

NZAC INSTRUCTION PROGRAMME

LEADING ON TECHNICAL ICE COURSE

3-6 August 2024



Photo: Oliver Edwards



NEW ZEALAND
ALPINE CLUB

3rd August – 6th August

LOCATION: WYE CREEK, REMARKABLES

ACCOMODATION: CAMPING

COURSE FEES: \$1,550 (INC GUIDING + HELI ACCESS)

Who is this course for?

The NZAC Leading on Technical Ice Course (LTIC) is designed for fit mountaineers who are able to look after themselves on 35-degree snow slopes, confidently leading traditional rock climbs, have good rope management skills and experience of camping in snow.

Participants should be competent in all of the course outcomes from the NZAC's Intermediate Snowcraft Course (<https://alpineclub.org.nz/parkside/wp-content/uploads/2020/01/NZAC-Intermediate-Snowcraft.pdf>) and have trad climbing experience.

Please see the NZAC Course Pathway prior to registering for this course.

(<https://alpineclub.org.nz/sites/default/files/2021-01/Pathway-Final.png>)



Photo: Tom Hoyle

Please do not apply if you are not competent in the course outcomes from the NZAC Intermediate Snowcraft Course or do not have trad climbing experience.

[CLICK HERE TO REGISTER ONLINE](#)

Course Syllabus:

Preparing for technical ice climbing

- Clothing/equipment
- Trip planning resources (avalanche forecasts/weather forecasts/guidebooks)
- Weather
- Using aircraft for access
- Selecting appropriate objectives

Being and moving on technical ice climbs

- Movement skills for technical ice climbs
- Using technical ice tools and crampons on steep ice
- Ice anchors (ice screws and v-threads)
- Rock anchors
- Ice condition and characteristics
- Belaying a lead ice climber
- Rope management for single and multipitch ice climbs

Changing Circumstances

- Resting whilst on steep ice
- Use of avalanche safety equipment including transceiver search
- Retreating from technical ice climbs

Course Outcomes*:

Preparing for the environment

- The knowledge to select appropriate equipment and clothing for technical ice climbing
- An ability to plan trips and select routes according to their grade, condition and guidebook description.
- An ability to interpret weather forecasts and observations with a focus on how this effect ice.
- The awareness of basic safety principles regarding the use of aircraft to access the high mountains

Being and moving in the Alpine Environment

- The knowledge of how to climb steep ice well balanced, efficiently and in control.
- An understanding on how to efficiently and effectively place ice axes and crampons whilst climbing on technical ice.
- An understanding of building quality anchors (ice screw, v-thread, snow bollard) and rock (nuts, cams, rock bollard) anchors.
- The knowledge to assess the condition of ice and adapt accordingly
- The ability to place protection to protect a leader and second on technical ice routes
- The ability to retreat and descend routes using appropriate techniques (retrievable abseils, down climbing, lowering)



-The skills to efficiently manage the rope on single and multipitch terrain (block leading, swinging leads, multipitch abseils)

Changing Circumstances

-The knowledge of techniques to safeguard against a lead fall on technical ice routes
-The ability to confidently perform a companion rescue in the event of an avalanche
-An awareness of snow shelters appropriate for emergency situations

Someone who has these skills and those listed in the High Alpine Skills Course is considered a **NZAC Advanced Mountaineer** and is likely to have the skills and ability to travel on glaciated Mount Cook Grade 3 Terrain

*Course outcomes may vary dependant on participant ability and course conditions. This is a guideline, individuals must assess their own ability after a course.

Accommodation:

Participants camp for the course nights at Wye Creek, this is a fantastic venue but in a sensitive environment so what gets taken in goes out, this includes toilet waste. The Course Instructor will arrange a toilet system (double bagged bucket). NZAC will supply poo bags for participant for emergency times when you can't get to the bucket. The bags can be deposited into the bucket afterwards. We recommend you purchase your own poo pot and bags too ([available from NZAC](#)).

