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Switzerland**Mobility** 

Bundesamt für Strassen ASTRA



Grades of Difficulty for Non-Motorized Traffic NMT for Leisure and Tourism

Objective

A uniform set of criteria should be used to indicate the grades of difficulty in non-motorized traffic for leisure and tourism. This makes it easier to compare different routes and allows guests to identify and use the offer that best suits their requirements.

This manual defines the specifications required for standardization. They are widely supported and also form the basis for assessing SwitzerlandMobility's national, regional and local routes.

Classification / assessment applies to each one-day stage. The classification / difficulty grade of routes with multiple one-day stages is based on the most difficult one-day stage.

We recommend that all authorities responsible for non-motorized traffic routes for leisure and tourism adopt the difficulty grades defined here in their route offers.

Application of conditions: If one of the values (length, height metres, time required) exceeds the stated threshold, the higher grade of difficulty applies.

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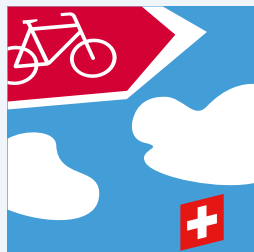





			
Technique	Easy (hiking)	Medium (mountain hiking)	Difficult (Alpine hiking) Hiking in Switzerland** does not include Alpine hiking trails
Signalization and marking:	Swiss Hiking Federation yellow (hiking trail) Swiss Alpine Club: up to T1	Swiss Hiking Federation white-red-white (mountain hiking) Swiss Alpine Club: T2 / T3	Swiss Hiking Federation white-blue-white (Alpine hiking) Swiss Alpine Club: T4–T5
Requirements:	<ul style="list-style-type: none"> No specific requirements 	<ul style="list-style-type: none"> Good level of fitness Surefooted / head for heights Knowledge of dangers in mountains (rockfalls, danger of slipping/falling, sudden change in weather) 	<ul style="list-style-type: none"> Very good level of fitness Surefooted / head for heights Experience with use of rope/pick axe Experience of climbing section using hands Knowledge of dangers in mountains (rockfalls, danger of slipping/falling, sudden change in weather)
Quality of trails / terrain:	<ul style="list-style-type: none"> Generally accessible trails As far as possible away from roads for motorized traffic Preferably not asphalted Steep sections negotiated with steps Streams crossed with bridges 	<ul style="list-style-type: none"> Partly rough terrain Mainly steep and narrow Streams crossed partially only at fords Exposed in places 	<ul style="list-style-type: none"> Partially through terrain with no trails, across snowfields, glaciers and scree, through rockfall areas or through rocks with short climbing sections Structural provisions cannot be relied on
Dangerous sections:	<ul style="list-style-type: none"> Section with risk of falling secured with handrails 	<ul style="list-style-type: none"> Particularly difficult sections secured with chains or ropes 	<ul style="list-style-type: none"> Some protection on particularly exposed sections with risk of falling
Equipment:	<ul style="list-style-type: none"> No special equipment required 	<ul style="list-style-type: none"> Solid boots with good profile on soles Suitable clothing for the conditions Topographic map 	<ul style="list-style-type: none"> Solid boots with good profile on soles Suitable clothing for the conditions Topographic map Compass and altimeter Rope and pick axe

Conditions*	Easy	Medium	Difficult
Length:	≤ 12 km	≤ 20 km	> 20 km
Height metres:	≤ 400 hm	≤ 900 hm	> 900 hm
Hiking time:	≤ 3 h	≤ 5 h	> 5 h

