



# 2017 EUROPEAN INSTRUCTION COURSE

## EQUIPMENT LIST

---

### Equipment Checklist

You **MUST** bring all items listed on the enclosed clothing and equipment checklist. The only exception is the items listed as optional; this is very important. Please contact us with any questions you have pertaining to equipment or clothing. At the same time you must keep your equipment weight to a minimum.

---

#### 1.0 Body Wear

---

- Waterproof shell jacket
- Waterproof shell pants
- Down or insulated jacket (*Optional*)
- Lightweight fleece top
- Fleece or softshell jacket
- Softshell climbing pants
- Base layer top and leggings
- Underwear

---

#### 2.0 Head Wear

---

- Sun hat
- Warm hat
- Balaclava (*Optional*)
- Sunglasses (*Plus an optional spare pair*)
- Ski goggles
- Scarf, bandana or Buff

---

#### 3.0 Hand Wear

---

- Liner gloves
- Leather gloves
- Mountaineering gloves with removable liners

---

#### 4.0 Foot Wear

---

- Socks x 2-3 pairs
- Mountaineering boots (*Can be rented locally*)
- Snow gaiters
- Lightweight shoes/boots
- Rock shoes (*Can be rented locally*)

---

#### 5.0 Packs & Bags

---

- Mountaineering pack
- Small duffel/travel bag

---

#### 6.0 Accessories

---

- Headlamp and spare batteries
- Water bottles x 2
- Thermos flask (*Optional*)
- Sleeping bag liner (*A requirement for all huts*)
- Personal first aid kit and medications
- Personal toiletries
- Sun block and lip balm
- Wet wipes (*Optional*)
- Ear plugs (*Optional*)
- Stuff sacks
- Camera
- Personal entertainment (*Optional*)
- Collapsible ski/trekking poles
- Pocket knife/Leatherman/tool kit (*Optional*)
- Additional snack food

---

#### 7.0 Climbing Equipment

---

- Ice axe (*Can be rented locally*)
- Crampons (*Can be rented locally*)
- Climbing harness (*Can be rented locally*)
- Climbing helmet (*Can be rented locally*)
- Belay device
- Locking carabiners x 2
- Non-locking carabiners x 3
- Prusiks x 2
- 60cm nylon sling

---

#### 8.0 Travel Gear

---

- Casual wear
- T-Shirt and shorts
- Passport, documents plus copies

# Clothing and Equipment Information Guide

The following information is a guide to assist you in securing the required clothing and equipment for climbing in Europe, along with recommended brands. You may have equipment you have used which is different to what is on the list, so please read thoroughly and get back to us with any questions.

---

## Fabrics/Garment Designs and Selection

---

Today there is a bewildering and ever changing array of modern technical fabrics and garments on the market. Accordingly, suitable mountain attire can be derived from a wide variety of garments utilized in varying combinations. The clothing on our gear list can be creatively substituted according to your preferences, but ensure your choices are functional and adequate. For example, a functional and often utilized garment that does not appear on our list is a vest.

A basic principle in selecting clothing and equipment is to minimize weight and bulk, while still ensuring adequate warmth and functionality. It can be difficult to find a brand that has all the features you prefer, which means you have to make prudent compromises. In the description below and for certain items, we suggest brands and specific products that we have found to be suitable; this is by no means definitive. In some cases there are multiple suitable brands on the market and hence we do not make specific suggestions.

Appropriate fabrics used in thermal underwear include polypropylene, silk and merino wool. The only cotton garment worn during the climb is your glacier shirt. Warmer insulating materials can be made from fleece, softshell or Primaloft®. Varieties of fleece include Windstopper, Wind Pro, Power Shield, Windbloc, Power Dry and Power Stretch. Be aware that fleece garments that incorporate stretch fabric take longer to dry. Softshell garments integrate stretchy nylon fabrics to increase freedom of movement, while also providing various degrees of wind and water resistance in a 'softshell'. They are often lined with a microfleece for increased insulation. Synthetic insulation materials such as Primaloft® are advantageous as they are warm even when damp, are water resistant and quick-drying.

