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CURRICULUM

Übungsleiter Mountainbike

1. Educational objective

Übungsleiter for Mountainbike are experienced volunteer mountain bikers who have the skills to guide groups responsibly on mountain bike tours that they have chosen themselves. They are aware of the risks involved in mountain travel and are able to help efficiently in case of emergency. *Übungsleiter* Mountainbike are also able to communicate basic skills for agreeable modern mountain biking to beginners and intermediate bikers. The training for *Übungsleiter* for Mountainbike“ primarily focuses on guiding, methodology and leadership skills.

Course volume: approx. **68 units** on 6 days.

2. Requirements

- General sports motor skills like balance, coordination and fitness in order to bike safely on paved and unpaved roads, tracks and trails in public space (other traffic), in professionally developed bike parks as well as in the forest and in alpine resp. high alpine terrain.
- Skills: Confident bike handling in various situations (road traffic, unpaved logging roads, trails). Confident riding on single tracks with root passages and low steps (single track scale rating S2). Surface varies from grass, gravel, forest floor and roots to sporadic gravel passages.
- Endurance and fitness: Mountain bike tours of 800 to 1200 meters in altitude difference without signs of fatigue and enough physical and mental stamina in order to master a (demanding) descent safely.
- Minimum age: 16 years.

3. 3 stages of 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 ...

The prerequisite for this stage is “knowing” resp. understanding knowledge.

(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.

The prerequisite for this stage is „understanding“.

(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.

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.

4. Teaching objectives & methods

4.1. Overview

Topic	Units
Tour Planning	6
Individual & Group	2
Orientation & Navigation	4
Weather	1
Equipment	6
Bike / Rider - Fitting & Adjustments	2
Riding Technique	19
Leadership / On Tour Together	18
Breakdown Assistance and Bike Maintenance	4
Legal Situation & Insurance	2
Demonstration Lessons	4
Total Units	68

4.2. Tour Planning [6 units]

Participants ...

- can plan a tour using the 4-phases-model and put it into practice (A)
- know the key parameters for planning mountain bike tours and can respond to questions and problems in their function as tour leaders and have the skills and abilities to act accordingly (A)
- are familiar with e-bike-specific questions and is able to take them into account for tour planning (maintaining battery life, pushing/carrying the bike, battery key, charging, spare battery) (A)
- can choose and plan a tour suitable for the conditions and the group, using the internet and guide books (A)
- can choose and plan a tour suitable for the conditions and the group, using the weather forecast, the topographic map and information from the internet and guide books (A)

- are able to write a complete and clear description for a section tour (bike) and can chair and facilitate a planning meeting (A)
- know how to use the resources of alpenverein**aktiv.com** for planning bike tours (A)
- knows the established trail difficulty ratings (“single track scale”) and can identify terrain accordingly. (A)

Methods

- **[Indoors/group]**
 - Groups of 2 participants plan a specific tour using map, internet and the form „Tourenplanung-Formular Mountainbike“

4.3. Individual & Group [2 units]

Participants ...

- know about the advantages of small and the disadvantages of large mountain biking groups (A)
- are familiar with the recommendation by the ÖAV for the maximum group size of mountain biking groups (6 +1) (U)
- can communicate decisions and leadership measures clearly and unmistakably (A)
- know about the influence of psychological processes and group dynamics on the readiness to take risks, on decisions and behaviour (U)
- know the phenomena of group dynamics and the „psychological danger signals“ and can detect them using self-reflection and can counter a dangerous increase in risk (A)
- know the measures and peculiarities of leadership necessary for guiding mountain bike groups (including mixed groups of regular MTBs and pedelecs). (A)

Methods

- **[Outdoors/group]**
 - Identifying and assessing the mental and physical state of the individual participants
 - Practicing various guiding situations in the group

4.4. Orientation & Navigation [4 units]

4.4.1.Map

Participants ...

- know the essential characteristics of a topographic map and the corresponding fundamental terms such e.g. declination, relief, key or scale (U)
- can determine their current position using the map (A)
- are familiar with the online maps on alpenvereinaktiv.com. (U)

Method

- **[Indoors/group]**
 - Teach basic map skills in groups („table of maps“)
 - Theory of determining the current position
 - Plan a specific tour using the map
- **[Outdoors/group]**
 - Various orientation tasks on tour
 - Practice of determining the current position

4.4.2.GPS, smartphone & computer

Participants ...

