1 Preparation of hike

- Get overview of hiking region, study maps and guides
- Estimate difficulty of hike w.r.t. terrain, altitude, fitness, skill etc.
- Inform yourself about weather conditions
- Estimate walking time, see 2
- Plan schedule, location for rests, alternative/return routes, emergency access

2 Estimation of walking time

- Rule of thumb for walking time in groups per hour:
  - Ascent: 400 m/h in altitude ($V_A$)
  - Descent: 500 m/h in altitude ($V_D$)
  - Horizontal: 4 km/h ($H$)
- Consider, both:
  - horizontal distance time: $t_H$
  - vertical distance time: $t_V = t_{V_A} + t_{V_D}$
- Estimation of walking time:
  $$\text{Total time} = \max(\sum t_V, \sum t_H) + \frac{1}{2} \min(\sum t_V, \sum t_H)$$

3 Necessary equipment

- Protection against weather (wind, sun, rain, snow, cold)
  - Appropriate clothing (jacket, trousers, hat, gloves, etc.)
  - Sunscreen, sunglasses, etc.
  - Spare clothes to change
- Nutrition (Liquid, snack, cereal bars, fruits, etc.)
- Map
- Money, ID card, paper, pencil
- First-aid kit, Knife, tissues, flashlight
4 Behaviour in a group

- Plan route of hike dependent on weakest member of group
- Choose walking speed appropriately
- Go always in subgroups of at least three (one map per subgroup)
- If splitting up group, notify person in charge
- Stay together, be mindful of each other

5 Be aware of weather condition

- Treacherous weather is common in the mountains
  - heat thunderstorm: avoid open areas
  - fog: do not leave trail. If lost, wait for fog to clear
  - snow: move carefully
  - rockfall: crouch on the ground, protect head with backpack, alert other hikers through calls
- Check conditions regularly
- If you get lost, S.T.O.P.: Stop, Think, Observe and Plan

6 In case of emergency

- Escort slightly injured persons, do not let them return alone
- Rescue heavily injured person from dangerous areas, stabilize, comfort. Be aware of possible internal injuries.
- Alert mountain rescue service immediately for medium and heavily injured persons.
- Accident report:
  - Who is injured: number of persons
  - What has happened: type of injury
  - Where did it happen: exact location
  - What are the surrounding conditions: weather, visibility, terrain, measures taken
- Never leave injured person alone
- Protect from heat, cold, wetness, etc.