



This Guide to Nordic/ Backcountry Senior is a work in progress. Our goal is to put it into the hands of the NSP Nordic & Backcountry community for real world use and evaluation prior to putting it into our new Manual. There will be content, format, and spelling changes. There will be discussion and debate. There will be evolution. Thank you for being part of the process. We primarily want to focus on content. This is meant to be used Nationally, to create a standard for all of our Nordic/ Backcountry Senior Programs and exams. While all of the exam criteria may not apply to your specific Division, Region, or Patrol please use this as the minimum standard.

To Patrollers seeking their Nordic or Backcountry Senior Certification, I hope this document helps with your success. Good luck!

Please email questions, or thoughtful, constructive feedback to either your Division Nordic Supervisor or me at [nsp@shandler.net](mailto:nsp@shandler.net)

Thank you,  
Rick Shandler, National Nordic Program Director

# Nordic/ Backcountry Senior Program Sign-Off Sheet

## Introduction

Thank you for your interest in the Nordic/ Backcountry Senior Program. This program presents you with the opportunity to elevate your understanding and practice of Nordic skiing, backcountry travel, and rescue leadership. As a Senior, you will represent a patroller with a higher level of proficiency, and someone who provides skills and leadership within your patrol as well as within NSP. This program helps to form our next leaders and officers. This guide will serve as a resource to manage your expectations, assist you in completing your prerequisites, and lists the skills that you and your trainers need to review in order for you to successfully complete the Nordic Senior Evaluation. You should work on the premise that all skills and knowledge covered in your prerequisites are potentially part of your evaluation.

**You must bring these sign off sheets with you to your Nordic/ BC Senior Clinics and Evaluation**

Senior Candidate Name \_\_\_\_\_ NSP # \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Email \_\_\_\_\_ Best phone # \_\_\_\_\_

Patrol Director Signature \_\_\_\_\_

## Senior Nordic/ Backcountry Candidate Checklist

---

Complete the following Prerequisites prior to Evaluation

- Nordic/ BC Senior Application signed by Nordic/BC Patrol Director or Division Nordic Supervisor Approval
- Mountain Travel and Rescue II course \_\_\_\_\_ (Date Completed/ Location)
- Avalanche Level 1 Module 1, or higher level course \_\_\_\_\_ (Date Completed/ Location)
- Nordic Senior Skills checklist
- Register for Nordic/BC Senior Evaluation
- Senior OEC \_\_\_\_\_ (Date Completed/ Location) (Required for Nordic Senior, it is recommended but not required for the S&T Evaluation)

## Completion Log for Senior Nordic/Backcountry Ski, Toboggan, & Rescue Skills

The following Senior Nordic/Backcountry skills have been demonstrated to a Nordic or MTR Instructor and have been performed correctly, confidently, and in accordance with the appropriate skill performance guidelines. Transport, Rope Rescue, Fire, Shelter and Navigation skills may be demonstrated to and signed off by an MTR Instructor. All skills are to be done by or lead by the Senior Candidate.

Skill Performance Required	Nordic Instructor (MTR Instructor acceptable where indicated by ^^) Name and Signature	Date Completed
<b>Pack Check</b>  Candidate pack should be evaluated for appropriate contents. This should include all items to meet the objectives for an all day evaluation. This should take place prior to Evaluation Day		
<b>Transport ^^</b>  1. Construct a Nordic Toboggan 2. Haul loaded toboggan minimum 0.5 kilometers (with 3 additional people) 3. Toboggan should remain sturdy after 0.5 K pull	_____ _____ _____	_____ _____ _____
<b>Rope Rescue ^^</b>  1. Build a Z-drag (3:1) haul system 2. On appropriate terrain demonstrate a low angle belay rescue system 3. On appropriate terrain haul Injured Patient no less than 25 feet via haul system 4. Demonstrate proper belay commands and techniques	_____ _____ _____ _____	_____ _____ _____ _____
<b>Fire ^^</b>  1. Construct and maintain a matchless fire on snow and boil ½ liter of water.		
<b>Shelter ^^</b>  1. Build an expedient emergency shelter capable of sheltering 2 people overnight		
<b>Navigation ^^</b>  1. Locate current position on map using UTM, Lat/Long, or Township and Range 2. Using Dead Reckoning, navigate to an appropriate destination 3. Demonstrate GPS Skills (enter waypoint via coordinates & current location, convert UTM to Lat/Lon or vsv, select appropriate datum, navigate to waypoint, select return course, create track) 4. Demonstrate Map and compass skills (Triangulation, resection, bearing, heading, etc.) 5. Demonstrate route selection and hazard identification	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____

Skill Performance Required	Nordic Instructor (MTR Instructor acceptable where indicated by ^^) Name and Signature	Date Completed
<b>General Repairs</b>  1. Repair skis/binding 2. Repair ski pole 3. Repair ski boot	  _____ _____ _____	  _____ _____ _____
<b>Tour</b>  Lead a Nordic/ BC tour and complete the objectives set forth by the Evaluators		
<b>Skiing</b>  Demonstrate the following techniques:  1. Diagonal Stride 2. Double Pole 3. Double Pole with Kick 4. Ability to Glide 5. Herringbone 6. Side Step 7. Kick Turn 8. Uphill Diagonal	  _____ _____ _____ _____ _____ _____ _____ _____	  _____ _____ _____ _____ _____ _____ _____ _____
<b>Skating</b>  Demonstrate the following techniques:  9. Diagonal Skate 10. V1 Skate 11. V2 Skate 12. V2 Alternate 13. Marathon Skate	  _____ _____ _____ _____ _____	  _____ _____ _____ _____ _____

