

## 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

The holder of this qualification can organise, instruct and guide trips in alpine or snow environments in all seasons. Trips are in non-technical terrain where a rope is not normally required. Trips can include unroped rock scrambling e.g. Mt. Temple (Arthur's Pass) in summer conditions.

Examples of trips within the scope of Alpine 1 are: Traverse of Avalanche Peak (Arthur's Pass) in winter conditions, Robert Ridge to Lake Angelus (Nelson Lakes) in winter conditions, ascent of Mt. Ruapehu.

### Prerequisites

Be a current Full Member of NZOIA

Be 20 years old or over

Hold a current First Aid Certificate (minimum of 12 hours or 2 day course including some direct contact with course tutors)

Hold a current NZOIA Bush 1 qualification

Hold as a minimum Limited Credit Programme - Introductory Avalanche Risk Management Level 5 (LCP iARM L5), including the Unit Standards 30451, 30453, 30454 or a 4 day Back Country Avalanche Course.

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 including at least 5 nights camping in snow

**Instructional experience** – at least 10 days instructing leading or guiding groups in an alpine environment including at least 5 nights camping in snow with groups.

The prerequisite experience requirements are minimums, extra days are recommended so that a broad range of experience is gained. Experience will include co-instructing/guiding or working as an assistant instructor/guide.

## **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

## **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
- 1.2** Be able to describe the technological advantages of using GPS and altimeters as navigation aids in alpine terrain

- 1.3 Role model the use of equipment that is in good condition and well maintained
- 1.4 Be able to impart basic knowledge about appropriate alpine clothing and equipment to clients e.g. principles of layering, use of sunglasses, gloves
- 1.5 Demonstrate how to pack personal and group equipment for an overnight alpine trip
- 1.6 Carry and use the appropriate clothing for environmental conditions

## **2. Demonstrate alpine navigation skills**

The candidate will demonstrate:

- 2.1 Safe and efficient route selection in alpine terrain
- 2.2 The skills to navigate across alpine terrain using a map and natural features, in limited visibility
- 2.3 Locating a position on a ridge using resection (triangulation)

## **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 skills**

The candidate will:

- 4.1 Describe types of avalanches common in New Zealand
- 4.2 Describe the factors contributing to avalanches in New Zealand
- 4.3 Obtain and describe the significance of the avalanche hazard forecast for the assessment area
- 4.4 Describe/demonstrate the significance of layering in the snowpack
- 4.5 Demonstrate making route selection and activity location choices that fit with the avalanche hazard forecast and minimise exposure to avalanches
- 4.6 Describe what measures to take if caught in an avalanche
- 4.7 Locate 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 equipment and cooking in alpine conditions
- 5.6 Demonstrate hygienic methods for handling/preparing food and preventing water contamination in an alpine environment
- 5.7 Describe appropriate toileting practices for use at alpine campsites, including for snow and delicate vegetation sites

## **6. Demonstrate mountaineering skills**

The following will be demonstrated on terrain that is within the scope of the NZOIA Alpine 1 qualification and using equipment that would normally be carried on a trip in Alpine 1 terrain.

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 Lowering an unconfident climber down a short slope using limited gear (an ice axe, karabiner, sling and short rope) and a waist or direct belay
- 6.6 An appropriate method of confidence roping
- 6.7 Setting up and using a fixed hand line

## **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
- 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 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 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 awareness of the risks and appropriate risk management strategies during a given alpine trip and the ability to adjust plans when required
- 12.4** 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
- 12.5** Be able to describe the prevention, symptoms and remedies for snow related first aid scenarios e.g. snow blindness, frostbite, dehydration, hypothermia, hyperthermia and sunburn
- 12.6** Never compromise their personal safety or the safety of their clients
- 12.7** 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 prepare and deliver teaching sessions on any given topic or skill contained in the NZOIA Alpine 1 Scope and Syllabus, which demonstrates:

- 13.1** A range of teaching skills e.g. introduction, appropriate voice, language and body language, teaching/visual aids, demonstrations, teachable moments, evaluation of learning
- 13.2** A wide knowledge of the topics/skills
- 13.3** Engaging clients in positive learning experiences which encourage enthusiasm and interest

### **14. Teach mountaineering skills**

The candidate will demonstrate teaching, including appropriate site selection:

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

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.