alpenverein akademie

CURRICULUM

Übungsleiter

Ski Touring

Winter 2019

Version 1808. ÖAV Abteilung Bergsport- Larcher, Mössmer, Wanner. Translation: Rothwangl

CONTENTS

A) Educational objective

Übungsleiter for Ski Touring are experienced volunteer ski mountaineers who have the skills to guide groups responsibly on ski tours that they have chosen themselves. They are aware of the risks involved in mountain travel and able to help efficiently in case of emergency. *Übungsleiter* for Ski Touring are also able to communicate basic skills for agreeable ski touring to beginners and intermediate skiers while being aware of the risks involved. The training for *Übungsleiter* for Ski Touring primarily focuses on guiding and leadership skills.

Course volume: ca. **56 units** on 5 days.

B) Requirements

- Experience in planning ski tours and in ski touring. Documentation of ski tours: „Indicate 6 ski tours of at least 1000 meters in altitude difference which you have completed during the last two years (without a guide or other help). Please name your partner and give the date (mm-yy) in brackets."
- Skiing technique: Descending swiftly, in a controlled manner and without falling in ski touring terrain. Advanced skiing technique and style. Impeccable ascension technique (kick turns).
- Endurance and fitness: Good physical fitness. Ascents of 1000 meters in altitude difference in a maximum of 3 hours (total time) without signs of fatigue.
- Basic emergency equipment skills (beacon, shovel, probe)
- Basic skills in evaluating ski touring terrain and in track setting technique
- Basic knowledge of the decision making and procedure strategy Stop or Go©.
- Minimum age: 16 years.

C) 3 stages in the acquisition of competences

The letters (U), (A) and (T) indicate the extent to which the participants need to acquire the course content. The three stages – represented by the three letters – are defined as::

(U) „Understanding":
- Comprehending and grasping meaning
- Having knowledge about …

Prerequisite for this stage is „knowing":
knowing ➔ understanding

(A) „Applying":
- Interpreting facts, recalling relevant knowledge and transferring it to other situations
- Using acquired tools e. g. being able to work with decision-making strategies.

Prerequisite for this stage is „understanding":
understanding ➔ applying

(T) „Teaching":
- Being able to communicate acquired knowledge according to its meaning

- Being able to teach competences during guided section tours and to instruct at training events.

Prerequisite for this stage is „Understanding“ and „Applying“:
understanding/applying ➔ teaching

The stage of competence to be reached (U, A or T) is indicated in the following pages. The method of teaching depends on the contents and will be one of the following: small groups, hands-on exercises, presentations, lectures and peer teaching/demonstration lessons.

D) Teaching objectives & methods

1. TOUR PLANNING [4 units]

Participants …

- ✓ can choose and plan a tour suitable for the conditions and the group, using the weather forecast and the avalanche bulletin, the topographic map and information from the internet and guide books (**A**)
- ✓ know how to use the resources of alpenverein**aktiv.com** for planning ski tours (**A**)
- ✓ are able to write a complete and clear description for a section tour and can chair and facilitate a planning meeting. (**A**)

Methods:

- [Indoors/group]
  - Groups of 2 participants plan a specific tour using map, coordinate scale and the form „Tourenplanung-Formular Skitour“
  - Plan a specific tour using the „Tourenplaner“ of alpenverein**aktiv.com** (if a computer and WiFi are available).

2. INDIVIDUAL & GROUP

Participants…

- ✓ know about the advantages of small and the disadvantages of large ski touring groups; they know the recommendation by the ÖAV for the maximum group size of ski touring groups (8 +1) (**A**)
- ✓ can communicate decisions and leadership measures clearly and unmistakably (**T**)
- ✓ know about the influence of psychological processes and group dynamics on the readiness to take risks, on decisions and behavior (**V**)
- ✓ knows the „psychological danger signals“ listed in the „Mental-Check“ (mental check) and can detect them using self-reflection and counter a dangerous increase in risk (**A**)

Methods:

- [Indoors/plenum]
  - Lecture „Notfall Lawine“ (avalanche emergency) (ppt) and lecture „Stop or Go©“ (ppt)
- [Outdoors/group]
  - Use the „Mental-Check“ in a specific situation („Thumb check“).