Skill Performance Required	Nordic Instructor (MTR Instructor acceptable where indicated by ^^) Name and Signature	Date Completed
<p>Downhill</p> <p>Demonstrate the following techniques:</p> <ol style="list-style-type: none"> <li>14. Straight Run</li> <li>15. Gliding Wedge</li> <li>16. Braking Wedge</li> <li>17. Wedge Turn</li> <li>18. Wedge Christie</li> <li>19. Stem Turn</li> <li>20. Skate Turn</li> <li>21. Step Turn</li> <li>22. Pole Drag</li> <li>23. Parallel Turns</li> <li>24. Telemark Turns</li> <li>25. Controlled Fall</li> <li>26. Traverse</li> <li>27. Demonstrate waxing appropriate for trail and weather conditions; or describe glide wax, red, blue, and green wax, and klister</li> </ol>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Backcountry Skiing – In addition to the above skills</p> <ol style="list-style-type: none"> <li>1. Uphill with Skins, ski crampons, waxless base, etc. with and without heel lifters</li> <li>2. Transition to and from Skins (if being used)</li> <li>3. Cross Slope Travel</li> <li>4. Side Slip/ falling leaf</li> </ol>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Medical</p> <p>Demonstrate the following skills:</p> <ol style="list-style-type: none"> <li>1. Any Senior OEC level problem, with improvised equipment if needed, and extended care as a possible complication</li> <li>2. Explain how to avoid, assess and field treat hypothermia</li> <li>3. Explain how to avoid, assess and field treat frostbite</li> </ol>	<p>_____</p> <p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p> <p>_____</p>
<p>Local</p> <p>Familiar with, and able to perform, any local protocol</p>	<p>_____</p>	<p>_____</p>

# Reference Materials

## [PSIA Nordic Matrix](#)

Go to youtube.com and search for PSIA Nordic Matrix or use the url below. This set of 20 videos contains excellent demonstrations of proper ski technique, and is great reference for the skills listed in this document.

<https://www.youtube.com/playlist?list=PL95AEFADCD89A9D05>

*Free Heel Skiing: Telemark and Parallel Techniques 3<sup>d</sup> ed.* by Paul Parker, The Mountaineers Books

*BackCountry Skiing, Skills for Ski Touring & Ski Mountaineering* by Volken, Schell, & Wheeler, The Mountaineers Books

# Guide to Nordic/ Backcountry Senior

Beta Version 54

Please send questions or comments to Rich Shandler, National Program Director, [nsp@shandler.net](mailto:nsp@shandler.net)

## General Course Guidelines

The Nordic Senior Program is tailor-made for members with the skiing ability of a PSIA level II for Nordic downhill or Nordic track who aspire to perform at the upper levels of skiing, emergency care proficiency, and other skills used while patrolling. The core components for Nordic senior candidates are addressed in this manual and *The Ski Patroller's Manual*, 14th edition.

## Required Nordic/Backcountry Senior Components

- Nordic/ BC Skiing
- Extended Nordic/BC Ski Tour
- Nordic Toboggan Transport and Belays
- Senior OEC
- Mountain, Travel & Rescue Level 2
- Two additional electives from senior elective list

## Time Commitment

- Each program core course includes local and division training, clinics, and evaluation

## Fees

- National-none
- Division-varies
- Local-varies
- Cost of materials

## Instructor of Record

- Division-trained senior instructors
- NSP Nordic toboggan instructor trainers

## Credentials

- Change of NSP member level to Nordic Senior once all core and elective components are completed
- Complete a review of Nordic skiing, toboggan handling, and subject survival skills once every three years

## Continuing Education Requirements for Nordic Senior Patrollers

Recommendation: Maintain certification requirements for Advanced Mountaineering by instructing Basic and/or Advanced Mountaineering courses or helping with local search and rescue training

References: As material is updated please work to stay contemporary and use the latest editions.

- The Ski Patroller's Manual, 14th edition, National Ski Patrol, 1997
- The Avalanche Handbook 3rd edition, David McClung & Peter Schaerer 2006
- Avalanche Rescue Quick Guide, National Ski Patrol, 6th ed. 2009
- Avalanche Rescue Fundamentals 2010
- The ABC of Avalanche Safety, second edition, E.R. LaChapelle, 1985
- Snow Sense, Jilla. Fredston and Doug Fesler, 2011
- PSIA materials (The American Teaching System:

- Nordic Skiing, ATS Nordic Handbook)
- Mountain Travel and Rescue 2nd edition, National Ski Patrol, 2012
- *Free Heel Skiing: Telemark and Parallel Techniques 3rd ed.* Paul Parker, The Mountaineers Books
- *BackCountry Skiing, Skills for Ski Touring & Ski Mountaineering* Volken, Schell, & Wheeler, The Mountaineers Books
- Area-specific manuals
- Webography
  - <https://training.fema.gov>
  - select Independent Study
  - Select the course desired from the drop-down menu

### [PSIA Nordic Matrix](#)

Go to [youtube.com](https://www.youtube.com) and search for PSIA Nordic Matrix. This set of 20 videos contains excellent demonstrations of proper ski technique, and is great reference for the skills listed in this document.

## Nordic/BC Senior Requirements and Recertification

Core and Elective Requirements	Recertification
Nordic /BC skiing	Continuing education review once every year by Nordic S&T Instructor
Toboggan transport and belays	Continuing education review once every year by Nordic S&T Instructors
Nordic On The Trail Refresher	Continuing education review annually, including local protocols and appropriate Nordic Refresher cycle content
Senior OEC	Satisfied by completing annual OEC refreshers
MTR 2 Course	Not required to maintain senior status

Completion of NSP's Senior Program entitles an NSP member to have his or her member-level category changed from "patroller" to "Nordic senior" in the national member data base (reference: The Ski Patroller's Manual, 14th edition, page 25).

## Senior Core Component: Nordic Skiing

### Prerequisites

- Training clinics (local, region, division)
- Warm-up exercises before evaluation clinic
- Patrol pack containing equipment and materials normally used in the local patrol environment. Patrol pack review should be done in time to modify or correct any deficiencies.

### Clinic/Evaluation Objectives

The skiing portion of the Nordic Senior Program consists of using good Nordic skiing fundamentals to demonstrate skiing maneuvers effectively in all varieties of terrain and conditions. Nordic skiing clinics emphasize maneuvers used in traditional, skating, and Nordic downhill skiing; specifically, the diagonal stride, the double-pole with and without kick, skate turns, uphill traverses, kick turns, the herringbone, Nordic downhill turns, step turns, the pole drag, and Nordic skiing in unpacked snow and icy conditions. (Fig. 26)

During evaluation, elegant, stylistic technique is not necessary; however, the senior candidate is expected to demonstrate proficiency equivalent to that of a PSIA Level II instructor (advanced intermediate).