You can read Guy Cotter's thoughts on the ultimate lightweight layering system at <http://www.adventureconsultants.com/adventure/LightweightGear/>.

---

## 1.0 Body Wear

---

### Waterproof Shell Jacket

This should be made from Gore-Tex or a similar waterproof breathable material. Look for a model with a full front zipper, a good attached hood with draw cord and so on for good adjustability, so that it will fit over a helmet. Preferably, the jacket should be long enough to allow a generous overlap with your overpants when you bend over. Obviously a technical mountaineering jacket is ideal but many general purpose jackets are sufficient.

*We recommend The North Face Summit Series L5, Arc'Teryx Alpha SV, Montane Alpine Pro and Rab Latok Shell Jackets.*

### Waterproof Shell Pants

This should be made from Gore-Tex or a similar waterproof breathable material. These must have full length zips down the legs, so that they can be put on and taken off when you are wearing boots and crampons. The bib/salopette types are warmer as they extend above the lower back/kidney area giving a good overlap with your jacket. Make sure they have sufficient movement to enable you to lift your legs high and enough room to wear light fleece pants underneath.

*We recommend The North Face Point Five NG, Rab Latok Alpine, Montane Alpine Pro and Arc'Teryx Alpha AR Shell Pants.*

### Down or Insulated Jacket

You may need a light down or synthetic insulated jacket for climbing in the Mont Blanc region or sufficient layers to stay warm at the higher altitudes.

*We recommend The North Face Immaculator, Marmot Ama Dablam, or Rab Infinity Endurance Down Jackets and The North Face Thermoball Hoody, Rab Xenon X, Montane Prism and the Arc'Teryx Nuclei FL Synthetic Insulated Jackets.*

		
Arc'Teryx Alpha SV Hardshell Jacket	Rab Xenon X Jacket	Marmot Scree Softshell Pants

### Softshell or Fleece Jacket

This should be a thick fleece (Polartec 200) or a softshell with a full front zip for ventilation. Zip up pockets help avoid losing items which are stored there and a hood and pit zips are also a bonus.

*We recommend the Arc'teryx Gamma MX and Marmot Estes Hoodies, or the Rab Vapour-rise Alpine Jacket.*

### Lightweight Fleece Top

A lightweight fleece top is a good addition for when you need extra warmth and it is not cold enough to require your regular fleece jacket. Polartec Classic 100 or a Power Stretch fabric is a good weight. A zip chest pocket is useful for keeping sun cream and snack bars accessible.

*We recommend The North Face TKA 100 Glacier ¼ Zip, Marmot Reactor Half Zip, Rab Powerstretch Pull-On, Patagonia R1 Hoody or the Arc'Teryx Kenseal Hoody Fleece Tops.*

### Softshell Climbing Pants

Softshell pants suitable for climbing on the warmer days and general casual wearing, or with long underwear beneath for colder days.

*We recommend The North Face Alpinisto, Marmot Scree, Montane Alpine Stretch or the Rab Sawtooth Softshell Pants.*

## Base Layer Top and Leggings

Long sleeve base layer tops made of polypropylene, polyester or merino wool are excellent. A high neck with a zip gives good temperature control. Bring two tops (one for climbing in and one for wearing in the evenings, or to double up if you are really cold).

Long-johns made of the same materials as your tops are lightweight and provide a change, if your climbing pants are wet or too warm. They also provide lots of additional warmth if worn under your climbing pants, although this would generally only be required in winter.

*We recommend The North Face Warm, Smartwool, Le Bent, Montane Primino and Rab Merino+ Base Layer Ranges.*

## Underwear

Bring sufficient changes of your regular underwear. It is possible to buy polypropylene, polyester or merino briefs and singlets, which are warmer and dry faster if you get wet, however most people use their normal and most comfortable underwear.

