



Avalanche Course: Level I

The goal of this course is to help you learn how to make your own decisions about appropriate backcountry snow travel. The Level I Course is a 24 hour format and is an ideal first course for those new to travel in avalanche terrain. If you have done an "old style" Level I a long time ago it might also be a good place to start over. For a skills "tune-up" we suggest our Level I Refresher.

Curriculum: During the course we cover the following topics:

- Types of avalanches
- Characteristics of avalanches
- An introduction to how avalanches form and release
- Recognition of avalanche terrain
- Introductory pit profiles and basic pit profiles
- Trip planning and preparation
- Reading and use of the local avalanche bulletin
- Backcountry travel techniques that minimize risk exposure
- Backcountry decision making
- Human factors that influence our decision making
- Equipment selection, usage and a mock companion rescue.

At the core of the course is the AIARE Field Notebook (included with the course) that we use as an in the field and hands-on reference tool.

This course fulfills the requirements of the AAA (American Avalanche Association) for a Level I course.

The course also uses the curriculum developed by AIARE (American Institute for Avalanche Research and Education) and our instructors are AIARE trained educators.

You may see other courses around that are two days in length but these do not meet any professional requirements and, we believe, give too much information in too short a time without allowing you to put into practice the skills and concepts presented.

Goals and outcomes of the course: The Level I is designed as a stand-alone course for backcountry travellers and serves as an introduction to avalanches. It is also a lead in to the Level II Course for those wishing to progress further.

By the end of the course you should have the ability to make appropriate decisions in the backcountry, recognise instabilities in the snowpack and apply decision making tools that allow for the most appropriate days activities (this might also include going back home). You should also recognise that this course is only the start of one's avalanche education and that this is an ongoing process that takes more than a lifetime to achieve.

Itinerary: Day One: We start in the classroom with slides and lectures explaining the contributing factors in avalanche formation, followed by a closer look at the formation and characteristics of the mountain snowpack, types of avalanches, terrain analysis, and companion rescue. The afternoon we'll car pool up to the snow to work on routefinding skills on snow, finishing the day with an introduction to avalanche rescue beacons.

Day Two: This day is also a mix of classroom and field. The morning is spent pulling it all together in a decision making framework and then examine the human factors which can make us ignore up all careful data collecting. In the afternoon we car-pool to our day's location we'll take a closer look at actual avalanche paths, trouble shooting potential routes of travel. The focus of the day is working on snowpack strength/bonding tests including: site selection, snowpack metamorphism, identification of potential weak layers, and practice with the tests.

Day Three: We take a tour bringing it all together with plenty of practice with bonding tests, routefinding, and beacon searches. We aim to conclude the day by 4.00pm.

Location: The course is held on-snow in the Bishop/Mammoth areas; in order to see the largest variety of terrain we'll be carpooling to various sites throughout the Bishop Creek and Rock Creek areas, potentially traveling as far as Mammoth depending upon the prevailing snow conditions. You should expect to drive 30-45 minutes from Bishop each day. We will facilitate car pools to the snow each day but you should make sure your vehicle is prepared for winter travel.

Meeting place and time: The course will meet the first day at 8.00 a.m. the White Mountain Research Station (WMRS) near Bishop. In Bishop, Line Street is an east/west street marked by the southern-most traffic light on Main Street/Highway 395, in town. To get to WMRS head east from this intersection on Line Street approximately 4 miles, crossing the Owens River bridge several miles out of town. About a half mile past the Owens River bridge WMRS comes up on the right. We'll be in one of the two class rooms that are through the gate, slightly to the right as you walk through.

Dates and Prices: Check the latest brochure, call us or go to our web site for dates and rates. Should minimum participant numbers not be reached you will be given the option of paying our private rate, rescheduling, or cancelling.

Course Inclusions: Price includes instruction, permits, a syllabus and loan of avalanche beacons, shovels, and probes.

Ratios: The AAA and AIARE suggest a ratio of no more than seven participants to one instructor for in the field sessions. To emphasize the practical nature of these skills we have a ratio of about one third classroom work and two thirds in the field.