### [Diagonal Stride and Double Pole](#)

A clear understanding of the technical components of diagonal stride and double pole methods are necessary for a successful evaluation. The weight shift, timing, and balance required for proper rhythm and flow are essential.

For the following segments of the clinics and evaluations, diagonal stride and double pole maneuvers should be performed on the terrain indicated.

Demonstration, practice, and evaluation: mildly rolling, track or prepared smooth surfaces

### [Performance Objectives for Diagonal Stride and Double-Pole Techniques](#)

When performing diagonal stride and double-pole techniques on track or prepared surfaces, the senior candidate must demonstrate the following.

- An emphasis on correct body position
- Balancing movements
  - An ability to move from ski to ski with rhythm and fluidity
  - An ability to balance on gliding skis during upper-body propulsion movements



- Rotary movements
  - Active guidance of the initiated ski to complement steering the weighted ski during the diagonal stride
  - Complementary arm/leg movements
  - Active guidance of both skis during the double pole
- Edging movements
  - An ability to maintain a flat, sliding ski
  - Use of knee/ankle control for edge angle control
- Pressure-control movements
  - Smooth, effective weight shift from ski to ski (kick)
  - Effective compression guided try abdominal muscles
  - Refined pole use and timing
  - Movement of weight to the heels during double-pole push, then toward the balls of the feet as the arms swing forward after pole push.

### Double Pole with Kick

The Nordic senior candidate is expected to combine foot propulsion with proper double-pole technique.

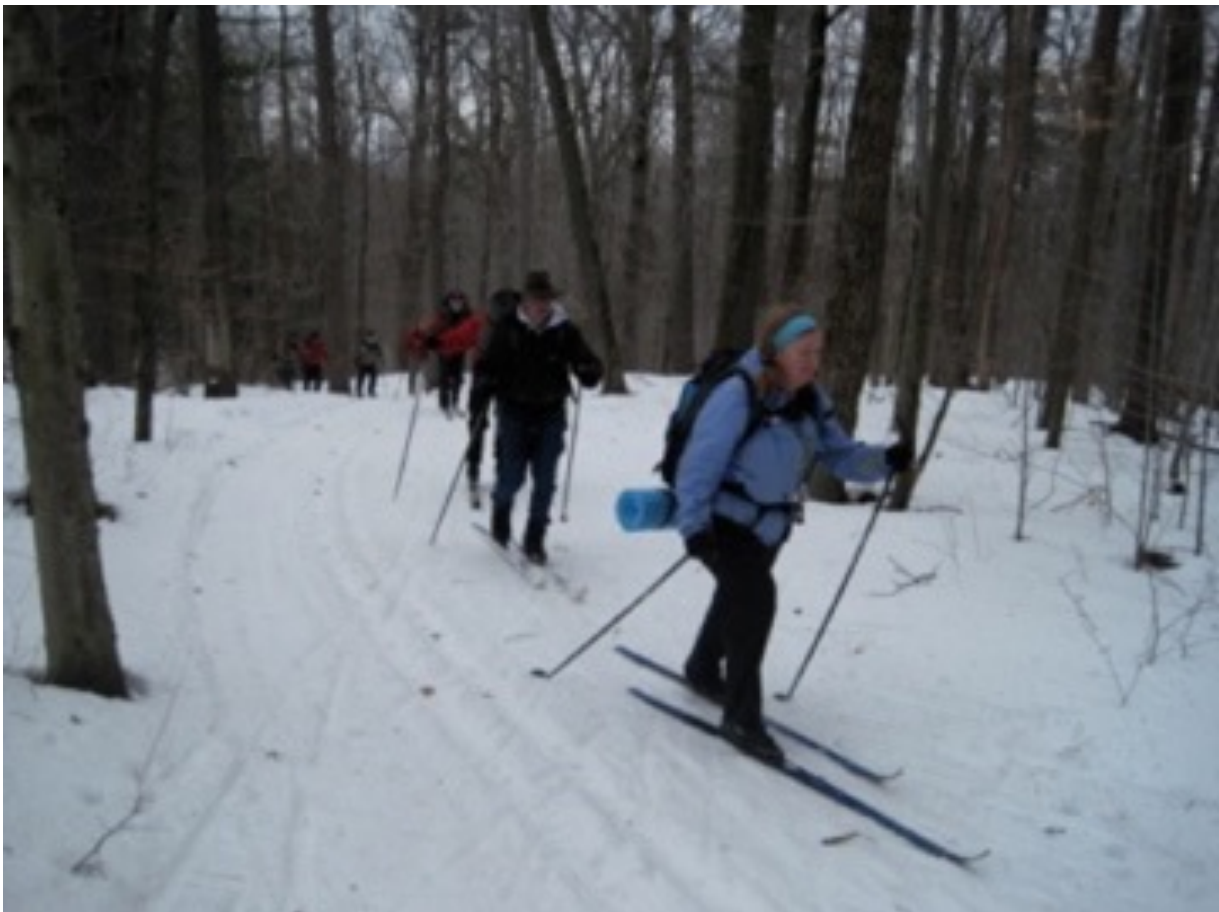
For the following segments of the clinics and evaluations, double poling with a kick should be performed on the terrain indicated.

- Demonstration and practice: easier, set track, flat, or slight downhill; more difficult, rolling set track.
- Evaluation: more difficult, rolling set track.

### Performance Objectives for Double Pole with Kick

When performing a double-pole-with-kick technique, the senior candidate must demonstrate the following:

- Balancing movements
  - Coordinated movement of one foot with both arms
  - Timing combined with dynamic balance
- Rotary movements
  - Active guidance of the unweighted ski to complement steering of the weighted ski
- Edging movements
  - An ability to maintain flat, gliding skis
  - Use of knee/ankle control for edge angle control
- Pressure control movements of the skis and



poles

- Smooth, effective weight shift from ski to ski (kick)
- Effective poling due to compression guided by abdominal muscles

## Skating

For the following segments of the clinics and evaluations, skating maneuvers (V-1, Skate, V-2, and V-2 Alternate) should be performed on the terrain indicated.

- Demonstration and practice: flat terrain to rolling trails
- Evaluation: mild rolling to more difficult trails.

