

Avalanche | Syllabus

NATIONAL SKI PATROL



Far West Division – Mother Lode Region

Pinecrest Nordic Ski Patrol

Avalanche Level 1 (Modules 1 & 2)

February 17-24, 2022 (classroom)

March 5-6, 2022 (field)

Course Syllabus

Thank you for registering for the Avalanche 1 course to be held via Zoom on February 17-24, 2022. I strongly desire to host the February 24 meeting in-person at a local Bay Area location. The field session will most likely be at Castle Peak – Tahoe Donner on March 5-6, 2022. Backcountry navigation is necessary. An additional class will be offered for those not familiar with map/compass/GPS and mobile apps (CalTopo, Avenza, Gaia, etc.).

Enclosed is the student pack for the course. Please make sure you review all materials before the class and complete the pre-test. This course syllabus contains:

- a preliminary weekend agenda
- important logistics (lodging, meals, etc.)
- guidelines for personal equipment

You may also download this information from the Pinecrest Nordic Ski Patrol (PNSP) website at <http://www.pinecrestnordic.org/av1>

Additional course information must be ordered and received prior to the course weekend:

- Staying Alive in Avalanche Terrain (required)
- Snow Sense text (optional do not purchase if above \$15.00)

Order these at: Amazon.com

These will be emailed to you separately:

- Pre Test
- NSP Far West Division Event Release Form (available online at the Pinecrest website as well)

All students must read the Staying Alive in Avalanche Terrain and complete the pre-test BEFORE the course (we will check your work at check-in, email to the instructors in advance). All students must sign the NSP Event Release form in order to participate in the course (you may sign this in person on the first day of the course). If you are a minor, you must have the event release form signed by your parent or guardian before the class.

IF THERE IS ANYTHING THAT YOU DO NOT UNDERSTAND OR HAVE QUESTIONS ABOUT ,PLEASE DON'T HESITATE TO E-MAIL ME.

Regards, Keith Gale
keith_gale@hotmail.com

Course Coordinator Instructor of Record

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Agenda: Classroom Sessions

Thursday February 17 – 7 :00-10:00PM ZOOM: PLEASE BE ON TIME!

Email your Pre-Test, and writing materials to take notes.

7:00– 7:30:	Introductions and Course Overview
7:30 – 8:00:	Avalanche Awareness - Hazards and Characteristics
8:00 – 8:45:	Avalanche Triangle (Weather)
8:45 - 8:55:	Break
8:55 - 9:20	Avalanche Triangle (Snowpack)
9:20 - 10:00	Avalanche Triangle (Terrain)

Tuesday February 22– 7 :00-9:30PM ZOOM

7:00 - 7:30:	Snow Mechanics and Avalanche Dynamics
7:30 - 8:15:	Stability Assessment-Snow Pit
8:15 - 8:25:	Break
8:25 - 9:25:	Trip Planning
9:25 – 10:00:	Planning Exercise

Wednesday February 23– 7 :00-9:00PM ZOOM

7:00 – 7:30:	Travel Safely in Avalanche Terrain- Principles of safe travel
7:30 – 8:00:	Decision tools
7:30 – 8:00	Companion Rescue
8:00- 8:10	Break
8:10-8:30	Medical
8:30-9:15	Human Factors: Presentation

Thursday February 24– 7 :00-10:10PM ZOOM (in-person preferred):

7:00-7:45.	Human Factors discussion
7:45-8:30.	A Dozen More Turns (video)
8:30-8:45	Break
8:45-9:10.	Tunnel Creek Case Study
9:10-9:30.	Sheep Creek Case Study
9:30-10:00.	Turnagin Pass Case Study
10:00-10:10	Outdoor Logistics

During the week of February 21, students will be required to review trip plans to a given location and report to their group at the following weekend with a comprehensive travel strategy based on available maps, weather and snow reports, personal and team equipment, and group make-up and dynamics. Details will be discussed at the end of Tuesday's indoor class

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Agenda: Outdoor

Saturday – March 5, 2022– Donner Summit Sno Park Area (location dependent)

08:00 - 08:30:	Arrive/Dress-up/ display Day Passes for Sno-Park
08:30 - 09:00:	Travel to trailhead.
09:00 - 09:15	Conduct beacon check at Trail-head
09:15 - 9:45	Beacon Basics
9:45 - 10:45	Single Beacon Practice Round Robin-Three stations
10:45 - 11:00	Multiple Beacon Introduction (know your beacon “marking” function”).
11:45 –12:00:	Travel to Lunch Spot
12:00 – 12:30:	Lunch
12:30-12:45	Strategic Shoveling
12:45-1:15	Sno-Pit Analysis
13:15–13:30:	Travel to Rescue Scenarios
14:00-15:30	Three Round Robin Rescue scenarios
15:30 – 16:00:	Beacon Station-Multiple Beacon
16 :00 – 16 :30:	Return to Trailhead
16 :30 – 17 :00 :	Final Debrief and Planning for Field Exercise

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SUNDAY – March 6, 2022 – 08 :00 CASTLE PEAK – TAHOE DONNER

We will confirm exact meeting place and directions during the week of February 25.

Please report to the meeting place on time and ready for a full day on the snow.

Pending weather and snow conditions, the field day may be re-scheduled to another subsequent weekend.

07:30-08:00- Boot-up/dress-up, display Day Passes for Sno-Park

08 :00 – 08 :30: Review objectives and trip plan

08 :30 – 09 :00 : Travel to Trailhead.