*We recommend the Smartwool, Montane Primino and Rab Merino+ Ranges of Underwear.*

		
Rab Merino+ 160 Hoody	The North Face Bones Beanie	Julbo Explorer 2.0 Sunglasses

---

## 2.0 Head Wear

---

### Sun Hat

A wide brimmed soft hat or baseball cap combined with bandana to protect you from the sun. The sun is extremely strong at altitude, especially as there is less pollution in the air.

*We recommend The North Face Horizon Breeze Brimmer Sun Hat, available from our office.*

### Warm Hat

Your hat can be wool, merino, Windstopper or fleece. It should extend over the ears and be snug enough not to fly off in a strong wind.

*We recommend The North Face Bones or Rab Shadow Beanies.*

### Balaclava (Optional)

Bring a lightweight balaclava preferably made from silk or polypropylene.

*We recommend Smartwool and Rab Power Stretch Balaclavas.*

### Sunglasses

Preferably a "glacier" style with side protection, though some wraparound glasses provide enough protection from reflected light. The lens should be dark enough to withstand the intense reflection from the snow and MUST filter 100% of UVA, B and C radiation. Snow reflects up to 85% of solar radiation and the UV index increases 10% with every 1,000m gain in altitude so it is of utmost importance you protect your eyes. We recommend a photochromic or category 4 polarized lenses with an anti-fog coating. If you wear prescription glasses, we recommend you get grey or amber prescription glasses. If you wear contact lenses, it is advisable to bring a pair of prescription glacier glasses as a back up. Leashes and nose guards can be used.

*We recommend Oakley, Adidas, Bollé, Julbo and Smith Sunglasses.*

## Ski Goggles

It is good to have interchangeable lenses - one with a dark and/or a polarized lens and a second set with an amber lens for low visibility. If you wear prescription glasses, please ensure they fit under your goggles.

*We recommend Oakley, Adidas, Bollé, Julbo and Smith Goggles.*

## Scarf, Bandana or Buff

A bandana and/or Buff are a useful addition to the cap to protect the back of your neck from the sun. The Buff makes a good face mask in windy cold weather and can replace a balaclava, when used with a warm hat.

*We recommend the Adventure Consultants Branded Buff, available from our office.*

---

## 3.0 Hand Wear

---

Like body wear, you'll need a few combinations of gloves for a wide variety of temperatures. Layering works well, so check the various combinations work together.

### Liner Gloves

These form a base layer and are worn, whenever climbing. These very thin, lightweight finger/liner gloves are worn on hot days to protect against sunburn and under heavier gloves on cold days. Ensure a close fit to allow you to handle ropes and carabiners. These can also be worn doubled up and should fit underneath your other glove combinations.

*We recommend the Black Diamond Lightweight, Rab Stretch Knit or Budget Polypropylene Liner Gloves.*

### Leather Gloves

A leather palmed glove that is dexterous is invaluable for days on rock or on warmer mountain days, where you still want hand protection.

*We recommend Marmot Spring, Rab Alpine and Outdoor Research Airbrake Gloves.*

		
Smith I/O Ski Goggles	Rab Alpine Gloves	The North Face Vengeance Mountaineering Gloves

### Mountaineering Gloves with Removable Liners

A good model will have a waterproof outer (e.g., Gore-Tex), abrasion resistant palms, shaped fingers, a waterproof outer and a removable insulating liner. Mountaineering gloves are not and should not be as warm as expedition mitts. Be aware that cheaper models are not waterproof. Because of the time you will spend holding your trekking poles, the dexterity your gloves provide will be extremely useful. Ensure you can fit your liner gloves underneath your mountaineering gloves.

*We recommend The North Face Vengeance, Rab Alliance or the Outdoor Research Alti Mountaineering Gloves.*

---

## 4.0 Foot Wear

---

### Socks

Various combinations suit different people. You need at least 3 complete sets of your personal preference. Some people prefer to wear just one pair of socks in their boots, while others wear two; a thicker pair over a thinner one.

