



SKI MOUNTAINEERING SCHOOL COLORADO MOUNTAIN CLUB BOULDER GROUP SPRING 2011

SUMMARY

The Denver and Boulder groups of the Colorado Mountain Club (CMC) jointly sponsor the Ski Mountaineering School. Denver Group members should register through the Denver Group, Boulder Group members through the Boulder Group. Members of other CMC groups may register through either group.

Ski mountaineering has been called backcountry skiing that from time to time requires mountaineering skills and judgment. It includes climbing peaks with the help of skis, ski traverses that take you into the mountains, and skiing slopes above and below treeline. This CMC course is intended for members who wish to improve their knowledge, skills, and safety while climbing and skiing on untracked slopes in mountaineering terrain. The school includes evening lectures, several 1-day field trips, and one multi-day overnight ski tour. The format of the course includes a series of lectures and field sessions that cover gear, travel techniques with backcountry gear, self-arrest techniques, emergency shelters, avalanche assessment (analysis, risk minimization, rescue), route finding, navigation, general winter mountaineering techniques, weather, group leadership, trip planning, and accident management.

SKI MOUNTAINEERING SCHOOL OUTLINE

GENERAL INFORMATION

Depending on the availability of qualified instructors, the school will accommodate a variety of backcountry gear: alpine touring (AT or randonee) skis, telemark skis, and split snowboards. Participants should be familiar with the use of their skiing or boarding gear in the backcountry. The school is designed for CMC members with good level of fitness (should be able to hike 1,000 vertical feet on a trail in an hour), the ability to ski Black slopes at downhill areas with reasonable confidence, and basic mountaineering skills and experience. The focus of the course is on the skills needed to ascend and descend ski mountaineering routes in Colorado and similar terrain. Although terrain requiring technical gear such as crampons, ice axes, ropes, etc., may be encountered during school field trips, regular sessions will not cover roped glacier travel and crevasse rescue. Ski mountaineering on glaciated terrain often requires such skills and experience. Hence, students who are interested in ski touring on glaciated terrain are encouraged to enroll in the CMC Denver High Altitude Mountaineering School (HAMS) or the Boulder Advanced Mountaineering School (AMS).

SCHOOL FORMAT

The course consists of 3 evening lectures and 5 field trips. Lectures are held in the American Mountaineering Center in Golden and start at 7:00 p.m. All field trips are held at backcountry locations. Four of the field trips are day trips, the fifth trip requires backpacking and camping or hut stay. To graduate from the school, students need to participate in all 3 lectures and all 5 field trips. Students have 2 years to complete the requirements. Participation during the second year is at no additional cost. The lectures will be held at the American Mountaineering Center in

Golden 7:00 – 9:30 p.m. on 3/8, 3/15, and 3/22. Field trips will be on 3/19, 3/27, 4/2, 4/16, 4/30, and 5/13-15

PRIOR PARTICIPANT EXPERIENCE EXPECTED

Enrollment in the school is on an application basis. This is an intermediate to advanced course and applicants are expected to have completed the following CMC schools, or have equivalent experience:

- A first aid course (Red Cross or mountain-oriented MOFA, WFA)
- Completion of either the Denver or Boulder Avalanche School or any equivalent Level 1 Certification Program. Should include at least a 1-day field practice session.
- Participants should have basic ice axe and crampon skills. Completion of a CMC Basic or Boulder Mountaineering School is one way to meet this requirement.
- Applicants are expected to have at least solid intermediate downhill or backcountry skiing or snowboarding skills. That means that applicants should be comfortable skiing groomed “Black” downhill runs at ski areas or be able to execute multiple linked turns on moderate angle backcountry terrain in ungroomed snow conditions.
- Applicants should be able to climb moderately steep and uneven terrain with skis or split snowboards and climbing skins.
- Participants should have a good level of fitness (should be able to climb 1,000 vertical feet on a trail in an hour).
- It is highly recommended that applicants participate in one or more moderate or advanced CMC ski tours before enrolling in the school.

REQUIRED EQUIPMENT

Participants who are uncertain about gear selection, or are interested in learning about newly available gear, should attend the optional backcountry gear demo (see above).

In addition to the usual gear one would take on a CMC hiking/climbing trip, participants will need the following equipment:

- Inclinator, avalanche beacon, shovel, and probe,
- Day pack for day trips and larger backpack for overnight trips (packs should be capable for carrying all of the gear plus the skis on the outside),
- Camping gear (tent, sleeping bag, pad, cooking gear) for overnight trips,
- Headlamp,
- Basic first aid kit,
- Basic ski repair kit appropriate for the gear used (straps, duct tape, Swiss Army knife or multi-tool),
- Backcountry skis with alpine touring (AT or randonnee) or telemark bindings or split snowboards with appropriate bindings,
- Ski poles, adjustable if preferred. Some skiers and boarders use self-arrest poles such as the BD Flicklock Whippet to stop steep skiing falls. An advanced tool - not for beginners!
- Glue-on climbing skins fitted to the skis or split snowboards,
- Alpine touring (AT or randonnee) or telemark ski boots or snowboarding boots,
- Optional: Medium-sized insulation pad,
- Emergency gear depending on the nature and seriousness of the trip (bivy gear, firestarter, extra clothing, etc.),
- Depending on the peak climb chosen, participants may need climbing gear such as helmet, ice axe, crampons and climbing harness.

REFERENCE BOOKS AND WEBSITES

No single reference book on ski mountaineering is recommended. The notes on the various field sessions include appropriate references for the particular session. A number of websites accessible to students are recommended. Particularly useful websites for avalanche information are: <http://www.couloirmag.com> and <http://avalanche.state.co.us/>. For general information: <http://www.wildsnow.com>. The magazines *Couloir* and *Backcountry* provide interesting articles on gear, techniques, avalanche assessment, and places to go.