- can use the app alpenvereinaktiv.com and other routable apps for orientation and navigation on tour (A)
- can download tours and map segments for offline use (A)
- know how to use their smartphones in an energy saving manner (A)
- can navigate using a modern GPS or GPS-enabled smartphone (A)
- can determine their current position using an app and is familiar with the various coordinate systems used to transmit position data (A)
- is familiar with the peculiarities of outdoor navigation when leading MTB groups. (A)

Methods

- **[Indoors/group]**
 - Introduce app functions (menu)
 - Download map segments
- **[Outdoors/group]**

- Use the app alpenvereinaktiv.com (or alternatives) for determining the current position on tour.
- Use the GPS / smartphone in various modes (current position, routing, ...) on tour.

4.5. Weather [1 units]

Participants ...

- know sources for reliable (mountain) weather forecasts in Austria (T)
- can read, understand and use a weather forecast for the respective tour (A)
- know the „Alpenverein-Wetterdienst“ (Alpenverein weather service) on alpenvereinaktiv.com resp. alpenverein.at (A)
- know about the importance of stable weather conditions (U)
- are aware of the dangers of sun and radiation and know the indications for the development of thunderstorms (U)

Do not teach

- Physical/geo-dynamic processes

Method

- **[Indoors/group]**
 - Get and compare weather reports from different sources.
- **[Outdoors/group]**
 - Compare weather forecast and development of actual weather.

4.6. Equipment [6 units]

4.6.1.General equipment

Participants ...

- are aware of their role as a model regarding equipment (U)
- can advise different categories and types of bikers on equipment depending on how they use their bike (T)
- are familiar with well-proven equipment and can explain its functions (backpack, tools, repair kit, first aid kit) (T)
- know how components, chassis and drivetrain systems of a modern mountain bike and pedelec work (U)
- can identify safety-related and technical problems in a mountain bike. (U)

Method

- **[Indoors/outdoors/group]**
 - Show, explain and use equipment

4.6.2. Clothing and protective gear

Participants ...

- are aware of their role as a model regarding equipment (U)
- know about the advantages of functional clothing and can explain them (T)
- use modern protective gear and can explain its practical use. (A)

Methods

- **[Indoors/outdoors/group]**
 - Show, explain and use equipment

4.7. Bike / Rider – Fitting & adjustments [2 units]

Participants ...

- know the basic rules for fitting mountain bikes (frame size) and can tell if the frame fits a rider's height (U)
- recognises improper seat positions and can explain and make minor adjustments to seat and foot position, saddle, stem and handlebar (A)
- understands tyre pressure and the basics (extension and compression) of a modern chassis (shock absorber, fork) and can perform a basic set up of a bike (tyre pressure, setting sag, rebound) (A)
- is aware of the necessity of a pre-ride inspection and can instruct it (front and rear brake, headset, fork/stem, tyres, hubs, quick-release skewers, thru axle, frame) (A)
- can identify problems or damages which indicate the bike is unfit for use (A)
- can inquire after safety-related equipment and bike components in a structured manner, thus finding and remedying possible deficiencies. (T)

Do not teach

- Fork and shocks service, hydraulic brakes service.

Methods

- **[Indoors/outdoors/group]**
 - Show and explain / use equipment and instruct a pre-ride inspection

4.8. Riding Technique [19 units]

Participants ...

- choose a safe environment for practising, which is conducive to learning success (A)
- can clearly and comprehensibly communicate, show and explain the basic biking techniques (neutral position, uphill and downhill riding, balance, braking, starting on a climb, shifting, dismounting backwards, cornering, clearing obstacles) (A)
- can methodologically instruct, observe and analyse a biking technique exercise (A)
- gives positive feedback and thus secures lasting learning success. (A)

Methods

- **[Outdoors/group]**
 - Show, explain, instruct and give feedback when practising.

4.9. Leadership / Together on tour [18 units]

4.9.1. Welcoming address & equipment check

Participants ...