3. EQUIPMENT

Participants …

- ✓ can draw up an equipment list for ski touring and knows the most important quality characteristics of the respective items (**T**)
  know the emergency equipment as recommended by the ÖAV and its quality standards. (**T**)

Methods:

- [Indoors/plenum]
  - Lecture „SAB-Skitouren“ (ppt)
  - Discussion of the concrete equipment list (sitting circle, „equipment bazaar“)

4. ORIENTATION & NAVIGATION [4 units]

4.1. Map

Participants…

- ✓ can orient a topographic map (**T**)
- ✓ can determine their position in the terrain accurately enough (using an altimeter) (**T**)
- ✓ can pinpoint points, lines and surfaces from the map in the terrain and vice versa (**A**)
- ✓ can infer accessability, walkability/skiability, steepness, exposition and shape of terrain concealed from view (**T**)
- ✓ can determine UTM coordinates on the map and also transfer them to the map (**A**)
- ✓ are familiar with the online maps and the gradient layer in alpenverein**aktiv.com**. (**U**)

Methods:

- [Indoors/group]
  - Teach basic map skills in groups („Table of Maps“)
  - UTM coordinates: Explain how to determine and transfer them
  - Plan a specific tour using map and „Planzeiger“
- [Outdoors/Gruppe]
  - Various orientation tasks on terrain.

4.2. Altimeter

Participants…

- ✓ can calibrate their wristwatch altimeters (**T**)
- ✓ use points of reference in order to minimize errors when determining elevation by barometer. (**T**)

Do not teach:

- × Orienteering compass
- × GPS

Methods:

- [Indoors/group]
  Give information during tour planning
- [Outdoors/group]
  - Calibrate the altimeter at the start (equipment check)
  - Use the altimeter for determining the current position.

4.3. Smartphone

Participants…

- ✓ can use the app alpenverein**aktiv** for orientation and navigtion (**A**)
- ✓ can download tours and map segments for offline use (**A**)
- ✓ know how to set their smartphones to energy saving mode. (**A**)

Methods:

- [Indoors/group]
  - Introduce app functions (menu)
  - Download map segments
- [Outdoors/group]
  - Use the app alpenverein**aktiv.com** for determining the current position during ski touring.

5. WEATHER [2 units]

Participants…

- ✓ know sources for reliable (mountain) weather forecasts in Austria (**T**)
- ✓ know the „Alpenverein-Wetterdienst“ (Alpenverein weather service) on alpenverein**aktiv.com** (**A**)
- ✓ know about the utmost importance of visibility during ski touring. (**A**)

Do not teach:

- × Physical/geodynamic processes

Methods:

- [Indoors/group]
  - Get and compare weather reports from different sources for tour planning
- [Indoors/plenum]
  - Lecture „Weather“ (ppt)
- [Outdoors/group]
  - Compare weather forecast and development of actual weather.

6. LEADING [26 units]

6.1. Welcoming address and equipment check

Participants…

- ✓ can communicate current information regarding avalanche bulletin, weather, destination clearly and concisely, proving their prudence and inspiring confidence (**A**)
- ✓ can inquire after safety-related equipment in a structured manner, thus finding and remedying possible deficiencies. (**T**)

Method:

- [Outdoors/group]
  - Have participants deliver welcome addresses and equipment checks. Give immediate feedback.

6.2. Avalanche beacon check

Participants…

- ✓ master performing the „full“ and the „short“ beacon check. Participants know: „All members of my group carry a fully functional beacon on their body, switched to transmit.“ (**A**)

Method:

- [Outdoors/group]
  - Demonstrate and explain. Have participants perform the check. For training purposes always perform the full beacon check at the start.

6.3. Uphill technique

Participants

- ✓ can give advice on climbing technique and equipment for efficient uphill travel on skins (**T**)
- ✓ can demonstrate, explain and help learn the proper technique for rounded turns and kick turns. (**T**)

Method:

- [Outdoors/group]
  - Demonstrate and explain in suitable terrain. Have participants imitate and repeat. Participants step into trainer’s role.