## Performance Objectives for V-1 Skate

When performing V-1 skate techniques, the senior candidate must demonstrate the following.

- Balancing Movements
  - Effective ski-to-ski movement that maintains glide and contributes to propulsion
- Rotary movements
  - Active foot/leg steering of the unweighted ski
  - Maintaining a “v” relation with the skis
  - Aligning the body to face the gliding ski
  - Maintaining the skis’ divergent relationship; size of “v” depends on the skier’s speed and steepness of terrain
- Edging movements
  - Edged ski to push; flat ski to glide
  - Refinement of edge angle on push ski and appropriate adjustment on glide ski
- Pressure-control movements
  - Complete weight transfer from push ski to glide ski
  - Skate push begins with the foot under the hips
  - Upper body and hips align with push ski before a smooth weight transfer; then move toward glide
  - Timing of pole plant, pull, and push becomes more refined

## Performance Objectives for V-2, V-2 Alternate

When performing V-2 and V-2 Alternate skate technique, the senior candidate must demonstrate the following.

- Balance movements
  - Makes effective ski-to-ski movements that maintain glide and contribute to propulsion
  - Shows ability to maintain extended glide, balanced on one ski.
- Rotary movements
  - Aligns body to face the gliding ski after weight transfer
  - Maintains the skis’ divergent relationship, yet

the size of the “v” is smaller due to gliding nature and higher speed of the maneuver

- Edging movements
  - Maintains a flat ski during polling and recovery phases
  - Uses fine edge-angle control to enhance the gliding nature of the maneuver
- Pressure-control movement
  - Maintains propulsion by polling, effective pole push, and upper body compression
  - Begins polling before skating
  - Prepares body for compression with forward lean of body before pole plant

## Skate Turns

For the following segments of the clinics and evaluations, skate turns should be performed on a set Nordic track on the terrain indicated.

- Demonstration and practice: easier, flat or gentle downhill, groomed trail; moderate, gentle downhill groomed trail
- Evaluation: moderate, gentle downhill groomed trail

## Performance Objectives for Skate Turns

When performing skate turns, the senior candidate must demonstrate the following.

- Powerful extension of the leg from a firm platform
- An edged ski for the push; a flat ski for the glide
- Simultaneous use of both poles with each skating motion
- Timing – weight is transferred to the divergent ski as the extension of the pushing leg is complete
- Rhythm achieved by smooth, sequential motion
- Marked acceleration out of turn

## Uphill Traverse

The uphill traverse is an important maneuver for travel on and off track. This maneuver should be practiced and evaluated during the extended ski tour. For the following segments of the clinics and evaluations, the uphill traverse should be performed on slopes with the terrain indicated.

- Demonstration and practice: more difficult, open moderate slopes (30 to 45 percent grade); most difficult, moderate slopes with obstacles
- Evaluation; most difficult, moderate slopes with obstacles

## Performance Objectives for Uphill Traverse

When performing uphill traverses, the senior candidate must demonstrate the following.

- Definite weight transfer at push-off to front ski
- Shortened stride and arm swing as pitch increases
- Forward body lean, eyes looking forward
- Proper rhythm, position, and recovery of poles
- Effective use of terrain

### Kick Turns

A kick turn is a stationary turn of 180 degrees for the purpose of changing direction when other techniques are undesirable or ineffective. It is often executed in confined areas such as woods. Practice and evaluation should take place during the extended ski tour while performing an uphill climbing traverse and a downhill traverse. For the following segments of the clinics and evaluations, kick turns should be performed on slopes with the terrain indicated.

- Demonstration and practice: easier, open gentle slopes (less than 30 percent grade); more difficult, moderate slopes with obstacles
- Evaluation: more difficult, moderate slopes with obstacles

### Performance Objectives for Kick Turns

When performing kick turns, the senior candidate must demonstrate the following.

- Balance with effective use of poles
- The tail of the ski clearing the snow
- The tail of the ski planted well forward
- The poles clear of the skis
- Complete change of direction while remaining in the same spot

### Herringbone

Demonstration of this maneuver should occur on a section of flat groomed track with a gentle uphill grade (5 percent). Practice and evaluation should occur on a slope with a more moderate to steep section of flat groomed terrain (8 to 10 percent) to clearly demonstrate strong edge set. For the following segments of the clinics and evaluations, herringbone maneuvers should be performed on groomed, Nordic tracks with the terrain indicated.

- Demonstration and practice; easier, gentle uphill set track; more difficult, moderate uphill set track
- Evaluation: more difficult, moderate uphill set track

### Performance Objectives for Herringbone

When performing the herringbone, the senior candidate must demonstrate the following.

- “V” stance sufficient to maintain forward motion
- Weight on inside edge of holding ski with knees and ankle flexed

- Diagonal polling technique with poles planted well behind and out to the side
- A quick ankle, knee, and hip extension to help maintain uphill momentum
- Head up, body committed forward

### Cross-Country Downhill Turns

The purpose of performing advanced cross-country downhill techniques is to refine turning skills, rhythmically link turns on open slopes, and employ a variety of techniques that are dictated by snow conditions and terrain. Skiing control and stability are necessary to ski safely and rapidly to an incident scene. Accepted cross-country downhill maneuvers include wedge turns (snowplow), stem turns, parallel turns (three to four linked) and telemark turns (three to four linked). For the following segments of the clinics and evaluations, cross-country downhill turns should be performed on slopes with the terrain indicated.

- Demonstration and practice: easier, open, packed slope (less than 30 percent grade); more difficult, open, groomed and ungroomed slopes (30 to 45 percent grade)
- Evaluation: more difficult, open, groomed and ungroomed slopes (30 to 45 percent grade)

### Performance Objectives for Cross-Country Downhill Turns

When performing cross-country downhill turns, the senior candidate must demonstrate the following.