- understand that guiding a mountain bike group requires clear leadership (U)
- understands the challenge of leading at a greater speed, the lacking possibility to intervene directly, the need for the clients' skills (U)
- is familiar with the relevant contents and actions of the three main areas of equipment, speed and the human factor (U)
- can inquire after safety-related equipment in a structured manner, thus finding and remedying possible deficiencies (T)

- is aware of the necessity of a pre-ride inspection and can instruct it (A)
(front and rear brake, headset, fork/stem, tires, hubs, quick-release skewer, thru axle, frame, motor check, control panel, battery).

Methods

- **[Outdoors/group]**
 - Participants take over guiding and leading (peer teaching/demonstration lessons). Trainer gives feedback after each task.

4.9.2. Leadership on tour

Participants ...

- are familiar with group development cycles and have a basic knowledge of group formation and leadership strategies (U)
- have an notion of roles, positions, values and ranking dynamics within their group (U)
- are familiar with and can identify unpopular positions and has the leadership skills to integrate difficult characters into the group (A)
- can identify the circumstances and situation (environment, requirement) and can change their leadership style accordingly (A)
- are aware of risks while guiding a group and can identify and control typical hot spot caused by group dynamics. (A)
- is familiar with the different leading situations in classic MTB groups, exclusive pedelec grops and mixed groups (maintaining battery life, pushing/carrying the bike, performance differences, etc.) (A)
- can identify deviations from the plan and react to them. (A)

Methods

- **[Indoors/group]**
 - Presentation and discussion of the topic “Individual and Group”, autonomous planning of a tour with focus on alternative destinations.
- **[Outdoors/group]**
 - Discussion and awareness-raising regarding all elements of planning, autonomous leading, feedback.

4.10. Breakdown Assistance & Bike Maintenance [4 units]

Participants ...

- are familiar with the well-proven equipment for bike tours and can explain its function (backpack, tools, repair kit, first aid kit) (T)
- know how components, chassis and drivetrain systems of modern mountain bikes and pedelecs work (U)
- can identify safety-related and technical problems in a mountain bike (A)
- can determine if a breakdown can be remedied and have the necessary skills to repair (tyre and tube damages, brake pads, caliper, broken chain, shifting problems, loose handlebar, headset, broken spoke, bent rim) (A)
- know the limitations of breakdown assistance on tour (A)
- know the difference between bike care resp. maintenance (by the rider) and bike service (by the specialist). (A)

Do not teach

- In-depth knowledge about all questions regarding bike maintenance and service. Refer to specialist.
- Teaching detailed technical knowledge.

Methods

- **[Indoors/Outdoors/Groups]**
 - Show, explain and use specific tools.

4.11. Rechtliche Situation & Versicherungsfragen für UEL MTB [2 units]

Der Teilnehmer (TN) ...

- 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)

- are aware that the third party risk insurance does not protect against the consequences of a criminal conviction and that the latter may entail a prison sentence resp. a fine calculated of a certain number of daily rates of pay (“Tagessatz”). Depending on the income, this may be between € 4,- and € 5.000,- (U)
- are familiar with the legal situation for mountain biking in Austria and decides autonomously which breach of law is justifiable for them (U)
- is familiar with the main contents of the Austrian Forest Act regarding riding logging roads, wasteland, and specifically the terms “Besitzstörung” (trespassing) and “Unterlassung” (omission) (U)
- know the insurance benefits offered by the Alpenverein relevant to their situation and know where to find detailed information (U)
- is familiar with the legal framework regarding the different types of pedelecs (EU norms) (U)
- understands the role and duty of the authorities (Alpinpolizei) to record and present the facts after a mountaineering accident (U)
- know how to deal with the authorities (Alpinpolizei) 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 für UEL MTB” (Questions of law and liability, powerpoint presentation) followed by a discussion.
 - Option 2: Have an FAQ session or work through case study with group.

4.12.Demonstration Lessons [4 units]

On the last day of the course, participants give demonstration lessons at differently themed stations, revising and practicing essential topics. 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.