09 :00 – 12:00 : Travel to field location

Do beacon check en route, Terrain recognition; safe travel practices

12: 00 – 12 :30 : Lunch

12 :30 – 13: 00: Snow-pit

13 :00 – 15 :30 : Round Robin Rescue Scenarios

15 :30 – 16:00 : Multi-beacon practice option

16:00 – 16 :30 : Return to Trailhead

16 :30 – 17 :00 : Debrief and return to vehicles.

17:30- Depart

All participants (*students, instructors, advisors*) are to return in teams to the meeting place at the conclusion of Sunday field exercise. Nobody will be dismissed until all teams, members, and instructors are present and accounted for at the trailhead.

NO EXCEPTIONS

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Transport on Snow:

- We will conduct field sessions in the Pinecrest backcountry trail system throughout the first weekend. The field session will be conducted entirely in the outdoors. Students must be equipped with either skis or snowshoes for crosscountry travel over snow.
- Skiers are encouraged to use free-heel bindings (cross-country, telemark, or AT), and either use waxless-type touring skis or bring climbing skins
- Snowshoes are recommended especially if you are not comfortable on skis. Bring ski poles and sturdy, waterproof boots if you are snowshoeing.

If you are renting gear, pick up your gear and make sure it fits and works properly BEFORE class starts at 8am Saturday. Please contact the course instructors if you have any questions about renting gear.

NOTE: Field sessions will take place in a backcountry, winter environment and weather patterns are unpredictable. Students must be equipped with appropriate clothing and gear to spend several hours in potentially cold and wet conditions. Students are expected to be proficient in moderate uphill and downhill travel in difficult snow conditions using their choice of gear (backcountry skis, boards or snowshoes). Please do not hesitate to contact the course instructors if you have any questions on appropriate gear and backcountry travel requirements.

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Equipment

For the lecture sessions: dress comfortably to be in a classroom for the entire morning session. Bring a pen and paper for taking notes.

For the field sessions: dress to be outside, working, for the entire day. We will eat lunch out on the mountain, so pack a healthy lunch. Bring a backpack with enough room to carry your lunch and any personal equipment, with some extra room for group equipment. Avalanche work is strenuous activity requiring plenty of energy. Make sure you bring a good lunch and plenty of water with you. You are also likely to spend a lot of time in the snow, and are likely to get wet. Be sure you are equipped with the proper clothing to maintain comfort all day in cold, variable, and wet conditions.

We encourage participants to use their own equipment wherever possible, as this will improve their experience with that equipment. You are not expected to own all the equipment on this list, but if you have it or can borrow it, please bring it along. We have a limited supply of packable shovels and avalanche transceivers that we can loan to those who do not already own them. If you plan on purchasing one of these items, the classroom instruction and field trip will give you a chance to learn about several different options before making your purchase. You can use this page as a checklist.

Avalanche 1 EQUIPMENT LIST

Clothing (required): NO COTTON!!!

- ___ Long Sleeve Shirt/Sweater (*polypro, fleece, wool*)
- ___ Pants (*polypro, pile, wool, wool blend, ski pants*)
- ___ Warm Jacket/Sweater (*fleece, down, wool, wool blend*)
- ___ Long Sleeve Thermal Underwear (*polypro, wool*)
- ___ Beanie/Balaclava
- ___ Mittens/Gloves - 2 pair (*polypro, fleece, wool*)

Foul Weather Gear (required):

- ___ Waterproof/Water-Repellent Parka or Shell
- ___ Waterproof/Water-Repellent Pants or overalls
- ___ Waterproof/Water-Repellent Mittens or gloves

Footwear (required):

- ___ Ski Boots or well waterproofed Hiking Boots
- ___ Gaiters, optional (*calf height*)
- ___ 2 pair heavy hiking/ski socks

Transport (required):

- ___ Skis (*backcountry touring, with skins*)
- ___ Snowshoes (*MSR or similar small type*)
- ___ Ski Poles (*even if you are snow shoeing*)

Avalanche (bring it if you have it. Rental beacon available for \$25, probe/shovel \$10) :

- ___ Avalanche Transceiver (beacon)
- ___ Avalanche probe
- ___ Snow shovel

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Helpful Links

There is a plethora of good information on avalanche education and awareness available on the internet. Listed below are just a few websites that your instructors find particularly useful. Lots of hidden treasures lie deep within these sites... take a few hours to browse and explore.

Avalanche Forecasts for various regions of California:

<http://sierraavalanchecenter.org> (Central Sierra, Tahoe area)

<http://esavalanche.org> (Eastern Sierra) <http://shastaavalanche.org>

(Mt Shasta)

Weather information

<http://www.wrh.noaa.gov/> (The source of most internet weather forecasts)

<http://www.wrh.noaa.gov/forecast/wxtables/index.php> (Forecast weather tables... useful!)

<http://www.nohrsc.nws.gov/> (Detailed snowpack data... pretty technical)

Incident reports and information portal for other mountain regions:

<http://avalanche.org>

<http://csac.org>

Products and training information:

<http://fsavalanche.com/> (National Forest Service Avalanche Center)

<http://beaconreviews.com> (Comprehensive data on various beacons)

<http://www.backcountryaccess.com/education-research/avi-research-and-papers/>

<http://www.youtube.com/user/AvalancheGuys> (Snow pit analysis videos - Montana)

Discussion forums (caution, not all advice here is legitimate):

<http://www.telemarktalk.com/phpBB/viewforum.php?f=2>

<http://www.tetongravity.com/forums/forumdisplay.php?f=17>

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