Notes and other information: The course does not include food or lodging. Please let us know if you need assistance making arrangements and you can refer to our local lodging information sheet for suggestions. WMRS offers dorm style lodging for \$30/night, to make arrangements call them at 760-873-4344; for more info see;

<http://www.wmrs.org>. (Food is not included but staying at WMRS is quite comfortable and convenient for these courses.)

If you want more information on what to look for in avalanche courses we suggest looking at the AIARE website at;

<http://www.avtraining.org>

Pre course Study: You will come to the course best prepared if you take a quick look over the set of pre-course study material that AIARE has put together It is available at;

<http://www.avtraining.org/studymaterialintro.htm>

Prerequisites: The course is not particularly physical but you will need to be able to be out all day in a range of weather conditions and you'll need to be able to use either cross country or alpine touring skis, or snow shoes. We will be travelling short distances on moderate slopes. No prior snow stability evaluation training is required.

Recommended reading:

- Tony Daffern, *Avalanche safety for skiers, climbers and Snowboarders*, The Mountaineers Books, 2000
- Fredston and Fesler, *Snow Sense*, Alaska Mountain Safety Center, 1999.
- Jamieson, Bruce, *Backcountry Avalanche Awareness*, Snowline Technical Services, Calgary, Canada, 1997.
- McClung and Schaerer *The Avalanche Handbook*, The Mountaineers, Seattle, WA, 2006
- Bruce Tremper, *Staying Alive in Avalanche Terrain*, The Mountaineers Books, 2001.
- Jill Freston, *Snowstruck*, Harcourt Books, 2005
- Ed LaChapelle, *Secrets of the Snow*, University of Washington Press, 2001
- Backcountry skiing; *Skills for Ski Touring and Ski Mountaineering*, Volken, Schell, Wheeler; The Mountaineers Books, 2007.

Equipment List for Avalanche Level I

The following list is a general guide and will assist you in packing for the program. Please do not hesitate to contact us if you have specific questions regarding equipment and if you need assistance prior to making a purchase. The following list will vary according to the time of year, and your individual requirements.

Items on the list with an * may be rented from SMC.

Essentials

- Beacon. This needs to be on the 457 frequency. We provide these if you do not have one.
- Shovel. Small collapsible style. We provide these if you do not have one.
- Probe. We provide these if you do not have one.
- On the snow transportation*. This can be snowshoes or skis. With skis you will need skins. With snowshoes bring ski poles. For telemark and alpine touring rentals call Mammoth Mountaineering (760) 934-4191. We rent snowshoes. A split board will get you up, but we will not be climbing for turns so carrying a board up might not be worth it for the few turns you will get in.
- Footwear. Ski boots or Sorrels or heavy boots for snowshoers.

Clothing

- 2 pair synthetic liner socks
- 2 pair heavier synthetic or wool blend socks
- Gaiters will keep snow out of boots.
- Long underwear top and bottom. Capilene or some other synthetic is most desirable.
- Warm pants or bibs. Pile or Expedition weight Capilene.
- Warm sweater top of some sort. Pile or Synchronilla.
- Pile jacket.
- Good quality rain/wind pants and jacket. A full storm system will ensure you stay warm even on the coldest days. Bibs are good to avoid the gap between pants and top.
- Warm hat.
- Visor hat (for sun)
- Liner gloves.
- Shell gloves or mittens. Mittens are warm, but you lose dexterity.

Etc.

- Daypack. A pack of about 2000 cubic inches is plenty big enough.
- Sunglasses, high quality with keeper leash. Wrap-around or a type with side shields are recommended. If you wear corrective glasses you might want a second pair.
- Sunscreen and lip screen. SPF 30+. Make sure the lip stuff actually contains a sunscreen. A 1 oz. bottle will be sufficient.
- One 1-quart plastic water bottle with insulating jacket.
- Thermos for a hot drink during the day.
- Headlamp with extra batteries and bulb.
- Camera, film and spare batteries.
- Binoculars are handy, but not essential.
- Notebook and paper. The waterproof style of note book is good for inclement weather.
- Goggles and a face mask are great if it becomes stormy.

Food

- Snacks and lunch for all three days. The two days it will be possible to buy lunch in town.

Vehicle

- Make sure that the vehicle is winterized with anti-freeze and bring tire chains. Be prepared for wintery and stormy travel.