- Warm-up games
- Neutral position uphill / downhill / ready position
- Braking
- Dismount in terrain
- Balance and coordination
- Clearing obstacles (uphill, downhill)
- Starting on a climb
- Repairs on tour
- Pedelec-specific demonstration lesson

5. Appendix - Riding Technique

The correct technique helps you not only to explore your limits but also to enjoy the fun of riding in safety. Before you rush into the exercises head over heels, please heed the following recommendations:

Always do a careful pre-ride inspection, no matter if you're about to practice or go on a tour. Malfunctioning brakes, a loose handlebar or headset can result in fatal accident. Safety comes always first! Riding an e-Bike, make sure you choose the appropriate level of electric assistance.

Exercises always start out in the neutral position. If you want to improve your riding technique, study movements on easy terrain before venturing onto more challenging ground.

Flat pedals with pins and matching shoes with a soft rubber outsole are the most wise decision, in our opinion. With many exercises, it's absolutely mandatory to dismount and mount very quickly. Any delay in clipping and unclipping can cause a fall. Another reason to choose flat pedals is that they can greatly improve your technical abilities (e.g. lifting the rear wheel). If you master the exercises with flat pedals, they will be a breeze with clipless pedals.

Make sure you choose a suitable training ground for your riding technique practice sessions. A spacious gravel parking lot or other flat location away from the traffic is ideal.

If your training session is successful or not is often decided by the right practice material. More often than not small branches, chalk marks, cones or cords are enough to represent obstacles. Bigger challenges can not only result in crashes but may also tint your sense of achievement.

Protectors are essential for each and every riding technique training session. Many of these exercises demand plenty of experience and instinctive feel in order to avoid a fall or crash. Helmet and gloves are therefore the absolut minimal equipment. From years and years of experience we recommend knee and shin protection as well. Whoever has had the pedal or a branch hit the shin or has picked gravel from the elbow knows why. A back protector can be replaced by a backpack. Hard or pointed objects however must be removed from the backpack.

Drop your seat all the way when practicing any downhill techniques. The seat post always needs to stay as low as possible. This is absolutely necessary in order to move the bike freely under the body and to be in a position to dismount backwards quickly. Moving freely over a dropped seat and a lower point of gravity is also favourable when riding an e-bike uphill.

5.1. Neutral Position

The neutral position is the body position that allows you to easily transition into any other position. Always use it when you riding downhill on a logging road or any other easy trail. It's a relaxed position that relieves your thighs. The following riding technique exercises are all based on the neutral position.

The pedals are level and your weight is evenly distributed between your legs. Imagine you have a pendulum reaching from you navel directly into the center of the crankset.

Your knees are slightly bent and not superextended, the elbows also bent and rotated outward. In order to avoid gripping the handle too tightly, try to cup your hands. The more relaxed you are in your arms, shoulders and hands, the better you can maneuver and soak up resp. control bumps. Your index fingers are always on the brake levers and your eyes look forward on the trail. If your thighs don't hurt and you neither pull on nor need to prop yourself onto the handlebar, you have found the right position.

- # Level pedals
- # Knees only very slightly bent
- # Center of gravity above crankset
- # Upper body slightly bent forward
- # Arms relaxed
- # Elbows slightly rotated outward
- # Relaxed grip of handlebar
- # Index fingers on the brake levers
- # Eyes focused far ahead on the trail

5.2. Climbing

When climbing, we do not use the neutral position but we are seated in the saddle. Depending on the gradient, the upper body is bent forward and the elbows are drawn in or down in order to maintain traction and front-end contact, which is the so-called climbing position. Due to the upper torso being bent forward and the gradient of the terrain, the imaginary pendulum is still reaching directly into the center of the crankset - so the center of gravity is still good. The steeper the terrain, the more you need to move the center of gravity toward the front in order to keep the front wheel from trying to lift. If too much weight is shifted away from the rear wheel, however, it loses traction and starts slipping. On steep terrain and loose surface, it is necessary to find a balance between enough weight on the rear wheel and the climbing position.

5.3. Descending

It is possible to descend moderate logging roads in the seated position, especially riding a full-suspension bike being seated can be used to relax the thighs. Otherwise you need to stay in the neutral position that allows you to easily transition into the ready position for more technical terrain, your eyes looking forward a few meters. In steeper or technically more demanding descents your body weight must be moved backwards. It is important to lower the saddle as far as possible in order to have room for manoeuvrability. Move your body behind your saddle and extend your arms (do not superextend, though). Keep a deep bend in the knees (cowboy position) in order to make room for sideway movement of the bike. Depending on the gradient, you may bend your knees even more. Your rear end moves further back resp. down towards the rear wheel. Such an extreme position, however, is only appropriate on very steep and technical sections. At a higher speed, it is easy to lose control due to too little weight on the front wheel and the bike becomes difficult to control.