- Balancing Movements
  - An ability to maintain a stable, relaxed stance through a broad range of speed, terrain, and snow conditions
- Rotary Movements
  - Earlier matching and active guidance of the inside leg
  - An ability to steer legs accurately, both sequentially and simultaneously
  - Round turn shape with improved accuracy and control
- Edging movements
  - Smooth increase or decrease of edge angles (progressive edging)
  - Minimized braking, which encourages gliding through the turn
  - Developed timing of edge change
- Pressure-control movements of skis and poles
  - Smooth weight shift
  - Movement of the center of mass in the direction of the turn

### Step Turns

Step turns are a moderate- to high-speed maneuver. The Nordic senior candidate needs to demonstrate the ability

to change direction on gradual downhill and in varying snow conditions. For the following segments of the clinics and evaluations, step turns should be performed on a set track with the terrain indicated.

- Demonstration and practice: easier, set track; more difficult, rolling set track
- Evaluation: more difficult, rolling set track

### Performance Objectives for Step Turns

When performing step turns, the senior candidate must demonstrate the following.

- Balancing movements – moving from foot to foot
- Rotary movements – development of foot/leg steering as sequential movements
- Edging movements – stepping sequentially from ski to diverging ski using enough edging on push ski to prevent side slipping
- Pressure-control movements of skis and poles
  - Moving from foot to foot, while standing on while foot
  - Using poles for balance and propulsion

### Pole Drag

The pole drag is a survival skiing technique used when terrain, obstacles, or snow conditions make other Nordic downhill skiing techniques impractical. Nordic senior candidates should be able to demonstrate control, stopping within a short distance at any time. For the following segments of the clinics and evaluations, the pole drag should be performed on the terrain indicated.

- Demonstration, practice, and evaluation: more difficult, steep, narrow trails.

### Performance Objectives for Pole Drag

When performing pole-drag maneuvers, the senior candidate must do the following:

- Remove straps to prevent injury in case the baskets catch on an obstruction; baskets drag in snow with pressure applied to poles.
- Maintain good body position (low and stable)
- Adequately control the speed of descent

### Overall Skiing: Unpacked Snow or Icy Conditions

During training clinics and evaluation, Nordic senior candidates will be expected to ski any trails or slopes under most any type of snow condition in the following terrain.

- Demonstration, practice, and evaluation: more difficult.

### Performance Objectives for Unpacked Snow and Icy Conditions

When skiing in unpacked snow and icy conditions, the senior candidate must demonstrate the following:

- Balance
- Stability
- Control
- Linked, downhill turns
- Moderate, Constant, Safe speed

### Evaluation

The Nordic senior skiing evaluation will concentrate on the skier's control, style, and ability to handle the terrain, rather than on testing basic skiing maneuvers. The group tour will allow the senior candidate to be evaluated on some of the required skills during the continuous evaluation on the tour. The following is the general definition for evaluating Nordic skiing in each of the categories on the score sheet.

#### Above Senior Level (<6)

The Nordic senior candidate demonstrates outstanding skill, ability, and technique in Nordic skiing (as measured by the program's performance objectives using the applicable criteria). The patroller consistently demonstrates exceptional stability and control in difficult terrain and snow conditions. He or she makes efficient and effective use of equipment and skiing technique to produce a fast, safe, smooth, and consistent run. The senior candidate displays confidence in adapting Nordic skiing skills to varying terrain and conditions.

#### At Senior Level (6)

The Nordic senior candidate skis safely and efficiently using an efficient combination of skill, ability, and technique (as measured by the program's performance objectives using the applicable criteria). The senior candidate exceeds minimum senior patroller standards for stability and control in all terrain and snow conditions, to produce a safe, smooth, and consistent run.

#### Below Senior Level <6

The Nordic senior candidate is inconsistent in understanding and in meeting the minimal skiing requirements (as measured by the program's performance objectives using the applicable criteria). The senior candidate makes occasional or frequent errors in speed, control, stability, route selection, communication, or equipment use. The senior candidate fails to meet one or more critical standards for Nordic skiing or performs skills at a level below that expected of a Nordic senior patroller.

# Senior Clinic Training Guide

## Part 1 – Nordic Skiing

With the Nordic skiing core component, the Nordic senior candidate will be able to demonstrate effective and expeditious skiing in any terrain or conditions and demonstrate specific skiing maneuvers incorporating good skiing fundamentals under specified conditions and on specified terrain (see detailed clinic/evaluation objectives, page XXX)

## Essential Content

- I. Track or prepared-surface techniques
  - A. Skills
    1. Diagonal stride (flat, uphill)
    2. Double Poling (flat, downhill)
    3. Double pole with kick (flat, downhill)
    4. Skating (flat)
      - a) V-1 Skate
      - b) V-2, V-2 alternate
      - c) Skate turns
    5. Uphill Traverse
    6. Kick Turn
    7. Herringbone
    8. Cross-country downhill turns
    9. Step turn
    10. Pole drag
  - B. Terrain
    1. Demonstration and practice
      - a) Mildly rolling
      - b) Track or prepared smooth surfaces
    2. Evaluation
      - a) Mildly rolling to more difficult
      - b) Track and prepared smooth surfaces
  - C. Performance objectives and evaluation criteria
    1. Weight transfer as feet pass
    2. Body position appropriate for terrain and snow conditions
    3. Timing
    4. Full, smooth extension of arms and legs, appropriate for tempo and speed
    5. Edging and pressure
    6. Balance
- II. Off-track techniques
  - A. Overall Skiing
    1. Climbing maneuvers (unpacked snow, trees, obstacles)
    2. Descending maneuvers (unpacked snow, trees, obstacles)
    3. Basic turns (open slope)
    4. Advanced turns – parallel or telemark (open slope)

- B. Terrain
  1. Demonstration and practice
    - a) Mildly rolling to more difficult
    - b) Unpacked snow and wilderness situations
  2. Evaluation
    - a) Moderately steep hills or most difficult division area
    - b) Unpacked snow and wilderness situations
- C. Performance objectives and evaluation criteria
  1. Weight transfer as feet pass
  2. Body position appropriate for terrain and snow conditions
  3. Timing
  4. Full, smooth extension of arms and legs, appropriate for tempo and speed
  5. Edging and pressure
  6. Balance

## Suggested Instructional Activities

- I. Review instructional techniques in “The American Teaching System: Nordic Skiing”, PSIA (NSP catalog #563) and “PSIA ATS Nordic Handbook” (NSP catalog #564)
- II. Select and design training exercises for the Nordic senior candidates that meet the stated objectives. There are many warm-up excises that your PSIA instructors can suggest. The senior candidate should be visibly confident with these technical skills. This requires the knowledge and ability to choose the correct ski technique for the situation and to execute it correctly. Since Nordic skiing includes uphill and downhill travel, many of the ski techniques (with minor modifications) can be used in both situations. Other techniques can be used only when traveling uphill or downhill or on level terrain.
- III. Following the clinic warm-up exercises, it is recommended that the tour be used as a continuous evaluation period during which the Nordic senior candidate can practice the techniques, receive assistance, and be evaluated on meeting performance objectives. The alternative is to schedule training exercises first, with a subsequent and separate evaluation component.