Access:

The course is designed to be a fly in – walk out course. The cost of the flight is included in the course fees. It is important to note this flight cannot be guaranteed due to the weather in the mountains. **Participants must be able to carry their gear in and out of Wye Creek in the unlikely event of the helicopter flight not being possible.** In the unlikely event of participants walking in to Wye Creek, a proportion of the course fee's will be refunded.

Instruction

The course will be run in a minimum 1:4 Guide to participant ratio, headed by fully qualified and experienced IFMGA Guide or NZMGA Climbing Guide. All participants must agree to follow the Guide's instructions and directions. 4 participants maximum per group. The course has a capacity of 8 participants.

Food:

Participants will provide their own food. Participants will be put in touch with each other ahead of the course to plan sharing meals. Flying in gives you the option to pack pre-cooked and easy to prepare meals. It is not recommended to solely rely on dehydrated food for sustenance. Please note food preferences on your registration form if wanting to cook in a group. **Please ensure you arrive having eaten breakfast.**

Flexible Course Dates

All courses are 4 days in duration. **However, given 36 hours' notice, you will need to be available for a delayed start and so a delayed finish, if the weather forecast is better. Therefore, you will need to be available for a 5-day window and instruction will occur on the best 4 day block out of the 5 days.** There is a lot to cover and this gives us the best chance of optimal conditions for instruction and climbing.

3th – 6th August (**4th – 7th August if delayed start is required**) Decision on a delayed start to be confirmed by the instructor via email on 1st August.

Getting there

The courses start from Heliworks, Queenstown (64 Grant Road, Frankton, Queenstown). Please arrive for 8.45am packed ready to fly. Should the course have a delayed start, participants may wish to meet up prior to the course to arrange kit in pairs.

Course Fees

The course fees include instruction and helicopter access to Wye Creek. **The course fees are \$1,550. Payment of a \$775 non-refundable deposit on acceptance secures you a place on the course.** The remaining \$775 is due by 1st June 2024.

No refunds will be available should you cancel within 60 days of the course start. Any refunds are not guaranteed and are at the discretion of the NZAC National Office and may depend on whether a replacement can be found.

No refunds are due for courses voluntarily reduced in length. If weather and/or conditions require the course objectives/itinerary to be modified no refund is due. Some course costs may be returned if they have not been incurred.

No refunds are due for leaving the trip for medical or fitness reasons. Exceptional circumstances may be considered and are at the discretion of the NZAC.

Insurance

We recommend you take out travel insurance and/or personal insurance as part of your preparation for participating on NZAC Instruction courses.

Emergency Situations and Risk Disclosure

The Course Instructor will have Emergency Management Procedures in place and a Satellite phone to immediately contact rescue services in the case of an accident or emergency. It is encouraged to take your own personal locator beacon if you own one.

The natural environment and climbing activities can involve risks. While recognising that the course organisers and instructors are doing their best to manage these risks, and agreeing to accept their direction whenever required, you must accept personal responsibility for your own actions and safety. You must also accept to follow the instructions of the Course Leader and other instructors at all times.

All participants on the Course are expected to be as honest and transparent as possible about their experience and fitness as part of their application. If a participant's lack of fitness/ability severely affects the running of the course the participant(s) may be asked to not participate for certain activities. Arrangements may be made to evacuate the participant(s) at their own cost. The instructor is the final arbiter in these decisions.

Schedule

Course Day 1:

8.45am meet at Heliworks_hanger and sort your equipment for the flight into Wye Creek. **You should arrive having eaten breakfast.** Please have your kit packed ready for the course. There will be a safety briefing pre-flying so please ensure you arrive on time. It's a short flight into Wye Creek where you will set up camp. The afternoon will be spent introducing you to the concepts of leading on ice, progress as instructor sees fit. A significant amount of time will be spent mock leading and getting mileage on ice.

Course Day 2 + 3:

These days are spent developing new skills and transitioning into becoming a comfortable lead climber on ice. Participants will be progressed at their own pace with the opportunity to take on steep and more technical routes as the instructor sees fit.