* Assessment of one-day stages

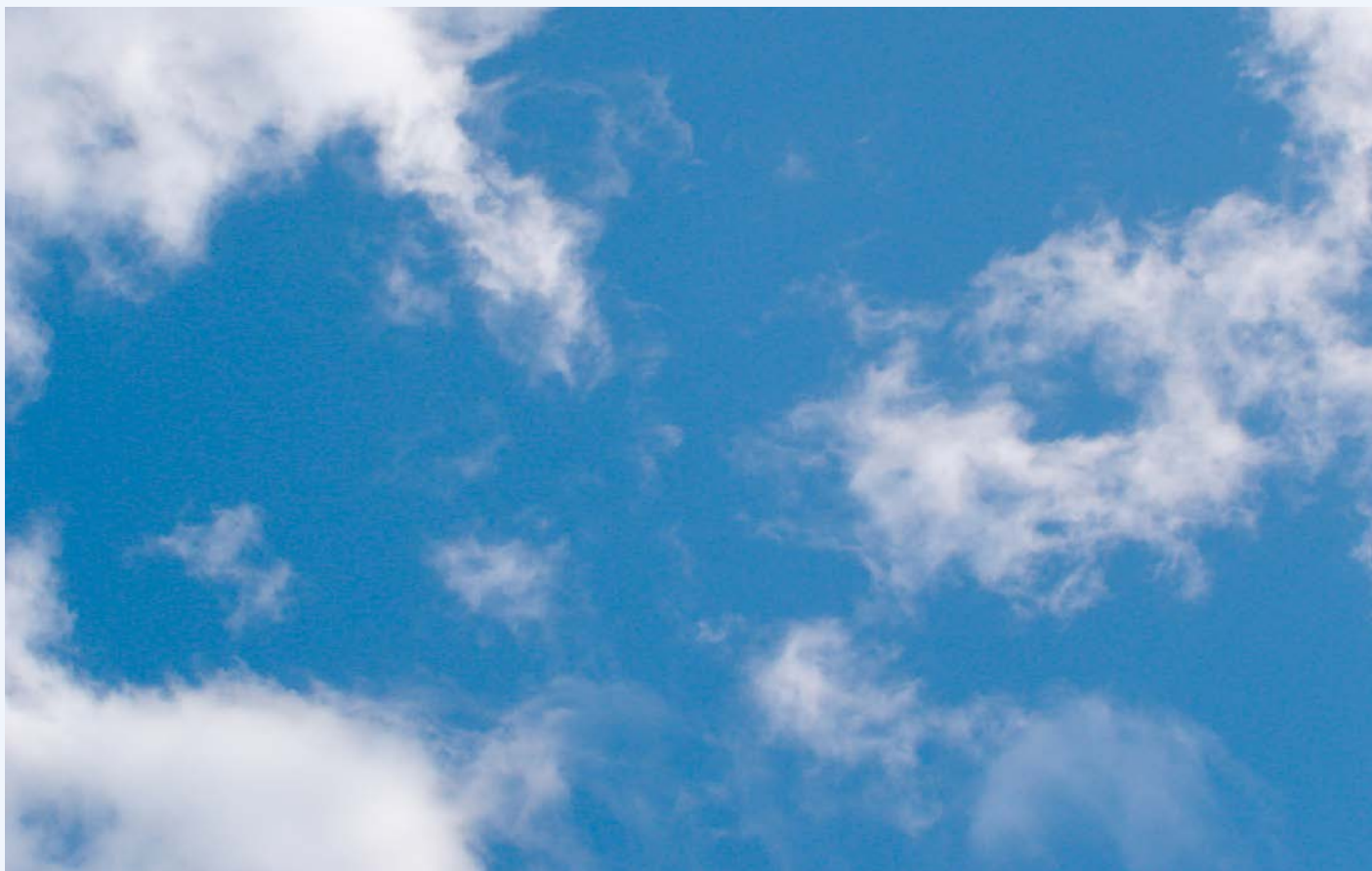







			
Technique	Easy	Medium	Difficult
Requirements:	<ul style="list-style-type: none"> Also for beginners and children 	<ul style="list-style-type: none"> Traffic experience required 	<ul style="list-style-type: none"> Good traffic experience required
Road quality:	<ul style="list-style-type: none"> Little-used side roads Separate cycle paths Roads with restrictions on motorized vehicles Forest and field trails Zones with reduced speed limits (20 and 30 km/h) 	In addition: <ul style="list-style-type: none"> Busy side roads Main roads with cycle lanes 	In addition: <ul style="list-style-type: none"> Busy main roads without cycle lanes
Dangerous sections:	<ul style="list-style-type: none"> Virtually no dangerous section 	<ul style="list-style-type: none"> Some dangerous sections 	<ul style="list-style-type: none"> Frequent dangerous sections
Equipment:	<ul style="list-style-type: none"> Normal bicycle suitable for road traffic 	<ul style="list-style-type: none"> Normal bicycle suitable for road traffic 	<ul style="list-style-type: none"> Normal bicycle suitable for road traffic