Courses similar to the proposed school are currently offered by mountaineering clubs in the Pacific Northwest. Appropriate web sites are:

- <http://www.mountaineers.org/skiing/>
- http://www.mazamas.org/education/skimt_info.php

APPLICATION AND REGISTRATION

Enrollment in the school is on an application basis. Interested individuals should complete a Ski Mountaineering School application form and return it to:

CMC Boulder Group/ SMS
633 S. Broadway, suite N
Boulder, Co 80305
303-554-7688

You will be informed about your acceptance into the Ski Mountaineering School once your application has been reviewed.

Application forms are available at any of the following:

Cindy Gagnon (bms@cmcboulder.org)
CMC office (address above)
website www.cmcboulder.org

Requests for waivers of prerequisite requirements should be made in writing at the time of application. The school fee is \$125 and covers lecture notes, other course materials, and a subsidy for any hut accommodations. Questions regarding the school or the application and registration procedure should be addressed to one of the Boulder Group school contacts

The application deadline is February 15

SCHOOL CONTACTS

Boulder Group
Co-director: Cindy Gagnon, gagnonc2@comcast.net, 303-938-8564

Denver Group
Co-director: Michele Jung, michelle jung <jungmm@hotmail.com>

Ski Mountaineering School Student Application for Admission

Colorado Mountain Club – Boulder Group



Application deadline is February 15

Name _____ Age _____ Male ___ Female ___

Address _____ City _____ Zip _____

Telephone: Home _____ Work _____

Preferred Email Address _____

CMC Membership Number _____ CMC Group _____

Applicants must be current CMC members and at least 18 years old.

Year Completed Avalanche School: _____ Provider (CMC, AAI, AAA, or other): _____

Indicate the Level of the Avalanche School Completed: _____

Completion of the CMC Avalanche Awareness School or equivalent training is a school requirement.

Year Completed First Aid Course: _____ Provider (Red Cross, CMC, or other): _____

Completion of a CMC first aid course or equivalent training is a school requirement.

Year Completed BMS _____

Basic mountaineering training is a school requirement. One way to meet that requirement is by completing the Basic Mountaineering School. If you have not completed BMS, please describe the equivalent experience in sections 7. and 8. below.

Current CMC Skiing Classification (for Denver Group members only):

Moderate: _____ Year Granted: _____

Advanced: _____ Year Granted: _____

Please answer the following questions as completely as possible.

1. List the CMC skiing and climbing trips that you completed in the last two years? It is highly recommended that you complete one or more CMC backcountry ski tours prior to enrolling in the Ski Mountaineering School.

CMC "Moderate" ski tours completed: Date Destination	CMC "Advanced" ski tours completed: Date Destination

2. List the CMC hiking or climbing trips that you completed in the last two years?

CMC "C" hikes or climbs completed: Date Destination	CMC "D" hikes or climbs completed: Date Destination

3. What CMC schools, seminars, or other training have you completed? Year

	Year

4. List training outside of CMC such as first aid, mountaineering, rock climbing, ice climbing, skiing, or avalanche schools. Year

	Year

5. List volunteer CMC activities where you helped or led/taught (for example teaching in CMC schools, serving as CMC officer, serving on CMC committees, trail maintenance, office support.)

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6. How would you rate your skiing ability? On which type of skiing terrain are you now comfortable?

Downhill Resort Skiing Ability – Choose the most difficult level at which you would be comfortable skiing under normal circumstances on groomed slopes:

- Green Ski Runs
- Blue Ski Runs
- Single Black Diamond Runs
- Double Black Diamond Runs

Backcountry Skiing Ability – Choose the most difficult level at which you would be comfortable skiing assuming that the avalanche risk at the time is acceptable for the indicated terrain:

- Slopes up to 25 degrees. Easy terrain, broad and open slopes, good snow. Sideslip and stem turn will get you down.
- Slopes up to 30 degrees. Terrain obstacles well separated. Backcountry snow conditions.
- Slopes up to 35 degrees. Steep. Closer spaced terrain obstacles such as tight trees. May encounter poor snow conditions.
- Slopes 35 to 40 degrees. Very steep. Terrain obstacles such as trees, cliffs, reasonable runouts.
- Slopes over 40 degrees. Extremely steep. Terrain obstacles such as narrow gullies or rocks, limited runouts. Falls difficult to arrest. Uncertain snow conditions.

Other indications of your skiing ability, such as examples of recent ski tours:

7. Basic ice axe snow skills are expected for participants of the school. Have you done any snow or ice climbing with an ice axe and crampons recently? If so, include names of routes, ratings or difficulty, and other descriptions of the climbs.

8. What ski touring, mountaineering, backpacking, camping, or hiking trips, other than those listed under 1. and 2. have you completed during the past year? Include names of peaks, CMC trip ratings, trips outside of CMC, number of days, level of difficulty, or other indications of your level of mountaineering skills and stamina.

9. For your safety and the safety of your group, please list any medical conditions that might affect your participation in the school or medical issues your instructors need to understand. If you have medical training beyond a first aid course, please indicate.

Medical Conditions, if any:

Medical Training (Beyond First Aid):

In Case of Emergency, Notify:

Name: _____

Telephone Number(s): _____

Relationship: _____

Address: _____

City: _____ State: _____ Zip Code: _____

I plan to use the following gear:

Avalanche beacon manufacturer/model _____ Year purchased _____

Alpine touring (AT or randonee) skis _____

Telemark skis _____

Split Snowboard _____

Date of application:

Print Name:

Signature:

Requests for waivers of prerequisite requirements should be made in writing at the time of the application.

The application deadline is February 15