Course Day 4:

Last chance to test out your new skills and get on the sharp end. It is also your last chance to ask any final questions and practice newly learnt skills. The afternoon will be spent walking out to Wye Creek.

Ice climbing is a very different sport to rock climbing and progressions take a lot longer. Ten laps on an easy climb on top rope doing drills is far more benefit than jumping on lead before you are ready. Topics covered will be leading head space and tactics, placing

screws, efficient tool and foot placements, cleaning ice, safe belay stances, stances for screw placement, racking screws, anchor building and descending/escaping ice routes.

Gear list:

Overleaf you will find a full list of the equipment you will need. **It is compulsory to email details (brands/style) and ideally a photo of your technical equipment, including a crampon fitted to a boot, to the course instructor prior to course start. This will ensure the gear is fit for purpose as there will not be time to remedy any gear issues prior to flying in.** Some NZAC Sections hire ice climbing gear. It is the individual participants responsibility to hire and return and kit.

Auckland Section Gear Hire

<http://www.aucklandclimber.org.nz/hiregear>

CW Section Gear Hire

<https://alpineclub.org.nz/parkside/wp-content/uploads/2015/04/CW-Gear-Hire-2019.pdf>

CNI Section Gear Hire

<https://alpineclub.org.nz/region/central-north-island/>

Otago Section Gear Hire

<https://alpineclub.org.nz/region/otago/>

Southland Section Gear Hire

<https://alpineclub.org.nz/region/southland/>

Wellington Section Gear Hire

<https://alpineclub.org.nz/region/wellington/>



Photo: Tom Hoyle

Please be careful purchasing any climbing or mountaineering equipment online. The NZAC recommends kits is purchased from a reputable outdoor retailer. This ensures your kit meets international standards and is not fraudulent. See <https://www.theuiaa.org/uiaa/is-your-equipment-really-certified/> for more information.

Item	Specification	#
Mountaineering Boots	Stiff mountaineering boots with good insulation are essential. Fully shanked. Plastic or leather. (La Sportiva Nepal, Scarpa Mount Blanc)	1 pair
Harness	4 Gear Loops, Adjustable leg loops	1
Helmet	Rated for mountaineering	1
Rope	60m Single dry treated rope.	1
Locking Carabiners	Not Magnet Lock	3
Snapgate Carabiners		2
Quickdraws		4
Belay Device	ATC or Similar (not Grigri style)	1
120 cm Sling	Sown sling	2
Personal Anchor System		1
Prussik Cord	4-5mm x 2 (once tied with a double fisherman these should be bellybutton to eye length)	2
V-Thread hook	Bought ones preferred. Homemade acceptable	1
Ice Screws. 13-19cm	Modern. Ideally express style (BD express screw / Grivel 360 etc)	4
Ice Screw. 22cm +	Modern.	1
Ice Axes	Technical Ice Axes. Pair. Adze and Hammer. Curved shaft, ideally with a grip rest. (Petzl Quark, DMM Apex, Grivel North Machine)	1 Pair
Crampons	Technical crampon that is well fitting to boots and has antiballing plates fitted. (Grivel G12, Climbing Technology Ice)	1 Pair
Snowshoes	For travel in soft snow conditions	1 Pair

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Tent (you may stay in a rock bivvy, your instructor will advise if tent is needed)	2-person tent (please arrange to share tents if you wish). Tents must be suitable for the winter mountain environment	1
Plates & Cutlery	Mug, plate, spoon, knife	1
Cooker	Plus fuel for 3 days (please arrange to share if you wish)	1
Cooking Pot	For use on Cooker	1
Poo Pot	Poo Pot and 12x Corn-starch Bags	1
Poles	Recommended should you need to walk out/in	1 pair
Avo kit	Modern transceiver with fresh batteries, probe & shovel	1
Head torch	Plus spare batteries	1
Sunglasses	AS/NZS cat 3-4 preferred	1 pair
Ski Goggles		1 pair
Sun protection	Sunscreen & lip balm	1
Large Pack	60-70L for getting your belongings into the mountains. Please ensure all your kit fits within this.	1
Sleeping Bag	650 Fill minimum. (Temperatures could be as low as -15c)	1
Sleeping Mat	Foam or Inflatable (inflatable with insulation recommended)	1
Water bottle/Thermos	1.5L minimum total capacity. Insulated	1
Personal toiletries	Including toilet paper	1
Personal 1 st Aid Kit	Guide will carry a group 1 st Aid Kit. Bring only personal items.	1