Conditions*	Easy	Medium	Difficult
Length:	≤ 40 km	≤ 60 km	> 60 km
Height metres:	≤ 400 hm	≤ 900 hm	> 900 hm
Time required:	≤ 4 h	≤ 5 h	> 5 h

* Assessment of one-day stages





			
Technique	Easy	Medium	Difficult
Requirements:	<ul style="list-style-type: none"> For beginners, families and children with basic mountain biking skills 	<ul style="list-style-type: none"> For advanced, experienced mountain bikers 	<ul style="list-style-type: none"> For mountain biking experts with plenty of experience and good riding technique
Trail quality:	<ul style="list-style-type: none"> Well secured, non-slippery, not overly steep trails and roads without steps (preferably unsurfaced) 	<ul style="list-style-type: none"> Preferably unsurfaced and flowy trails Challenging sections (loose surfaces, steep ramps, rideable steps and tight bends are however possible) Bike pushing sections are few and short 	<ul style="list-style-type: none"> Technically challenging paths and trails (steep ramps, loose surfaces, large steps, partially blocked sections, tight bends or hairpin bends) Obstacles, long bike pushing/carrying sections are possible.
Dangerous sections:	<ul style="list-style-type: none"> Few dangerous spots, exposed sections are secured against falling 	<ul style="list-style-type: none"> Dangerous spots, exposed sections and Alpine-specific hazards possible 	<ul style="list-style-type: none"> Frequent dangerous spots, exposed sections and Alpine-specific hazards

Conditions*	Easy	Medium	Difficult
Length:	≤ 40 km	≤ 50 km	> 50 km
Height metres:	≤ 800 hm	≤ 1200 hm	> 1200h m
Time required:	≤ 4 h	≤ 5 h	> 5 h

* Assessment of one-day stages

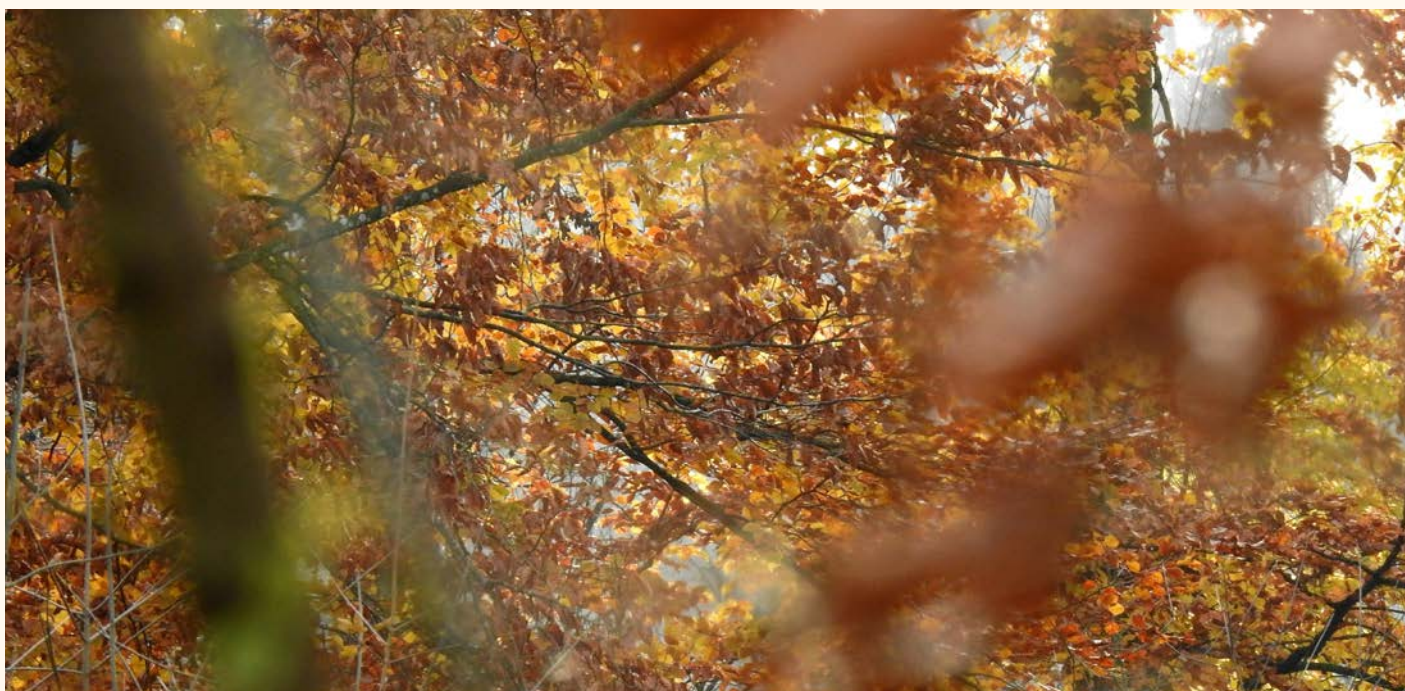
Technical difficulty grade according to SwitzerlandMobility compared with the singletrack scale:

Easy = up to S0




Medium = up to S1

Difficult = generally up to S2, in exceptional cases S3

For mountain bike pistes, the difficulty scale according to the specialist brochure «Signalisation Mountainbike-Pisten» by the Swiss Council for Accident Prevention BFU (2016) applies.

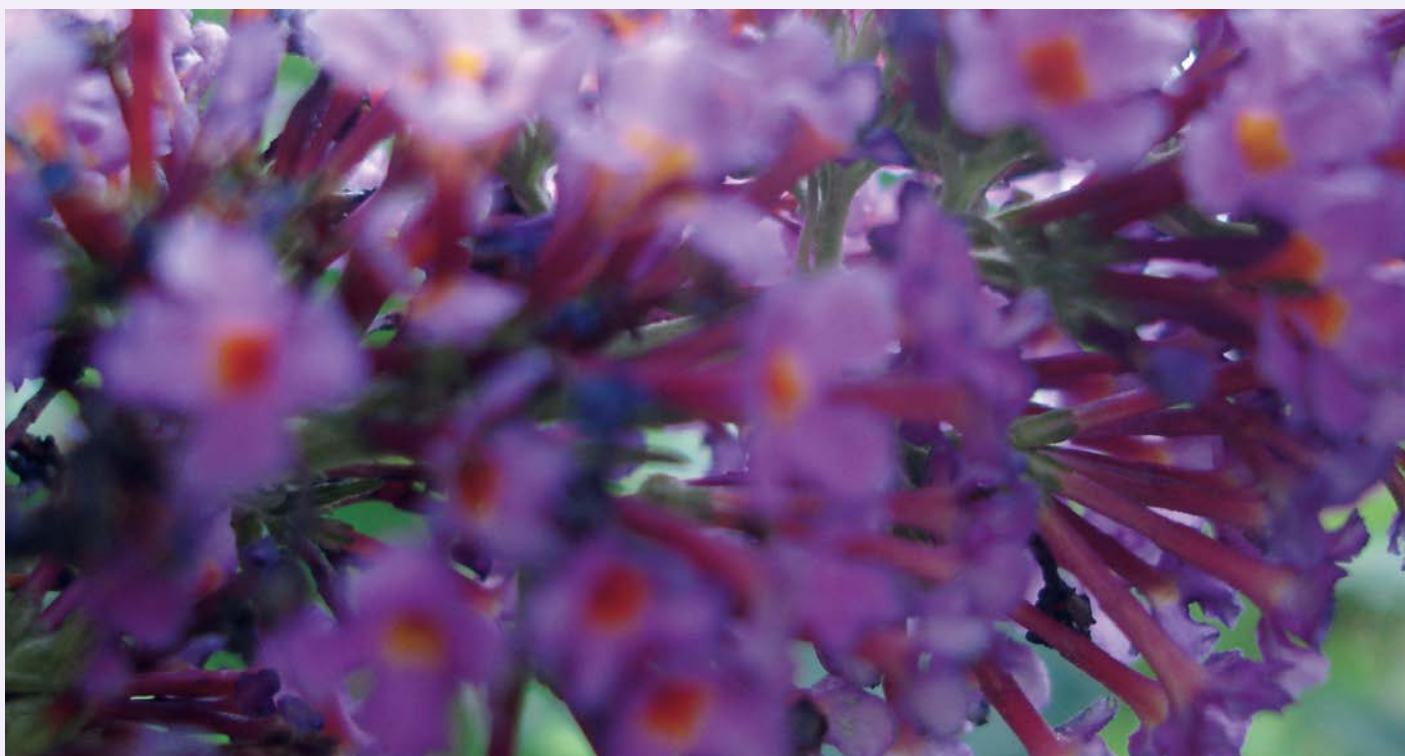







			
Technique	Easy	Medium	Difficult
Requirements:	<ul style="list-style-type: none"> Also suitable for beginners and families Knowledge of Road Traffic Regulations (VRV) 	<ul style="list-style-type: none"> Good, confident skaters Knowledge of Road Traffic Regulations (VRV) 	<ul style="list-style-type: none"> Very good, technically proficient skaters Knowledge of Road Traffic Regulations (VRV)
Path quality:	<ul style="list-style-type: none"> Hardly any ascents or descents Asphalt or concrete surfaces Areas designated for pedestrians Cycle paths Roads with 30km/h speed limit and traffic-free meeting areas Side roads with little traffic 	<ul style="list-style-type: none"> Easy ascents or descents possible Asphalt or concrete surfaces Areas designated for pedestrians Cycle paths Roads with 30km/h speed limit and traffic-free meeting areas Side roads with little traffic In exceptional cases technically difficult sections, which must be negotiated on foot if necessary 	<ul style="list-style-type: none"> Ascents and descents possible Asphalt or concrete surfaces Areas designated for pedestrians Cycle paths Roads with 30km/h speed limit and traffic-free meeting areas Side roads with little traffic In exceptional cases technically difficult sections, which must be negotiated on foot if necessary