5.4. Balance

Balance is not only required in difficult and slow passages but good balance is also a prerequisite for safe riding. There are numerous fun exercises that can easily be built into everyday biking. Make sure you choose only moderate electric assistance when riding an e-bike.

Snail racing

In neutral position, begin rolling as slowly as you can from a starting line to a pre-defined stop line without putting your foot down. The last one to arrive is the winner.

Balancing support

Choose a wall or a big bolder. Ride towards it in an 45° angle and press the front wheel against the obstacle and try to keep your balance. If this works well, ride head on towards it and repeat the exercise.

Who stands the longest

On a confined area adapted to the group size, all riders balance on their bikes as long as they can. Whoever touches ground with their feet is eliminated but can continue to practice out of bounds. Using the brakes cleverly, balance can be

optimised. Block your brakes and push your front foot into the pedal. The bike should be able to move freely under you, knees and hips help balancing - always keep your knees off the saddle or top tube. As soon as you start losing balance, gently open the brakes and try to regain balance by minimal rolling.

All exercises can be done using a city bike while waiting at traffic lights. The farther ahead your eyes focus, the easier it is.

5.5. Correct Braking

In order to brake effectively and accurately, a lot of practice and - above all - experience is required. Depending on the surface, weather and equipment, the braking response differs. Take your time approaching correct braking technique.

Most of your braking power comes from your front brake. When braking, only the index fingers rest on the outermost tip of the lever, the other fingers are on the handlebar.

5.5.1. Decelerating using the rear brake

In this exercise all fingers of the front brake are on the handlebar and none touch the front brake lever. If you squeeze the rear brake lever too hard, the rear wheel loses traction and starts slipping resp. skidding. Try to develop a sense of what it feels like when the brake drags. Define a line from which onwards you start braking, begin pedalling about 10 m before it and roll towards it in neutral position. At the line, start braking.

Make sure your rear brake decelerates at its optimum, without locking. Depending on the make of your brakes, you will hear a dragging, gurgling or gentle squealing sound, which you can use as guidance. Try to come to a stop as quickly as you can and without blocking your rear wheel. Once you have optimised braking by dragging, look for a different surface - gravel, grass, forest ground - and repeat the exercise. You will find that the braking response differs greatly depending on the surface.

5.5.2. Decelerating using the front brake

Stand next to your bike, put both hands on the handlebar and squeeze the front brake lever hard. The rear wheel should lift off, only the front wheel maintains contact to the ground, the saddle touches your hips. Try to push your bike forward while gingerly, slowly and evenly opening the front brake. The rear wheel should stay in the air, at the same height. This exercise - done on different surfaces - helps you gain a feeling for front brake deceleration.

5.5.3. Lowering your center of gravity

Correct shifting of the center of gravity and timing are essential to safe braking. Braking and shifting the center of gravity should be one fluid movement. As soon as you squeeze the front brake you will find that the bike wants to send you over the handlebar. The steeper the terrain, the more intense the feeling of being flung over the bar is. In order to prevent this, you actively need put up "gentle resistance".

Depending on how hard you brake, you need to shift your center of gravity down and backwards. The upper body moves downwards and your knees bend - as if you were doing squats. The arms prop themselves against the handlebar and work against the pull to the front. Bend your hips and move your rear end slightly behind the saddle. As on a descent, you must make sure that you are not as far back as the rear hub, since this means a loss of traction and a loss of control of the front wheel. Arms and legs are additional shock absorbers that soak up the bumps. Soft compression and subsequent bracing (using arms and above all the lateral muscles of your torso) can very well soak up the sudden impact of braking.

5.5.4. Braking

Now combine the three exercises. Both index fingers are on the brake levers, you start rolling in the neutral position and start braking at the stop line. Both brakes start to decelerate, at the same time you lower your center of gravity and move backwards and absorb the braking energy with your legs and arms. As soon as you come to a stop, your body shifts into the neutral position.

