific use of computer software and hardware; and basic principles of naval architecture and engineering are all covered.

In the elective section candidates are able to choose from a selection of vessel system and process planning unit standards; including systems testing, plumbing, electrical, hydraulic, air conditioning, refrigeration, power plant installation and the application of multi axis CAD/CAM.

Candidates choose a strand specific to the construction type they are working in: composite, timber, or metal; covering specification, testing and specialist technical competencies.

This qualification takes, on average 3.5 to 4.5 years to complete.

Pre-requisite Requirement

National Certificate in Boatbuilding - Composite, Wooden, Alloy or Steel (Level 4)



New qualification to be introduced 2011

NATIONAL DIPLOMA IN BOATBUILDING - *WITH STRANDS IN COMPOSITE, WOODEN & METAL* (Level 4) (Version 1)

Unit Standard Content

Unit Number	Unit Title	Level	Credit Value
1988	Supervise workplace operations	4	6
2784	Create and use a computer spreadsheet to solve a problem	2	3
2785	Create a computer spreadsheet to provide a solution for organisation use	3	5
5953	Create and monitor a project plan using a computer application	3	3
7380	Recognise and examine management control concepts	3	3
8078	Lead a team to achieve specified quality improvement objectives	5	6
8085	Demonstrate knowledge of quality and its management	3	4
8087	Use core quality management tools	3	5
8493	Provide leadership for a team in an organisation	5	10
9704	Manage interpersonal conflict	4	6
11406	Demonstrate knowledge of engineering contract law and documentation	6	4
15189	Implement a health and safety plan for a workplace	4	4
18336	Demonstrate and apply knowledge of team-building skills	4	5
21773	Demonstrate and apply knowledge of mechanical statics for mechanical engineering	4	15
21774	Demonstrate and apply knowledge of mechanical dynamics for mechanical engineering	4	15
23395	Participate in staff selection processes	4	3
23396	Demonstrate knowledge of performance management planning	4	3
24783	Facilitate continuous improvement in a competitive manufacturing organisation	4	5
24872	Produce documents for a workplace using a computer	3	3
25449	Demonstrate knowledge of requirements for managing staff exit in an organisation	4	4
26082	Demonstrate knowledge of and apply sustainability concepts in the boatbuilding industry	4	10
26083	Analyse requirements, and supervise and lead the laying out, marking and cutting of vessel construction materials	5	10
26084	Plan and communicate a work schedule and supervise and lead a team for construction of a boat module	5	10
26085	Supervise the use and care of portable power tools in boatbuilding	5	5
26086	Verify machine operation, train users and supervise machine operation in boatbuilding	5	10
26087	Explain costing and pricing factors and prepare an estimate for a boatbuilding job	5	10
26088	Demonstrate knowledge of regulatory compliance in boatbuilding	5	5
26089	Explain project control in boatbuilding	5	8
26090	Demonstrate knowledge of trim and stability variation on vessels	4	5
26091	Monitor and assess marine paint application and finish	4	4
26092	Explain cathodic protection for marine vessels	5	6

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NATIONAL DIPLOMA IN BOATBUILDING - WITH STRANDS IN COMPOSITE, WOODEN & METAL (Level 4) (Version 1)**Elective Unit standards: Plus at least 4 unit standards from the following list:**

Unit Number	Unit Title	Level	Credit Value
11795	Commission marine electrical and electronic systems and equipment	4	10
26098	Supervise and survey hull welding to classification society requirements	5	6
26100	Determine requirements and supervise the dismantling, inspection, assembly and testing of boat components	5	5
26101	Interpret installation requirements and plan a complex plumbing system installation for a vessel	5	10
26102	Interpret installation requirements and plan a tankage system installation for a vessel	5	6
26103	Interpret installation requirements and plan a hydraulic system installation for a vessel	5	8
26104	Interpret installation requirements and plan a refrigeration system installation for a vessel	5	6
26105	Determine requirements and plan an air conditioning system installation for a vessel	5	6
26106	Interpret installation requirements and plan a custom power plant and power train installation on a vessel	5	6
26107	Apply 3D CAD/CAM in boatbuilding	5	5
26108	Explain the prevention of fouling and corrosion in saltwater pipework on vessels	5	4

Composite Strand - The following standards are required

Unit Number	Unit Title	Level	Credit Value
3187	Produce a laminate specification for composites	6	12
3196	Test properties of a composite laminate	4	10
26093	Produce a work schedule and resourcing plan for a composite boat structure	6	7

Wooden Strand - The following standards are required

Unit Number	Unit Title	Level	Credit Value
26094	Determine scantlings for a wooden boat	5	10
26095	Test properties of boatbuilding timber	5	10
26096	Produce a work schedule and resourcing plan for a wooden boat structure	6	7

Metal Strand - The following standards are required

Unit Number	Unit Title	Level	Credit Value
15134	Supervise welding operations	5	20
26099	Produce a work schedule and resourcing plan for a metal boat structure	6	7