*We recommend Smartwool, Mund and Bridgedale Socks.*

## Mountaineering Boots

An insulated leather mountaineering boot is ideal for climbing in the Alps, but make sure they are waterproof, supportive and warm enough, for snow and ice climbing. The right fit is more important with leathers than for plastics and they need to be worn in, so make sure you do several multi-hour hikes on rough terrain and hills before you wear them in the mountains.

The boots must have a reasonable sized welt at the back and front to accept 'clip on' crampons. There are many different models designed for different kinds of use; from glacier walking to steep ice climbing. As they don't wear out that quickly it's worth thinking about what your end use is going to be before buying a pair.

Plastic or new-generation synthetic rigid soled boots with removable liners can also be used for higher elevation ascents around Mont Blanc, although if you are going to focus on ascents of rock routes they may be too heavy. However in this day and age, leather boots or at least hybrids are more the status quo.

*We recommend the Scarpa Mont Blanc (no surprise there!) and Phantom Guide, La Sportiva Nepal, Batura 2.0, Trango Ice Cube, Lowa Weisshorn and Mountain Expert, Garmont Mountain Guide Pro and the Salewa Vultur Vertical Mountaineering Boots. For lighter rock oriented alpine boots, the Scarpa Charmoz or La Sportiva S Evo Boots are both good choices.*

## Snow Gaiters

Full calf-length gaiters keep the snow out and need a good tie down system under the in-step, so as to stop them creeping up at the heel and allowing snow in. A Velcro or zip closure at the front is best for putting them on and removing them easily.

*We recommend Sea to Summit Alpine and Rab Latok Extreme Gaiters.*

		
La Sportiva Nepal Evo Mountaineering Boots	Salomon XA Pro 3D Ultra 2 Shoes	Rab Latok Extreme Gaiters

## Lightweight Shoes/Boots

Lightweight shoes or lightweight trekking boots are handy for walking around in at the end of the day and for the walk out down the valley. Believe it or not, a pair of Crocs can be good lightweight slippers for inside the huts.

*We recommend Salomon XA Pro 3D Ultra 2, La Sportiva TX4 Shoes or Omega GTX, and Scarpa Kailash Boots.*

## Rock Shoes

Bring these if you have them as they are used on training days or non-mountain days, otherwise these can be rented locally.

---

## 5.0 Packs & Bags

---

### Mountaineering Pack (40-55 Litres)

There are many models available which are suitable and the required features include a volume of 40-55 litres as well as crampon and ice axe attachment points. Avoid trekking style packs with bulky side pockets.

*We recommend the Osprey Mutant 38, Lowe Alpine Alpine Ascent 40-50, Deuter Guide 35+ and Black Diamond Speed 50 Mountaineering Packs.*

### Small Duffel/Travel Bag

This is for storing clothing and items left in town, while you are on the mountain. Bring a lock and if you're particularly adept at losing keys, please make sure to buy a combination lock and set to an easy to remember number!

*We recommend The North Face Base Camp Duffel Range.*

## 6.0 Accessories

### Headlamp and Batteries

Petzl make the best headlamps available. Avoid the 'micro' or simple LED models as they have problems with battery life and light levels. The new high-output LED headlamps are superb as they provide an excellent level of lighting and are also very light. Bring two NEW sets of lithium or alkaline batteries for the trip.

*We recommend the Petzl Actik and Black Diamond Storm or Spot Headlamps.*

### Water Bottles

The wide mouth plastic bottles are good. One or two 1 litre water bottle used in conjunction with a small thermos should allow plenty of water to re-hydrate in the dry mountain air.

*We recommend the Nalgene 1 Litre Wide Mouth Bottles.*

### Thermos Flask (Optional)

A small thermos is great for extra hot drinks whilst camping and when on the mountain.