Dangerous sections:	<ul style="list-style-type: none"> Virtually no dangerous sections 	<ul style="list-style-type: none"> Some dangerous sections 	<ul style="list-style-type: none"> Frequent dangerous sections

Conditions*	Easy	Medium	Difficult
Length:	≤ 30 km	≤ 50 km	> 50 km
Height metres:	≤ 50 hm	≤ 200 hm	> 200 hm
Time required:	≤ 4 h	≤ 5 h	> 5 h

* Assessment of one-day stages






			
Technique	Easy (canoe)	Medium (canoe)	Difficult (rafting)
Requirements:	<ul style="list-style-type: none"> ● Suitable for beginners and families ● Basic knowledge of canoeing desirable 	<ul style="list-style-type: none"> ● Basic knowledge of canoeing with individual use 	<ul style="list-style-type: none"> ● Only as guided tour ● Requirements according to service provider
River type:	<ul style="list-style-type: none"> ● Calm waters ● Lakes and very gently flowing rivers 	<ul style="list-style-type: none"> ● Calm waters and white waters I–II ● Regular rapids and waves ● Simple and open river bends 	<ul style="list-style-type: none"> ● White waters II–IV
Dangerous sections and obstacles:	<ul style="list-style-type: none"> ● Few, easily passed obstacles 	<ul style="list-style-type: none"> ● Easily passed obstacles 	<ul style="list-style-type: none"> ● Easy to difficult to pass obstacles
Boat type:	<ul style="list-style-type: none"> ● Depending upon river type (open kayak, Canadian canoe, possibly rubber dinghy) 	<ul style="list-style-type: none"> ● Depending upon river type (open kayak, Canadian canoe, possibly rubber dinghy) 	<ul style="list-style-type: none"> ● Rafting dinghy