5.6. Starting on a Climb

Before you try to start, you should shift into the correct gear (and choose the appropriate level of assistance), suitable for the gradient. It is the one that makes it easy to spin your legs. If you choose too easy a gear, you will find yourself pedalling without propelling yourself forward and choosing too hard a gear will make you stall. Most often, the smallest chainring at the front and second or third biggest cog at the rear is a good choice.

The crank on the side of the foot that you start pushing down with should be parallel to the lower tube in order to have optimum leverage. In order to get the necessary traction on the rear wheel, it is enough to move slightly forward on the saddle. Since the saddle is in a higher position when climbing, stand on your toes or lean your bike to one side. A raised curb, a root or a stone can help you mount the bike.

The elbows are drawn down in order to guarantee good traction and both brakes are squeezed tight. Starting is a fluid movement that has got a lot to do with timing. Push down with the foot connected to the pedal and lightly push off and forward with the foot on the ground. At the same time, gather momentum with your torso by moving it forward and release both brakes. Make sure, your rear pushes down hard on the tip of the saddle, otherwise your rear wheel will skid. As soon as you have gained enough speed, you can slide back into your saddle and continue your climb.

5.7. Correct Gear Shifting

In order to save wear and tear on material and nerves, correct gear shifting should also be learned. Anticipating the terrain has proven valuable for shifting into the correct gear in good time. The steeper the terrain and the bigger the effort needed for pedalling, the more difficult shifting gets. For smooth shifting, you give a serious power stroke to build up speed and keep your momentum, then ease the pressure off and shift to the required gear while merely spinning the cranks. Timing is everything. This is even more important when riding an e-bike since there is more traction on the chain. Who can shift softly?

5.8. Dismount in steep terrain

Off logging roads or on easy terrain, always dismount backwards and put the uphill foot down first. Once you have got used to dismounting backwards, it is easier to stay in control in case of an unintentional emergency dismount. Your eyes should always be far ahead of you on the trail in order to make out any obstacles as early as possible. Start braking using both levers and slow down. Shortly before you come to a standstill, lower your downhill foot still touching the pedal. This takes pressure off the uphill foot, which then can be put down on the ground. At the same time, slowly push your bike a little bit forward under your body. Braking, load-shifting between feet and putting the uphill foot down should be one fluid movement. Make sure you don't give up the level position of the pedals too early because at too much speed, you will lose control over the bike and you will be more of a passenger than the pilot. As soon as you stop in front of the

obstacle, you push the bike forward under you, release the rear brake and grab the saddle. Now also move the downhill foot backwards onto the ground. As soon as you stand firmly, release the front brake and lean your bike towards the slope.

- # Focus eyes far ahead on the trail
- # Brake evenly
- # Push saddle forward under you
- # Lower pedal connected to downhill foot
- # Take pressure off the uphill foot
- # Push saddle all the way forward and put free foot on the ground
- # Put supporting leg down
- # Release rear brake
- # Release front break

5.9. Cornering Techniques

There are different types of twists and turns and therefore different methods to ride them. We differentiate between three cornering techniques: steering, leaning, and pushing.

While you initiate the change of direction by actively moving the handlebar when steering, e.g. when slaloming, when leaning or pushing, changing direction happens by leaning the bike.

An essential part of all these techniques is anticipation, more specifically focussing on where you want to go. Your bike always follows your eyes. Imagine a rail on which you ride. As soon as you are at the entrance of the corner, you should be looking at the apex. As soon as you pass the apex, your eyes should already be on the exit.

Always start riding at the outside of the turn, which is called "starting high". Pull inwards on the apex and follow the line towards the outside again at the exit of the corner.

5.9.1. Steering

This technique is only for lower speeds and is initiated by actively changing the steer angle. It is mainly used in technical and slow passages or when practising slalom on the training ground.

5.9.2. Leaning

This technique consists of initiating and riding corners mainly by leaning the bike. You are in neutral position and follow your eyes. This option is well suited for structured surfaces or for riding banked turns (“berms”). Your upper body and bike are both at the same angle.

