ISIA Avalanche Course

This course delivery and outline is provided by:

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2010 Course Dates

Mt Hutt September 13/14 and 20-21 (2 part)

Cardrona September 13-16

Nth Island October 18-21

Description

Commercial ski/snowboard areas in other parts of the world are vastly different from NZ in size, terrain, snow conditions and operation policies. The ISIA Avalanche course is intended for ski, snowboard and telemark instructors wanting to expand their knowledge of the mountain environment, to travel safely within it and impart knowledge useful for an instructor within organized area boundaries worldwide.

It is also a required course towards achieving international status (ISIA) from your NZSIA Level Three instructing qualification. Documented attendance at a professional MSC Avalanche Stage 1 course or a MSC Backcountry Course is acceptable as a cross-credit for the ISIA Avalanche Course toward ISIA status.

The ISIA Avalanche course provides a better understanding of avalanche phenomenon and what is needed to make decisions about personal safety when travelling in avalanche terrain with a group. Additionally, this course will help develop more advanced observation and route finding skills for moving in the mountains. Although we stress the need for avoiding avalanche related rescue, time is also dedicated to learning the technical skills required for small party rescue and handling other emergency situations.

Pre-requisites

There is no prerequisite study for the Avalanche course, although participants need to be capable of travelling in the backcountry safely and comfortably, (see **Field Days** below).

The course may be attended by any experienced skier or rider, (i.e. Associate, Levels One, Two and Three etc).

Content/Format

The Avalanche course is four days in length and involves a daily combination of classroom and field study. The length of each and sequence may vary do to weather or other considerations. Field study may take place within and beyond commercial ski area boundaries. This course will be taught by a UIAGM guide or NZMGA Winter qualified guide who is also Stage II Avalanche qualified.

The course covers:

- Mountain weather and NZ information sources
- Snow Stability (sources, characteristics, changes and basic tests)
- Decision making and human influences
- Safety equipment (including use of transceivers)
- Identification of avalanche terrain (including relationship to map)
- Characteristics of avalanche phenomenon
- Observation techniques
- Group travel in avalanche terrain
- Small party search and rescue
- Handling emergency situations
- Snow shelter construction
- Future study options

Lectures

Lectures generally begin in the morning at 9am and are prior to an afternoon field session if the classroom is on the mountain. The day usually concludes in the classroom by 4pm. Attendees are encouraged to bring a notepad and pencil. Off-mountain classroom venues may involve morning meetings or evening sessions the night prior to a field day. The venue will be confirmed by your instructor. Please arrive promptly and “ready to learn”.

Field Days

Field days focus on practical aspects and last half to two thirds of the day. Participants are required to bring a 20-50 L. backpack capable of carrying skis or snowboards and avalanche & personal safety gear. Limited amounts of avalanche safety gear, (457 kHz transceiver, and collapsible probe and shovel) may be available from your instructor or local sports shop at your additional expense (and may vary by region). Snow (or pruning) saws and compass will be useful but not required.

Your personal safety gear should include an extra layer of clothing, sun protection, water, snacks and perhaps a pack lunch. Additionally, you will need a means of travel in the backcountry, (for usually the last 3 of the 4 days). Depending on the conditions, climbing skins with touring skis/bindings, snowshoes and occasionally ski/snowboard boots are options. Contact your instructor for your most likely needs and possible sources for hire or purchase.

Assessment

Transceiver competency will be the only assessed component of the course to the following standard:

Locate 1 transceiver buried 30cm deep below a 50cm x 50cm target within 4 minutes within a 20m x 20m site.

Certificate

For Avalanche Courses, a 'Certificate of Attendance/Transceiver Competency' will be issued by the provider. Participants must attend the entire course to receive attendance credit.

Avalanche Course General Learning Outcomes

- Manage personal safety in avalanche terrain and identify when others are placing themselves at risk in avalanche terrain.
- Demonstrate self party avalanche rescue techniques and emergency snow shelter construction

Learning Outcomes:

1. Gain knowledge of avalanche phenomena and recognition of avalanche terrain

1.1 Types of avalanches and avalanche motion are described (Ice, loose snow, slab, tensile and shear stress, triggers).

1.2 Avalanche paths are identified (Start zones, track, run-out etc).

1.3 Avalanche terrain is identified using knowledge of factors contributing to avalanches (Aspect, angle, altitude, anchoring, appearance, etc)

2. Demonstrate safe travel techniques in avalanche terrain

2.1 Pre trip and en-route decisions based on avalanche hazard forecasts, weather and terrain, which reduce exposure to avalanche hazard during periods of risk are identified (Avalanche.net.nz, evaluations of snow stability, terrain selection etc).

2.2 Decisions relating to the management of a small group in avalanche terrain are consistent with safe travel and traps in avalanche decision making are identified (group dynamics, familiarity with terrain, expert halo, risk shift, risk acceptance, etc)

2.3 Personal actions demonstrated contribute to personal safety at all times (clothing and equipment are considered, safety protocols for conditions are followed, use of - collapsible probe, portable shovel, transceiver, Avalung, ABS airbag, etc).

3. Identify factors which affect avalanche occurrence and sources of further information.

3.1 The basic content and relative importance of class I, II and III information is described.

3.2 Snow stability evaluation and forecast terminology are described. (Very Poor-Very Good, qualifiers, here and now evaluation, forecast future nature regarding weather)

3.3 The effects of mountain weather on the snowpack are described and related to snow stability.

3.4 Sources of snow stability and hazard information are identified, (weather/forecast and stability info. from regional forecasts, websites, television, radio, ski patrol, other informed users, etc.).

4. Gain basic knowledge of snowpack structure.

4.1 The key features of snowpack structure are described. (Weak/strong snow characteristics are described and identified.)

4.2 A variety of strength/stability tests are demonstrated. (Range: test profile, compression test, burp test, ski pole test, hand shear, rutchblock, schredblock, SAFE slope cut, etc.)

4.3 Surface changes and the development of seasonal snowpack is described, (elevation, aspect to wind and radiation, storm cycles, temperature).

5. Demonstrate avalanche transceiver proficiency

5.1 Transceiver search skills (locate 1 transceiver buried 30cm deep below 50cm x 50cm target within 4 minutes (20x20m site).

6. Demonstrate self party rescue

6.1 Techniques are described for improving personal survival in an avalanche accident and/or incident (angling away from danger area, discarding equipment, airspace in front of face, hand raised above surface, keeping calm etc).

6.2 Search strategies and techniques are demonstrated for rescuing others involved in a simulated accident and/or incident (visual search, transceiver search, probing, digging, planning, dog handler site considerations, etc).

6.3. Describe procedures for calling out SAR

6.4 The importance of witness statements and procedures is identified.

7. Demonstrate emergency snow shelter construction techniques

7.1 Site resources are considered as to available people, gear, safe location and snow conditions, and resources are used efficiently.

7.2 Different construction techniques are introduced, practiced and critiqued. (Range: trench, snow mound, igloo, cave)