Conditions*	Easy	Medium	Difficult
Length (km):	River ≤ 20 km Lake ≤ 15 km	River ≤ 25 km Lake ≤ 20 km	River > 25 km Lake > 20 km
Time required:	River ≤ 4 h Lake ≤ 3 h	River ≤ 6 h Lake ≤ 5 h	River > 6 h Lake > 5 h

* Assessment of one-day stages








	
Technique	Due to generally low demands on the user, no distinction is made between technical difficulty grades on winter hiking trails.
Requirements:	Winter hiking trails demand a higher level of alertness and caution with regard to weather conditions and slipping hazards. This aside, they do not pose any exceptional demands on the user.
Trail quality:	Signposted winter hiking trails are publicly accessible, maintained and checked trails that are intended for pedestrians. They are preferably routed away from roads for motorized traffic and usually have a snow-covered surface. The trail structure corresponds with the technical requirements of a yellow-marked hiking trail without obstacles for trail maintenance (e.g. steps).
Equipment:	Sturdy footwear with snow-grip soles or snow spikes and weather-appropriate equipment required. Carrying topographic maps is recommended.

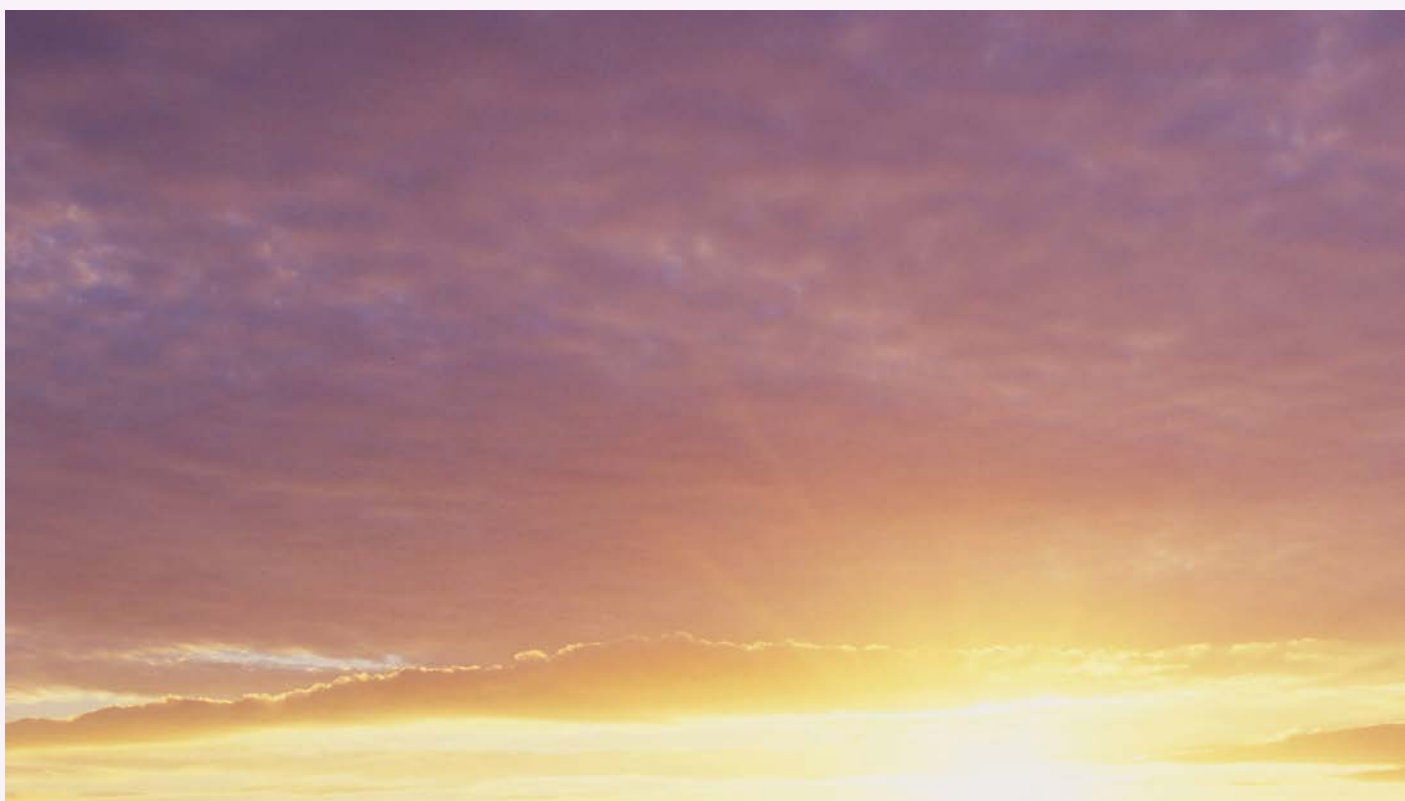
Conditions*	Easy	Medium	Difficult
Length:	≤ 5 km	≤ 12 km	> 12 km
Height metres:	≤ 200 hm	≤ 500 hm	> 500 hm






