

Alpine 1



Photo: Mike Atkinson

Scope and Syllabus

With the support of:



NZOIA™ Alpine 1

Scope

Alpine 1 Profile

The NZOIA Alpine 1 is able to:

- Plan and prepare for an overnight alpine trip
- Lead and manage groups in alpine environments
- Apply weather interpretation and forecasting skills
- Role model and promote accepted environmental practices
- Provide interpretive information
- Connect concepts of tikanga Māori to the alpine environment
- Apply effective safety management
- Prepare and deliver teaching sessions
- Teach mountaineering skills
- Engage clients in positive learning experiences

Scope

Mountain Terrain Scope

The holder of this qualification may operate in non-technical alpine terrain with a Mt Cook technical grade of up to grade 1 and serious grade 1. Terrain may be low consequence snow slopes, open tussock or scree and easy rock scrambling. The use of a rope will not normally be required outside of an emergency situation.

Avalanche terrain scope

This scope applies when snow conditions are deemed as above threshold (snow quantities sufficient to produce an avalanche)

The holder of this qualification may operate on snow slopes <25 degrees and simple ridge travel. Both terrain types must be void of exposure to overhead avalanche hazard.

Outside of this scope the qualification holder will operate in managed avalanche terrain, this is defined as within the boundaries of an operational ski field where avalanche mitigation work is carried out by ski patrol.

Prerequisites

Be a current Full Member of NZOIA

Be 20 years old or over

Hold a current First Aid Certificate

Hold as a minimum MSC Avalanche Skills Course 2 (ASC 2)

Have the following experience as evidence in a logbook:

Total experience – at least 40 days experience (an alpine day is considered to be at least 6 hours) of alpine travel

Personal experience - at least 20 days personal alpine experience in both winter and summer conditions including at least 5 nights camping in snow

Instructional experience – at least 10 days instructing leading or guiding groups in an alpine environment both winter and summer conditions including at least 5 nights camping in snow with groups. Experience will include co-instructing/guiding or working as an assistant instructor/guide.

Total experience can include training course days. Training course days cannot be included in personal experience. The prerequisite experience requirements are minimums, extra days are recommended so that a broad range of experience is gained.

Registration and Revalidation

Registration and revalidation with NZOIA provide proof of currency for NZOIA qualification holders.

Progressing to NZOIA Alpine 2

As the NZOIA Alpine 1 gains more experience, they can progress to gaining the NZOIA Alpine 2 qualification. The steps they can follow include:

- Gaining the experience outlined in the NZOIA Alpine 2 prerequisites
- Attending an approved NZOIA Alpine 2 training course
- Working with an NZOIA Alpine 2 holder

Syllabus

Assessment Notes

The syllabus outlines what the content of the assessment will include and gives an idea of what assessment tasks the candidate will be asked to complete. All judgements on how the candidate meets the syllabus must be based on current good practice and industry standards.

Assessors use three types of direct evidence to judge a candidate's competency:

- Written questions/assignment
- Questioning and discussion
- Observation of practical tasks

Teaching crampon use to peers may occur if it is deemed inappropriate to teach crampon use to the clients due to environmental conditions or client ability.

Technical Competence

1. Demonstrate and/or describe the care and correct use of equipment and clothing commonly used in New Zealand for alpine trips

The candidate will:

- 1.1** Have knowledge about equipment commonly used in New Zealand including; types, characteristics, advantages, limitations, cost, care, maintenance and storage for a range of equipment e.g. boots, tents, packs, sleeping bags, ice axes, crampons, helmets, transceiver
- 1.2** Role model the use of equipment that is in good condition and well maintained
- 1.3** Impart basic knowledge about appropriate alpine clothing and equipment to clients e.g. principles of layering, use of sunglasses, gloves
- 1.4** Demonstrate how to pack personal and group equipment for an overnight alpine trip
- 1.5** Carry and use the appropriate clothing for environmental conditions

2. Demonstrate navigation skills

The candidate will demonstrate:

- 2.1** Knowledge and use of maps commonly used in Aotearoa New Zealand, including use of scale, symbols, gridlines, contours and features
- 2.2** Locating a specified point on the map using a 6-figure grid reference
- 2.3** Orientating a map using features only and using a compass only
- 2.4** Calculating and following a compass bearing to a feature
- 2.5** Estimating distance and time and describing the route for a navigation leg
- 2.6** Safe and efficient route selection in alpine terrain
- 2.7** Skills to navigate across alpine terrain using a map and natural features, in limited visibility
- 2.8** Locating a position on a ridge using resection
- 2.9** Demonstrate and/or describe use and limitations of contemporary technology e.g. Altimeter, GPS, Navigation apps

3. Demonstrate safe practices in and around alpine waterways

The candidate will:

- 3.1** Identify the hazards in alpine streams
- 3.2** Describe their decision-making process prior to crossing a given alpine stream
- 3.3** Demonstrate safe techniques when travelling in or across an open or snow-covered alpine stream

4. Demonstrate avalanche and snow safety management skills

The candidate will:

- 4.1** Describe the factors contributing to avalanches in New Zealand
- 4.2** Obtain and describe the significance of the avalanche hazard forecast for the assessment area
- 4.3** Describe/demonstrate snow stability test/s
- 4.4** Demonstrate route selection and activity location choices that fit with the avalanche hazard forecast and field observations
- 4.5** Demonstrate leadership and group management skills that minimise the groups exposure to avalanche hazard
- 4.6** Describe what measures to take if someone is caught in an avalanche
- 4.7** Manage an avalanche rescue scenario including locating two buried transceivers in a 50m by 50m area in under 5 minutes

5. Demonstrate alpine camping skills

The candidate will:

- 5.1** Demonstrate selecting an alpine campsite and identifying any natural hazards present
- 5.2** Describe the advantages and disadvantages of a range of different camping shelters; tent, bivvy bag and snow shelters
- 5.3** Demonstrate building a snow shelter suitable for an overnight stay and describe the advantages and disadvantages of different types of snow shelters
- 5.4** Describe the advantages, disadvantages and safe use of a range of different stove types suitable for use in alpine environments; gas, methylated spirits and white-spirits
- 5.5** Demonstrate the organisational skills required for managing people, equipment and cooking in alpine conditions
- 5.6** Demonstrate hygienic methods for handling/preparing food
- 5.7** Describe appropriate toileting practices for use at alpine campsites

6. Demonstrate mountaineering skills

The candidate will demonstrate:

- 6.1** Using an ice axe for walking, self-belay, self-arresting and step cutting
- 6.2** Crampon use on slopes in non-technical terrain where a rope is not normally required
- 6.3** Tying the following knots for use in an alpine application; overhand, clove hitch, Italian hitch, figure 8
- 6.4** Tying an improvised harness
- 6.5** Build an appropriate anchor to manage a client up or down a slope
- 6.6** Waist and direct belays
- 6.7** An appropriate method of confidence roping
- 6.8** Setting up and using a fixed hand line to provide additional support

The Environment

7. Apply weather interpretation and forecasting skills in an alpine environment

The candidate will:

- 7.1** From a weather forecast for a given mountain area of New Zealand, describe the effect on mountain conditions this forecast would have
- 7.2** Be able to identify what the symbols on a synoptic weather map represent and from a synoptic map make a 48-72-hour weather forecast for a given mountain area in New Zealand
- 7.3** Demonstrate the ability to anticipate weather conditions from changes in clouds, temperature and wind direction in a mountain area of New Zealand, and based on these observations make a 24-hour forecast

8. Role model and promote accepted environmental practices

The candidate will:

- 8.1** Demonstrate and/or describe the responsibilities to land owners and other users, including access protocols e.g. ski areas
- 8.2** Role model and promote the principles of Leave No Trace

9. Demonstrate and/or describe cultural and environmental knowledge and interpretation of a given alpine area

The candidate will understand, and provide interpretive information about:

- 9.1** The natural and cultural history of the area
- 9.2** The geology of the area
- 9.3** Local flora and fauna
- 9.4** Concepts of tikanga Māori and be able to connect these to the alpine environment e.g. Pounamu trails, traditional food gathering, tapu summits and Kaitiakitanga

Group Management and Leadership

10. Plan and prepare for an overnight alpine trip

The candidate will prepare a written plan for an overnight alpine trip, camping in snow, which is suitable for the intended client group and outlines:

- 10.1** The aims, objectives and purpose of the trip
- 10.2** Route information including; estimated distances and times, emergency options and alternative routes
- 10.3** Risk and hazard identification and management
- 10.4** Any consent or access issues
- 10.5** How to get weather information and an avalanche hazard forecast
- 10.6** Clothing and equipment list for both individuals and the group

- 10.7** A menu plan which includes balanced, nutritious and varied food, fuel requirements, emergency food and identifies safe methods for organising group cooking
- 10.8** Intentions information, communications and emergency procedures

11. Lead and manage a group in an alpine environment

The candidate will demonstrate leading and managing a group in a range of alpine terrain (e.g. tracks, snow, tussock, rocky broken ground, scree, slippery ground) including:

- 11.1** Effective management of the group including; pacing, rest stops, explaining potential dangers, keeping the group together and a system for accounting for everyone
- 11.2** Establishing rapport and using a leadership style appropriate to the group
- 11.3** Organise and motivate a group/individual in an alpine environment

12. Apply effective safety management

The candidate will:

- 12.1** Be familiar with the use of and can describe the advantages and limitations of different methods of communication suitable for use in an alpine environment; mountain radio, VHF, cellphone, GPS tracker, PLB and SAT phone
- 12.2** Have a first aid kit and be able to deal with first aid situations as required
- 12.3** Demonstrate the knowledge and ability to identify, assess and manage natural hazards in an alpine environment. These include:
- Avalanche and ice fall
 - Rock-fall
 - Falling/Sliding (snow, ice, rock, tussock, water-ways)
 - Extreme weather (lightning, wind, precipitation)
 - Volcanic events (lahar, gas, rocks)
- 12.4** Demonstrate awareness of the risks and appropriate risk management strategies during a given alpine trip and the ability to adjust plans when required
- 12.5** Be able to describe procedures used in the event of an incident e.g. accident or illness in the party, party member being missing, party becoming lost
- 12.6** Be able to describe the prevention, symptoms and remedies for snow related first aid scenarios e.g. snow blindness, frostbite, dehydration, hypothermia, hyperthermia, sunburn and fatigue
- 12.7** Take reasonably practicable steps to eliminate or minimise the effect of significant risks for self and others
- 12.8** Demonstrate safe practices and good judgement and decision making within the scope of this qualification

Instruction

13. Prepare and deliver teaching sessions

The candidate will:

- 13.1** Develop aims based on knowledge of clients
- 13.2** Plan a logical sequence of teaching progressions
- 13.3** Select and prepare a suitable location for client success
- 13.4** Use clear demonstrations and explanations
- 13.5** Use a range of teaching skills and methods
- 13.6** Provide opportunities for clients to practice
- 13.7** Deliver feedback that is timely and specific
- 13.8** Maintain a positive learning environment

14. Teach mountaineering skills

The candidate will teach (must include but not limited to):

- 14.1** The use of an ice axe to aid walking, including self-arresting on low consequence slopes
- 14.2** Crampon use on easy snow slopes
- 14.3** Terrain and route choice