Item	Specification	#
Insulated Jacket	Down/synthetic (useful for belaying) Winter weight.	1
Alpine Shell jacket	Gore-Tex or equivalent	1
Alpine Shell Over trousers	Gore-Tex or equivalent	1 pair
Hat	Warm	1
Neck Warmer / Balaclava		1
Windbreaker Top	Softshell	1
Thermal tops	Polypro or merino	2
Thermal leggings	Polypro or merino	2
Mittens	Waterproof (for use belaying or around camp)	1 pair
Climbing Glove	Waterproof, insulated articulated gloves. (good quality!)	1 pair (2 preferable)
Inner Gloves	To be worn under your climbing gloves.	3
Socks	Skiing or high cut tramping	2 pairs
Jacket or Jersey	Warm midweight wool or fleece.	1 pair

Optional extra items:

Item	Specification	#
Compass		1
Altimeter		1
Toe/foot/hand warmers		1
GPS		1

Some tips on gear:

Boots:

To be able to stand on your front points safely and comfortably all day, boots need to be rigid (fully shanked). Plastic or leather is fine, but they need to be warm, waterproof and be able to take your crampons. Examples:

- La Sportiva Trango, Nepal evos
- Scarpa Inverno, Mont Blancs

Ice tools:

Standard mountaineering axes won't do. You need a pair of proper ice climbing tools. Some examples of suitable tools are:

- Black Diamond: Vipers, Fusions, Cobras
- Petzl: Quark, Nomic
- Grivel: Tech machine, North machine

Crampons:

Crampons must fit your boots securely with no chance of falling off with either automatic or semi-automatic bails, can have either vertical front points or horizontal with aggressive secondary points, two parts or fully rigid.

- Black Diamond Sabretooth or Cyborgs
- Grivel G14, G12
- Petzl Lynx or Sarken

Ice screws:

Please bring modern ice screws. One of your screws should be 22cm, the rest can be shorter.

Harness:

Because you will require good gear loops to rack equipment and want to be comfortable at hanging belays, a good padded harness is ideal. Best to choose a rock-climbing harness over a lightweight alpine harness.

Ice clippers:

It is possible to lead ice climbs with your screws attached to your harness with a solid rubber band holding a big snap link carabiner in place, but a better option is the Black Diamond or Petzl ice clipper. You'll need two, one for each side of your harness.

Snowshoes:

Necessary to travel from camp to the climbs. These can be hired from Small Planet-Queenstown, Mountain Outdoors- Wanaka or Bivouac- Christchurch. The Course Leader will confirm if these are required once the date decision is made (36 hours' notice). This will be based upon the snow conditions.

Clothing:

A winter weight down jacket is **essential**: Cold is mandatory for ice climbing but being cold is not. You will need a good, hooded winter weight down or synthetic jacket to belay in, stand around in and relax at camp in.

Gloves:

It's very important to have a couple of pairs of warm gloves with you as they will invariably get wet. Leather insulated gloves like black diamond patrol gloves are recommended. Have few pairs of light fleece gloves or interchangeable inners in a wind proof shell **AND** a warm pair of mittens for belaying and around camp.

Thermals:

You will get wet ice climbing so make sure you have dry thermals to get into in camp and a spare fleece top for this as well.

Basic First Aid:

Personal first aid kit with pain relief, plasters, strapping tape and bandage is bare minimum.

How to manufacture a simple V-thread hook:

Use a wire coat hanger or a bike spoke and cut to length. This should be no shorter than 22 cm and the hook on the end needs to be sharp. File it with the small file on your swiss army knife or similar. Best if the loop at the other end is big enough for a karabiner. That way you can clip it onto you.