*We recommend Primus Vacuum Bottles.*

### Personal First Aid Kit and Medications

A basic personal first aid kit is necessary including blister tape, 2nd skin (optional), gauze pads, crepe and triangular bandages and painkillers. Also any personal medication required. *(Please remember to inform your guide if you are on prescription medicine. Your standard medications can be dangerous at altitudes).* Store the first aid kit in a waterproof container or a plastic bag inside a stuff sack is often adequate.

		
Black Diamond Storm Headlamp	Osprey Mutant 38 Pack	Nalgene 1 Litre Wide Mouth Water Bottles

### Sleeping Bag Liner

For use with the blankets that are supplied in the huts.

*We recommend Sea to Summit Sleeping Bag Liners.*

### Personal Toiletries

Bring a small toilet kit - flannel, some soap, toothpaste and toothbrush. Keep it light and don't bring a full tube of toothpaste to carry around.

### Sunblock and Lip Balm

Conditions can be extreme so you will need a bottle or tube of maximum protection sun block. In addition, lip balm (with SPF 15 or higher) is worth carrying in your pocket for application during the day.

### Wet Wipes

Baby Wipes or similar pre-moistened cloth wipes for personal hygiene. These antibacterial wipes are excellent for cleaning hands and other hygiene issues, whilst away from civilisation. Just a few of them in a small zip lock bag will suffice.

### Ear Plugs (Optional)

A handy way to get a night's sleep when sharing a room with a snorer!

## Stuff Sacks

Lightweight nylon bags with draw cords to store spare clothes etc. These are very useful for organising gear in your pack or when you're in a hut, and we suggest bringing 2 or 3.

*We recommend Sea to Summit Stuff Sacks and Dry Bags.*

## Camera

Bring along your choice of either a SLR or fully automatic camera. Be aware that batteries can be a problem with cold temperatures so it is a good idea to bring spare sets of batteries and storage cards.

## Personal Entertainment (Optional)

Feel free to bring an MP3 player or a good book for any downtime.

## Collapsible Ski/Trekking Poles

Compulsory as these are great for walking in deep snow or to save the knees on long days. Snow baskets are a worth addition in deep snow.

*We recommend Leki and Black Diamond Trekking and Ski Poles.*

## Pocket Knife/Leatherman/Tool Kit

Choose the Swiss Army style, Leatherman or equivalent.

*We recommend Victorinox Knives and Leatherman Multi Tools.*

## Additional Snack Food

Bring any personal favourites that you wish. We recommend you bring at least 4 GU sachets for instant carbohydrate replacement on the climb. You may also bring electrolyte drink to mix in your water bottles.

		
Grivel G12 New-Matic Crampons	Black Diamond Venom Ice Axe	Petzl Adjama Climbing Harness

## 7.0 Climbing Equipment

### Ice Axe

For general alpine climbing, you will need a straight shafted axe between 60 cm to 70 cm long, depending on your height. A longer tool is more helpful on moderate ground and even the most difficult climbs have approaches and descents for which this is helpful. Short axes with curved shafts and moulded hand grips are fine on hard technical ice climbs, but not so suited to most alpine climbing.

The head of the axe should be comfortable to hold when using the axe as a walking stick and not have any protrusions which will dig into your hand.

The pick can be a normal curve or a 'reverse curve'. The steep picks and reverse curves hold better on steep ice, although they are more difficult to self-arrest with. Many tools come with replaceable picks so check that the bolts are tight before each climb.

The adze is still used a lot for chopping steps in ice and snow and must be a good angle to do so. Some adzes are too dropped to chop steps easily and instead are designed for climbing steep unconsolidated snow.

Shafts are either metal, wood or glass composites and some have rubber hand grips. A rubber grip at the base of the shaft makes it easier to hold when self-arresting or climbing steeper ground, as well as keeping your hand warmer. The shaft

must be smooth enough to be forced into the snow and should not have protrusions which can get caught up on a crusty snow surface.