## Track or prepared surfaces

- I. Crab Walk: Ski downhill in a wedge and edge one ski without rotary (steering) movements, while flattening the other ski. Repeat the process by edging the opposite ski. Proceed down the slope by alternating from ski to ski, producing a zigzag pattern. Crab walking demonstrates direction change as a result of hard edging. This exercise develops edging and pressure control.

- II. Diagonal Stride: Ski in a straight line between two points without poles. Count the number of strides between the points. Try to reduce the number of strides each time. Experiment with push off, glide length, and body position. This exercise is used to develop weight transfer, pushing off, and gliding on one ski.
- III. Double Pole: On a gentle slope, use both poles to propel yourself downhill. As you stand up, move hips forward to project the upper body. Use upper body compression, then arm push. Compare differences relating to compression and tempo.
- IV. Gliding and Braking Wedge: Let your skis glide downhill in a wedge position using minimal edging. At a designated point (A), begin a braking wedge, and stop at a designated point (B). Repeat exercise, gradually decreasing the distance between A and B (and increasing braking power). Note changes in body position and edging. This exercise is used to develop edging, sliding, and steering.
- V. One-Step Double Pole with Kick: On rolling or bumpy terrain use this maneuver at the crest of a rise. Feel the leg power differences at higher and lower speeds. This maneuver develops sliding, pole push, and push-off,
- VI. Parallel Turn: Speed control is achieved by completing the turn. Concentrate on steering through the arc of the turn rather than pivoting and setting edges at the end of the turn. Experiment with edge control and rotary movements to vary the shape of the turn.
- VII. Poling: Use alternate poling to propel yourself forward in a track. Experiment with shaft angle and arm extension. Vary for maximum glide and maximum power. This exercise is used to develop arm extension and upper body strength.
- VIII. Pole Drag: Remove pole straps and grip poles on the shafts and handles. Drag baskets in the snow to reduce speed. Rest shafts or forearm against knee or thigh to increase leverage and braking power.
- IX. Skate: On flat terrain or a gentle slope, skate in a straight line. Align toe, knee, and nose over gliding ski for proper body position. This exercise is used to develop weight transfer and edging, and it promotes an upright body position.
- X. Skate Turn: On flat terrain ski a figure eight. Vary the size of the figure. Experiment with double and diagonal poling. Start slowly and gradually increase your speed and power. This exercise is used to develop edging, push-off, pole push, and weight transfer.
- XI. Step Turn: On a gradual downhill, change directions by taking small divergent steps. Pull up on the tips while stepping to keep the tail in the snow and the ski under control.
- XII. Straight Run: Begin with the basic body position with skis comfortably apart and parallel, knees slightly bent, and hands at sides. Use a double pole push to start the skis sliding. Distribute body weight as evenly as possible over both feet. Transfer weight from foot to foot while in a straight run. Shuffle skis back and forth while in a straight run. These exercises help develop a balanced stance.

### Off-track techniques

- I. Herringbone and Half-herringbone: Climb hill using herringbone, switch to half-herringbone on left. Vary the width of "V" shape and amount of edging. Keep your weight over your feet. Use this exercise to develop edging, weight transfer, and pole push.
- II. Sidestep: Position your skis directly across the fall line in an edged position. Then pick up the uphill ski, and step laterally uphill. Move the downhill ski along-side the uphill ski (matched). You also may wish to experiment with forward side stepping, which is a combination of uphill traverse and uphill sidestep. Practice sidestepping downhill, then downhill and forward, downhill and backward, etc. This is a necessary maneuver when belaying or entering steep terrain.
- III. Stem Christie: From a traverse, stem the uphill (outside) ski with an upward and forward motion. Weight is transferred to this outside ski and edging begins. Complete the turn as skidding stops and the skis enter a new traverse.
- IV. Stem Turn: From a traverse, stem the uphill ski while maintaining the edge of the downhill ski in the traverse. The turn is initiated with smooth and continuous pressure to the stemmed ski accompanied by a steering of both feet in the direction of the turn. To resume the traverse, the uphill ski is steered parallel to the downhill ski.
- V. Telemark Position: On rolling terrain, absorb bumps by singing into the telemark position. After cresting the bump push down with legs to maintain snow contact, sink into the telemark position again at transition. Experiment with fore and aft positions to develop balance. This exercise is used to develop sliding and balance.
- VI. Telemark turn: As you move from one telemark position to the other, allow your center of mass to create a constant flow of motion. Rise during initiation to release edges, then sink into the telemark position, actively steering both skis. Speed control is achieved by completing the turn. Rounded turn shape is achieved by proper blending of edging, pressure control and rotary motion throughout the arc of the turn. Experiment with varying the shape of the turn

- and with fore and aft weighting.
- VII. Travers (downhill): Point your skis at a downward angle to the fall line, and use the downhill diagonal stride. As the hill gets steeper, maintain the downward angle, adjust your poling for balance, and edge your skis into the hill to prevent sideslipping.
- VIII. Traverse (uphill): Point your skis at an upward angle to the fall lie, and use the uphill diagonal stride. As the hill gets steeper, maintain the upward angle, adjust your poling for balance, and edge your skis into the hill to prevent sideslipping.
- IX. Traverse with Kick Turn: This exercise involves a stationary turn of 180 degrees for the purpose of changing direction when other techniques are undesirable or ineffective. Place your skis across the fall line, edged if necessary, and face downhill. Plant your poles behind (uphill) you for stability. Body weight is on the uphill ski. Kick your downhill ski forward and up, and pivot it around on its tail to the opposite direction, bringing the feet together, but facing opposite directions. Transfer your body weight to the downhill ski, and bring the uphill ski around to point in the same direction. Bring your poles to your sides. On steep terrain, it may be easier to do the kick turn facing uphill.
- X. Wedge Christie: From a traverse, open both skis into a small wedge and steer them into the fall line. The edge change on the inside ski and weight transfer to the outside ski should be as smooth as possible. The skis may be steered parallel before or after the fall line, depending on the situation.