5.9.3. Pushing

Depending on speed, curve radius and the surface condition, sometimes a little more grip is needed. When pushing, lower your upper body and push the handlebar down with your inside arm. The outside elbow is bent and stays up. The bike will lean more than the rider. You will be riding the corner on the flanks of your tyres. For better traction, the outside crank is lowered and pressure is applied onto the pedal. The inside leg is resting on its pedal with no weight at all. This gives you better control and grip on loose ground or flat corners (no berms). The center of gravity remains in the center of the crankset. Should you skid, you can quickly put down your free inside foot to prevent a possible fall.

Another kind of corner is the switchback. No worries, this is not about jumping your rear wheel but about correctly riding a serpentine resp. switchback. Keep in mind that your rear wheel does not follow the line of your front wheel. In order to avoid sending the rear grinding over the inside bank, you need to look at a wide entry point and you need to bring your front wheel in by active steering. This way, your rear wheel has enough room and you go easy on your equipment and the environment.

5.10. Clearing Obstacles

5.10.1. Front wheel

Lifting your front wheel is not done by firmly pulling at the handlebar but mainly by throttling your bike, which means pushing down with your feet into the bottom bracket. To make lifting easier, use the rebound of the shocks by compressing hard beforehand. As soon as the shocks decompress, stretch your legs and push the bottom bracket resp. crankset slightly forward. The upper body darts upwards, not backwards. The arms remain extended. The better you master this technique, the more likely it is to tilt backwards. Should you get the feeling of tilting backwards, put the rear brakes on to prevent rolling backwards. As soon as your front wheel has cleared the obstacle, absorb the bump as gently as possible with your arms and legs.

5.10.2.Rear wheel

Choose a gentle slope to make this exercise easier. The brakes are not used in this exercise. Activate the shock absorbers by compressing firmly with your legs. Use the energy of decompression to lift the rear wheel by pointing your toes down and your heels up. At the same time build up tension by bracing yourself against the handlebar and the pedals. If you are well braced in the frame you can lift the rear wheel by bending your legs. Do not push the upper body forward. Try to absorb the energy of touching down as softly as you can with your body.

5.10.3.Step down

For practising, choose a small step which you can ride towards with some run-up and preparation. In the neutral position, roll up to shortly before the step and lower your upper body - in relation to the height of the step. Move your elbows outwards. Bend your legs, in relation to your upper body. Let your arms drop as soon as the front wheel rolls over the step. Do not forget about your rear wheel - it also needs to roll over the obstacle. Again, the drop can be compensated for by your bent legs. The softer these movements are, the easier it is to roll over a step or drop in a controlled manner.

6. Evaluation of the Participants

Successfully completing the training course „Übungsleiter Mountainbike“ 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).

6.1. Key Qualification

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, a bike tour of 800 bis 1000 meters in altitude difference (ascent) and a descent on a single trail rated as S1/S2 in difficulty is expected to be well within the limits of the participant's performance capacity.
- **(Q 2) Expertise:** The participant is sufficiently competent in order to guide a group on an (alpine) bike tour (e.g. Transalp) or in order to teach a group the basics skills of modern mountain biking technique. The participant has understood the topics treated in the course (technique and leadership) and can put them to work. Moreover, s/he has comprehensive orientation and navigation skills and can plan a bike tour diligently.

- **(Q 3) Risk management & self assessment:** The participant possesses pronounced 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.

6.1.1. Pass / Fail

Participants of the course “UEL Mountainbiking” 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.

7. Time Table

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
7:00	Arrival					
8:00						
9:00						
10:00	Check-in, Welcome, Warm-ups, Expectations	Riding Technique 2	Trail Riding Technique & Leadership	Trail Riding Technique & Leadership	E-Bike Riding Technique Leadership, E-Bike Tour	Demonstration Lessons & Tour Guiding
11:00						
12:00	Methodology, Didactics Equipment Check, Gear Information					
13:00						
14:00						
15:00	Pause	Pause	Pause	Pause	Pause	
16:00						
17:00	Riding Technique 1	Individual & Group	Law & Insurance	E-Bike Theory	Maintenance Workshop	End of Course
18:00	Abendessen	Abendessen	Abendessen	Abendessen	Abendessen	Departure
19:00						
20:00	MTB Theory	Tour Planning	Tour Planning	E-Bike Tour Planning	Pass / Fail Preparation of Demonstration Lessons	