The spike at the bottom of the tool should be sharp enough to penetrate hard snow. A wrist loop is needed for support when climbing on steeper ground. The correct length allows you to hold the bottom of the shaft with the sling tight.

*We recommend the Petzl Summit Evo, Grivel Air Tech Evo G-Bone and Black Diamond Venom Ice Axes.*

## Crampons

A clip on style with a toe 'harness' are best. Check that the set-up is secure and that the strap is long enough. Avoid technical ice climbing crampons and ensure you have 'anti-balling' plates on them.

Be sure to check the heel piece of the clip on crampon is compatible with your boots and stays in place when in the up position. If possible, practice putting on your crampons before your trip.

*We recommend the Petzl Vasak Leverlock Universal, Grivel G12 New-Matic and Black Diamond Sabretooth Clip Crampons.*

## Climbing Harness

The sit type harness is used for most mountaineering situations and these should be lightweight, comfortable and adjustable around the waist and legs. A specially designed alpine harness is easier to get in and out of (which is important when nature calls) and can be put on even when you have boots and crampons on. Many rock-climbing harnesses have fixed leg loops and hence cannot be adjusted for different clothing layers. Wear your mountaineering layers when trying on a harness to ensure it fits over clothing. Comfort is essential as you may be sitting in it for extended periods of time while belaying or being involved in crevasse rescue practice.

*We recommend the Petzl Adjama, Arc'Teryx AR-395A, and Black Diamond Xenos or Aspect Climbing Harnesses.*

## Climbing Helmet

Plastic climbing helmets are lightweight and designed to deflect falling ice and rocks. They also protect the head in the case of a fall. Plastic becomes brittle as it ages, so if you are borrowing a plastic helmet, then it should not be more than 4 years old. Composite (fibreglass/carbon fibre) helmets are also available but are generally quite heavy or else expensive.

Check the helmet size and make sure that it is easily adjustable for when you are wearing your hat or balaclava underneath.

*We recommend the Petzl Sirocco or Meteor, and Black Diamond Vapor or Vector Climbing Helmets.*

		
Petzl Meteor Climbing Helmet	Black Diamond Venom Ice Axe	Black Diamond Alpine Carbon Cork Trekking Poles

## Belay/Rappel Device

Bring an ATC style or small figure 8 device for rappelling. It must be able to accommodate ropes of different thickness.

*We recommend the Petzl VERSO or Black Diamond ATC-XP Belay Devices.*

## Locking Carabiners

Bring 2 'Pear-shaped' locking carabiners.

*We recommend the Petzl and Black Diamond Locking Carabiners.*

## Non-locking Carabiners

Bring 3 snap-gate or non-locking carabiners.

*We recommend the Petzl and Black Diamond Snap Link Carabiners.*

## **Prusiks x 2 and 120cm Nylon Sling**

Prusiks are generally made from 6 mm kernmantel cord and you will need 2 of these. Two shorter prusiks of 1.8m in length (i.e. untied cord length, which is then tied to make a prusik) and one 60cm (sewn or tied length) sling are a good combination. A double or triple fisherman's knot is generally used to join the ends and create the loop. If in doubt, bring 8m of cord and your guide will teach you how to tie them.

---

## **8.0 Travel Gear**

---

### **Casual Wear**

Bring a selection of casual clothes to wear on the between days, when not in the mountains and at the end of the trip.

### **T-Shirt and Shorts**

Cool clothing to wear when doing activities in the valley, e.g. trekking or rock climbing.

### **Passports, Documents and Copies**

You will be in at least two countries when around the Mont Blanc region.

---

**NOTE: If you found you have forgotten anything when you arrive in Chamonix, do not worry as there are plenty of stores that specialise in mountaineering equipment. Your guide will be happy to help you with any purchases you would like to make.**

**If you would like to rent any equipment, please let the staff at the office know and they will make sure that it is put aside for you and available for you upon your arrival. If you have any questions, please ask.**

---