## Senior Core Component: Extended Nordic Ski Tour

The extended Nordic ski tour is the basis for evaluating senior candidates' overall Nordic and mountaineering knowledge, skills, and abilities. This tour provides the opportunity for the senior candidates to demonstrate their physical conditioning, stamina, strength, and rate of travel using the appropriate skiing techniques, orienteering, route selection, and recognition of avalanche and other hazards potential to travel. The senior candidates will be expected to construct a toboggan that remains adequate and sturdy after two 50-yard tests, locate a site and construct an emergency shelter of appropriate size that affords adequate protection and

demonstrate the ability to provide a hot drink or meal.

Relevant aspects of Nordic skiing, toboggan transport, and belay techniques are frequently evaluated during this tour. The extended ski tour should last four or more hours.

### Prerequisites

- Training sessions (local, region, division)
- Patrol pack containing equipment and materials normally used in an extended Nordic ski tour environment

### General Terrain Requirements

- 1,000 feet of vertical elevation gain or 25 kilometers (15 miles) of trails
- Variety of trails and slopes, rated from easiest to most difficult

### Clinic/Evaluation Objectives

The senior candidate will address the categories that follow to fulfill the course objectives satisfactorily.

### Orienteering

- Follow a compass heading over such a distance and with enough heading changes to demonstrate orienteering proficiency.
- Plot current location on a map by taking sighting on known landmarks and converting them to a location on a map.

### Toboggan fabrication

- Only use materials from a patrol pack and natural materials in the field to construct a toboggan
- Load a person into the toboggan and transport the person a minimum of 50 yards uphill, a minimum traverse of 50 yards, then transport a



minimum of 50 yards downhill. The instructor will evaluate the toboggan for safety, stability, construction, and sturdiness to determine if it is adequate for long-distance transport.

### Bivouac and patient-survival skills

- Select an appropriate bivouac site for a severe winter condition as described by the instructor of record
- Build a bivouac shelter large enough for one patroller and one 'patient'.
- Build a fire to prepare a hot drink or meal. For evaluation purposes candidate must demonstrate the ability to build and maintain a fire. Stove use does not demonstrate a survival skill.

### Performance Objectives for the Nordic Extended Ski Tour

When participating in the extended Nordic ski tour, the senior candidate must demonstrate competency in the following:

- Skiing technique and proficiency
- Stamina
- Strength
- Rate of travel
- Proper route selection
- Map and compass proficiency
- Recognition of avalanche or other potential travel hazard
- Toboggan construction (sturdy after three 50-yard tests)
- Construction of emergency shelter in terms of site, size, and protection offered
- Ability to heat and provide a hot drink or meal

### Evaluation

The following is a general definition for evaluating the extended ski tour in each of the categories on the score sheet.

#### Above Senior Level (>6)

The Nordic senior candidate demonstrates outstanding leadership, mountaineering skills, stamina, and adaptability throughout the extended ski tour. The senior candidate consistently demonstrates exceptional endurance and overall ski skills in difficult terrain and snow conditions. The senior candidate consistently makes reasoned decisions based on mountaineering skills and knowledge. The senior

candidate makes efficient and effective use of equipment available in his or her patrol pack for all situations encountered. He or she makes efficient and effective use of management skills demonstrated in securing the incident scene and preparing an effective bivouac. The Nordic senior candidate displays confidence in adapting to the variety of circumstances presented in the tour.

#### At Senior Level (6)

The Nordic senior candidate demonstrates effective leadership, mountaineering skills, ability, and technique. The senior candidate exceeds minimal senior patroller standards for endurance and overall ski skills in difficult terrain and snow conditions. The senior candidate demonstrates knowledge of mountaineering skills. The senior candidate makes reasonable use of equipment available in his or her patrol pack for most situations encountered. He or she provides a serviceable bivouac within a reasonable timeframe. The Nordic senior candidate demonstrates reasonable adaptability to the circumstances presented in the tour.

#### Below Senior Level (<6)

The Nordic senior candidate is inconsistent in meeting the objectives of the extended ski tour. The senior candidate fails to exercise leadership and frequently leaves decision making to others, makes errors in leadership judgment or equipment use, or takes excessive time to grasp situation and perform skills. The senior candidate fails to meet the critical standards for the extended ski tour or performs skills at a level equivalent to a basic patroller.

## Senior Clinic Training Guide 2 – Extended Nordic Ski Tour

With the extended Nordic ski tour, the Nordic senior candidate will be able to demonstrate the overall Nordic and mountaineering knowledge, skills, and physical ability to meet the requirements of an emergency search and rescue situation in unfavorable terrain and weather.

### Essential Content

- I. Orienteering
  - A. Follow compass headings
  - B. Plot location and landmarks on map



- II. Toboggan construction
    - A. Use materials from pack
    - B. Use natural materials
  - III. Bivouac and patient-survival skills
    - A. Select an appropriate bivouac site
    - B. Build a shelter of minimum volume
      - 1. To accommodate one patroller and one patient
      - 2. To permit use of a fire or stove to prepare a hot drink or meal
3. The senior candidates can then construct an improvised toboggan and set up moving and static belays

## Senior Core Component: Nordic Toboggan Transport and Belays

The senior candidate must demonstrate leadership ability when setting up and moving a Nordic toboggan. Also, the senior candidate must demonstrate an ability to use specific equipment effectively and apply his or her knowledge of knots, routes, patient packaging, and patroller safety considerations. In addition, the successful senior candidate must demonstrate the technical skills required to evacuate a patient successfully under any existing weather and terrain condition. He or she also must have the ability to coordinate a team to conduct a toboggan transport in a smooth, efficient, and safe manner.