			
Technique	Easy (blue)	Medium (red)	Difficult (black)
	Easy terrain when ascending and descending. In general, no difficulties such as traverses or steep sections in non-hazardous terrain. Safety measures are restricted to exposed sections. Summary: not steep, with the exception of short and non-hazardous steeper sections	Moderately steep terrain with occasional steep or exposed sections when ascending and descending, or traverses which require an adapted technique. Safety measures are restricted to particularly steep or exposed sections. Summary: moderately steep, exposed in places	Often steep and exposed terrain which requires a good snowshoeing technique. Safety measures are restricted to particularly exposed sections with a risk of falling. Summary: often steep and exposed
Requirements:	Snowshoe route users must be familiar with the difficulty grade of their chosen trail and meet the requirements on surefootedness, head for height and physical fitness. They must also be aware of mountain-specific dangers (avalanche, ice and rock fall, risk of slipping/falling, sudden weather change).		
Trail quality:	Signposted snowshoe routes are snow-covered trails which are accessible to the general public and intended for hikers wearing snowshoes. They are mostly ungroomed and located away from prepared trails. Particularly difficult sections are generally secured.		
Equipment:	Snowshoes, poles, weather-appropriate equipment and topographical maps are required.		

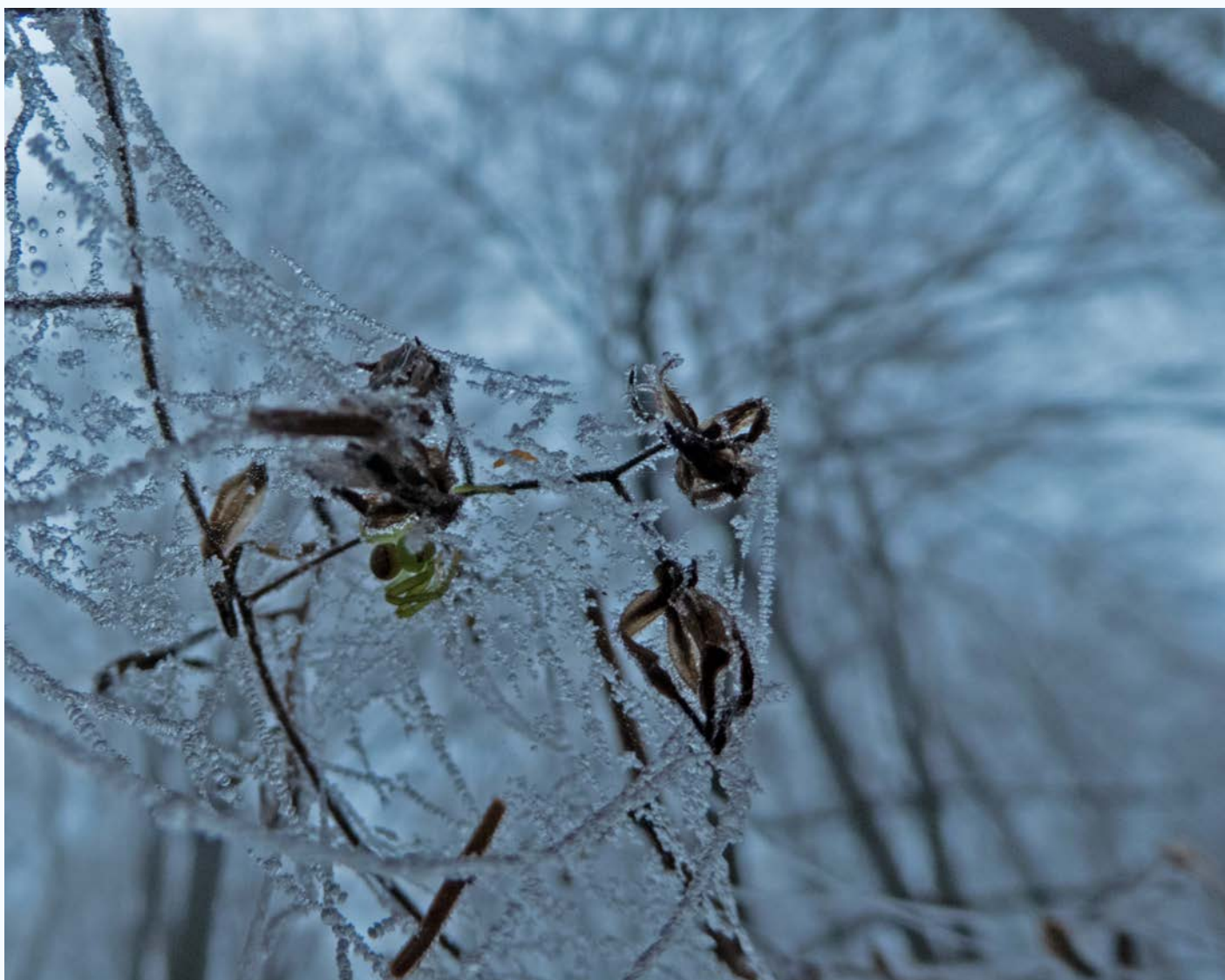