Do not teach:

- × Downhill technique

6.4. Climbing speed

Participants…

- ✓ know about the importance of pace adapted to the group when leading for the ÖAV in order to promote a positive skiing experience (**A**)
- ✓ can switch from their „private“ climbing speed to a generally slow pace suitable for leading (**A**)

✓ make timely breaks, taking the terrain into account. (**A**)

Method:

- [Outdoors/group]
  - Demonstrate and explain on suitable terrain. Have participants follow the example. Repeat. Participants step into trainer's role.

6.5. Spacing

Participants…

✓ can put the Stop or Go© recommendation (standard procedure) of „10 m spacing distances at 30° or more" into practice as is appropriate to the situation. They know the reasons for this recommendation and also know the exceptions. (**A**)

✓ know the difference between „spacing distances" (distance between skiers to reduce snowpack loading) and "safety spacing" (distance between skiers to minimize group exposure to avalanche hazards) (**A**)

✓ can put the Stop or Go© recommendation (standard procedure) of "30 m minimum resp. standard distance" and „skiing singly at 35° or more" into practice as is appropriate to the situation when skiing downhill. (**A**)

✓ know : „While climbing in terrain that needs kick turns, distances of at least 10 m must be kept. When descending, distances of at least 30 m must be kept. Very steep slopes of 35° or more must be skied singly – from one safe point to another. Simultaneous skiing of steep slopes is taboo." (**A**)

Method:

- [Outdoors/group]
  - Demonstrate and explain in suitable terrain. Have participants follow the example. Repeat. Participants step into trainer's role.

6.6. Making the most of the terrain – „Setting track"

Participants…

✓ can recognize favourable and unfavourable shapes of terrain (**A**)

✓ observes the surroundings continuously – what is above me, what is below me, terrain traps? (**A**)

✓ can set a safe and efficient uphill track („comfort track") and judge existing tracks critically. (**A**)

Method:

- [Outdoors/group]
  - Participants take turns leading and setting track, trainer comments and corrects. For the sake of practice, a new track is to be set (most of the time) even if there is an existing one.

6.7. Decision making using Stop or Go©

Participants…

✓ understand the structure and internal logic of Stop or Go© (standard procedures, check 1, check 2, go-factors) (**A**)

✓ can categorize the steepness of a slope according to the 4 gradient classes : (**A**)

below 30°, 30-34°, 35-39°, 40° and above)

- ✓ can detect ("yes/no") the alarm signs listed in check 2 („Stop or Go© danger patterns") (**A**)
  („yes/no") and assess their specific relevance („dangerous for me?")
- ✓ know the definition of „densely covered in tracks" and can identify the relevant passages (**T**)
  in the terrain; can differentiate thickly populated, dense „forest" from single trees
  respectively slopes sparsely populated with trees and can identify "melt-freeze crusts"
- ✓ can make decisions using Stop or Go© in a structured manner. (**A**)

Do not teach:

- ✗ 10 typical danger situation (according to the Tyrolean avalanche bulletin)
- ✗ Other reduction methods (Snow Card, etc.)

Method:

- [Outdoors/group]
  - Demonstrate and explain in suitable terrain. Participants follow the example. Repeat. Participants take over trainer's role.

7. SNOW & AVALANCHES [4 units]

7.1. Avalanche bulletin

Participants…

- ✓ know the most important sources for avalanche bulletins (**T**)
- ✓ know the definition of the avalanche hazard levels and know about the exponential increase of the risk potential (**A**)
- ✓ can understand the information on avalanche prone locations in the avalanche bulletin and can locate them in the terrain (**A**)
- ✓ can understand the information on causes of danger in the avalanche bulletin und recognize them in the terrain. (**A**)

Method:

- [Indoors/plenum]
  - Lecture „Avalance emergency“ (ppt) and lecture „Stop or Go©“ (ppt)
- [Indoors/group]
  - Discuss the specific avalanche bulletin while planning a tour