Conditions*	Easy	Medium	Difficult
Length:	≤ 4 km	≤ 8 km	> 8 km
Height metres:	≤ 200 hm	≤ 400 hm	> 400 hm








	
Technique	Cross-country skiing trails are not distinguished according to technical difficulty grades.
Trail quality:	Cross-country skiing trails are mechanically groomed and suitable for cross-country skiing using the classic and/or skate technique. Cross-country skiing trails are located in avalanche-safe terrain without fall risks. In the event of exceptional hazards, information is provided on site and the trail is closed. Cross-country skiing trails do not follow ski pistes, sledge runs or winter hiking trails. Any crossings are signalized.

Conditions*	Easy	Medium	Difficult
Length:	≤ 8 km	≤ 16 km	> 16 km
Height metres:	≤ 100 hm	≤ 200 hm	> 200 hm





			
Grade	Easy	Medium	Difficult
	<ul style="list-style-type: none"> ● Max. gradient 14% ● ø gradient max. 10% ● Curve radius min. 8 m ● No icy sections 	<ul style="list-style-type: none"> ● Max. gradient 18% ● ø gradient max. 12% ● Curve radius min. 6 m ● No icy sections 	<ul style="list-style-type: none"> ● Max. gradient 18% ● ø gradient may be more than 12% ● Curve radius may be less than 6 m ● No icy sections
Trail quality:	Sledge runs are snow-covered trails that are normally groomed. Users of sledge runs should be prepared to encounter pedestrians and other traffic users on the trail.		
Equipment:	Winter-proof clothing with gloves, sturdy boots with braking aids, a snow sports helmet and ski goggles are recommended.		