7.2. Snow

Participants…

- ✓ can differentiate between loose snow avalanche, slab avalanche and gliding avalanche and understand their formation (**T**)
- ✓ can recognize freshly fallen snow, wind-transported snow, wet snow, firn, depth hoar and surface hoar and knows the conditions for their formation (**A**)
- ✓ knows the term „critical quantity of new fallen snow“ and its definition (**U**)
- ✓ knows about the paramount importance of the alarm sign „recently wind-transported snow“ and can differentiate between unbounded „loose“ powder snow and „soft but bounded“ wind-transported snow. (**A**)

Do not teach

- × Digging a snow profile
- × Compression test (CT, ECT), rutschblock test, “Nietentest”
- × Systematic snowpack analysis and interpretation

Methods:

- [Indoors/plenum]
  Lecture „Avalanche Emergency“ (ppt) and lecture „Stop or Go©“ (ppt)
- [Outdoors/group]
  - Give explanations during tours
  - Do 1 rutschblock to demonstrate dynamics of a slab avalanche

8. RESCUE TECHNIQUE [5 units]

Participants…

- ✓ are able to help efficiently in case of an avalanche accident and to put the emergency algorithm into practice as required by the situation (**A**)
- ✓ can fulfill their role as tour leader competently and coordinate their group appropriately (**A**)
- ✓ can locate two buried subjects in a depth of about one meter within 10 minutes ("probe hit") and excavate one buried person („head/mouth&nose free of snow"). (**A**)
- ✓ know the advantages and the mode of operation of avalanche airbag systems (**U**)
- ✓ can teach a group of beginners (6 people) within an hour how to rescue a fully buried person (about 1 m deep) in about 10 minutes (= „head/mouth&nose free"). (**T**)

Do not teach:

- × Open probing, deep burials
- × Three circle search method, micro search strips
- × Avalanche ball, Avalung
- × "Biwaksackschleife" (provisional evacuation by sliding injured person wrapped in a bivybag)
- × Building a bivouac shelter.

Methods:

- [Indoors/plenum]
  - Lecture „Avalanche Emergency" (ppt)
- [Outdoors/group]
  - Teach management of avalanche emergencies (basic operating procedure)
  - Improvise avalanche accident scenario (e.g. while descending).

9. LAW & INSURANCE [2 units]

Participants…

- ✓ know the free of charge „Notfall-Hotline“ (emergency hotline) of the Alpenverein and the services and support it offers and they know when and how to use it (**U**)
- ✓ understand that they are only responsible under criminal and/or civil law if negligent behaviour on their part can be proven (**U**)
- ✓ know that all Alpenverein tour guides resp. all officials are insured against third-party risk and have legal protection insurance. Consequently, they will not suffer any financial damage even if negligence should be proven (**A**)
- ✓ know the insurance benefits offered by the Alpenverein relevant to their situation and know where to find detailed information (**U**)
- ✓ understands the role and duty of the authorities to record and present the facts afters a mountaineering accident (**U**)
- ✓ know how to deal with the authorities and are familiar with the recommendation of the Alpenverein to refrain from police interrogation immediately after the accident. (**T**)
- ✓ understand the legal terms „Fahrlässigkeit“ (negligence), „Kausalität“ (causation), „Maßfigur“ (standard conscientious tour leader), „Einlassungsfährlässigkeit“ (reckless endorsement), „Auswahlverschulden“ (culpa in eligendo – fault through a poor choice of one’s vicarious agent) und „Verkehrsnorm“ (common standard of generally accepted behaviour). Participants are aware of the main differences between criminal and civil law. (**U**)

Do not teach:

- × In-depth knowledge about all the insurance benefits of the Alpenverein
- × Detailed legal knowledge.

Methods:

- [Indoors/plenum]
  - Option 1: Present „Rechts- und Haftungsfragen“ (Questions of law and liability) (ppt) followed by discussion.
  - Option 2: Have an FAQ session or work through case study with group.

10. ECOLOGY [4 units]

Participants…

- ✓ learn about ecological processes in the alps (**U**)
- ✓ get to know about typical wildlife and plants while being on walking trails (**U**)
- ✓ are able to lead groups in ecological endangered terrain (**A**)
- ✓

Method:

- [Outdoors/group]
- - Show and explain on suitable terrain.

11. DEMONSTRATION LESSONS [5 units]

On the last day of the course, participants give demonstration lessons either at differently themed stations or during a demonstration ski tour, revising and practicing essential leadership qualities. Participants receive feedback on their performance promptly.

The topics listed below are discussed during the demonstration lessons and revisions. There will be time for questions and discussions should anything have remained unclear. Presentations in front of groups are practiced.

- Avalanche bulletin
- Check 1
- Check 2
- SOP Planning
- SOP Terrain
- Avalanche beacon training
- Basic map reading
- Correct tour planning
- UTM coordinates
- Avalanche beacon check
- Equipment for ski touring
- Ascending, rounded turns & kick turns
- Basic emergency equipment
- Emergency algorithm

E) Evaluation of the participants

Successfully completing the training course „Übungsleiter Skitouren“ qualifies the participants to guide and instruct. It is the responsible trainer who decides if a participant has passed or failed. The criteria for a pass respectively the key qualifications are communicated at the beginning of the course (resp. are available online.)

Key qualifications

During the entire period of the course, participants are observed and evaluated using the following key qualifications. (The order in which the key qualifications are listed below does not imply order of importance.):

- **(Q 1) Fitness & sports motor skills:** The participant possesses the necessary physical (endurance, strength, technique) and psychological (courage, prudence) characteristics and skills necessary for successfully practising the sport. Regarding endurance/fitness, an ascent of 1000 meters altitude difference (in about 3 hours) is expected to be well within the limits of the participant’s performance capacity. The participant is expected to descend swiftly, in a controlled manner and (almost) without falling.
- **(Q 2) Expertise:** The participant is sufficiently competent in order to guide a group on off-piste ski tours or in order to teach a group basics skills for agreeable ski touring while being aware of the risks involved. In order to prevent accidents the participant can put into practice the decision making algorithm (check 1 and check 2) and the Stop or Go © standard procedure. The participant is able to put into practice the basic operating procedure for avalanche emergencies and can coordinate a group in order to help efficiently in case of an avalanche accident.
- **(Q 3) Risk management & self assessment:** The participant possesses procounced risk awareness and displays generally prudent behaviour. They have realistic self assessment and one can trust that they will only take responsibility for those guided tours and courses for the Alpenverein that they can definitely cope with.
- **(Q 4) Willingness to learn & learning progress:** The participant is curious and very eager to improve their know-how and to share their personal experience. They can quickly and successfully put demonstrations, explanations, directions and corrections into practice and integrate them into their behavioural repertoire.
- **(Q 5) Social skills:** The participant is sufficiently emphatic and thoughtful, able to communicate with others and is appreciative towards them, has leadership qualities and is a team player. These skills are to be evaluated taking into account the specific educational objective.

pass/fail

Participants of the course “ÜL Skitouren” have passed if the responsible trainer gets a „positive“ impression in all 5 key qualifications. A “fail” – if the deficit in one key qualification is too pronounced – results in retaking the entire course. “Pass/fail” is communicated on the last evening of the course, possibly on the last day of the course.

F) Time Table

	Day 1	Day 2	Day 3	Day 4	Day 5
7:00	Arrival				
8:00		Leadership Skills Orientation Uphill Technique	Leadership Skills Orientation Rescue Technique	Leadership Skills Orientation Individual and Group	Demonstration Lessons
9:00					
10:00	Check in & move into accommodation Course opening				
11:00					
12:00	Equipment check Methodological basics Leadership skills				End of Course
13:00					
14:00					
15:00	Break	Break	Break	Break	Departure
16:00					
17:00	Snow and Avalanches	Rescue Technique	Orientation Weather	Equipment	
18:00	Dinner	Dinner	Dinner	Dinner	
19:00					
20:00	Tour Planning	Tour Planning	Tour Planning	Pass/Fail Law and Insurance	
21:00					
22:00					