The Nordic senior candidate should be able to work as a team member and provide leadership when constructing a sturdy toboggan from available materials (which may include an injured person's skis). The senior candidate should be able to transport the patient a considerable distance under various conditions, using appropriate moving and static belays. Items to be considered when constructing a toboggan include skis, carabiners, webbing, ropes, knots, and any other available building materials. The Nordic senior candidate must demonstrate the ability to improvise in an emergency situation.

Moreover, the Nordic senior candidate must consider the time and nature of the illness or injury to package and care for a patient properly. The senior candidate does not have to demonstrate OEC skills for specific injuries during this component. Instructors should identify the nature of the injury so the senior candidate can use that information to determine appropriate patient management and proper route selection.

While on the extended ski tour, the Nordic senior candidates may be evaluated on their ability to construct a toboggan (from available materials), transport a subject a significant distance, and demonstrate good belaying and patient-handling techniques.

### Prerequisites

### Suggested Instructional Activities

- I. Practice building endurance to achieve the following in the final evaluation:
  - A. Skills
    - 1. 25 kilometers (15 miles) (one-day tour) or a 1,000 foot elevation gain
    - 2. Minimum four-hour duration
  - B. Terrain
    - 1. Track and prepared surface
    - 2. Off-track
  - C. Evaluation
    - 1. Techniques appropriate to terrain
    - 2. Assess the physical abilities (strength and stamina)
- II. Create scenarios that incorporate the use of orienteering, subject survival, improvised toboggans, and belay skills. Test the physical conditioning of the senior candidates.
  - A. Mock search and subsequent rescue
    - 1. Divide the senior candidates into toboggan teams (no more than four people per team). Give them the compass coordinates, Uniform Map System (UMS) coordinates, or bearings of known landmarks made at the incident site.
    - 2. After the team has navigated to the incident site, have the Nordic senior candidate construct a hasty shelter, stabilize the subject by conserving heat and providing hot fluids (five-minute drill).



- Training clinics (local, region, division)
- Warm-up exercises before evaluation clinic
- Patrol pack containing equipment and materials normally used in the patrol environment

### Clinic/Evaluation Objectives

The senior candidate will address the categories that follow to fulfill the course objectives satisfactorily

### Organization and leadership of a toboggan transport and belays

The senior candidates will work as a team to rig toboggan belays and haul ropes in such a way that when transported over varied terrain, the toboggan will not have to be re-rigged in the transitions from uphill to downhill, across a hill, or when going from wide to narrow trails, etc.

### Performance Objectives for Organization and Leadership of a Toboggan Transport/Belay

When participating in the toboggan transport/belay exercise, the senior candidate must demonstrate the following.

- Proper selection of knots
- Proper selection of anchor(s)
- Suitable belay position
- Confidence in belay
- Ability to establish belay time through effective communication
- Successful construction of toboggan (if appropriate)
- Leadership in conducting a rescue operation
- Communication with proper authorities (rescue and other affiliated organizations)
- Team versus an individual approach to the exercise

### Up-slope transport and belay of a loaded toboggan

Training and evaluation content will include route selection, negotiating obstacles, determining the availability of terrain anchors, and a discussion of patient injury. Other important topics to be incorporated into training and evaluation of belay setup and operation include communications, belay commands, teamwork, and effective use of assistance. Demonstration, practice, and evaluation will take place on most difficult terrain consisting of steep slopes between parallel roads or trails with

obstacles.

### Performance Objectives for Up-slope Transport and Belay of a Loaded Toboggan

When participating in the up-slope transport and belay exercise, the senior candidate must demonstrate the following.

- Appropriate route selection
- Communication with subject and team members
- Proper belay setup
- Effective operation of belay
- A smooth, safe, and comfortable ride for the patient
- Confident leadership

### Down-slope transport and belay of a loaded toboggan

A portion of the down-slope transport and belay exercise should include a static-belay lowering of a loaded toboggan with the same anchor and hauling system used for the up-slope exercise. The remainder of the exercise should involve moving and moving-static belay techniques. The terrain for demonstration, practice, and evaluation of the static belay should be on the most difficult, steep slope between parallel roads or trails with obstacles. Terrain for demonstration, practice, and evaluation of moving and moving-static belays should be on more difficult groomed and ungroomed slopes.

### Performance Objectives for Down-slope Transport and Belay of a Loaded Toboggan

When participating in the down-slope transport and belay exercise, the senior candidate must demonstrate the following.

- Appropriate route selection
- Communication with subject and team members
- Proper belay setup
- Effective operation of belay
- Speed control using wedge, sideslip, and transitions
- Traverse the slope with minimal slipping
- Coordinated movements with other team members
- Stable position of the rear of toboggan (maintained throughout the exercise)
- Control of rope with hand or belay position
- Skiing with stability and control
- Adaptability to terrain and condition changes

- A smooth, safe, and comfortable ride for the patient
- Confident leadership

## On-trail, flatland transport of a loaded toboggan

This exercise covers the leader's positioning versus that of the other operator(s), along with the leader's transition and communication with other operator(s). Another evaluation component is the leader's and operators' attention to the patient and the patient's ride. For the following segments of the clinics and evaluations, these toboggan transport maneuvers should be performed on the following terrain.

- Demonstration and practice: easier, set track (narrow and wide trails); more difficult, rolling set track (narrow and wide trails)
- Evaluation: more difficult, rolling set track (narrow and wide trails)

## Performance Objectives for On-trail, flatland transport of a loaded toboggan

When participating in on-trail, flatland toboggan transport, the senior candidate must demonstrate the following:

- Appropriate positioning of the leader and other team members
- Communication with subject and other team members
- A smooth, safe, and comfortable ride for the patient
- Confident leadership

## Evaluation

The following are general guidelines for evaluating the Nordic senior candidate's ability to construct and handle the toboggan in each of the categories on the scoring sheet. NOTE: This evaluation may be incorporated into the extended tour evaluation.

### Above Senior Level (<6)

The Nordic senior candidate demonstrates outstanding leadership, skill, ability, and technique in operating a Nordic toboggan (as measured by the program's performance objectives using the applicable criteria).The senior candidate consistently demonstrates exceptional stability and control in difficult terrain and snow conditions. The

senior candidate makes efficient and effective use of equipment, belay techniques, and skiing movements to produce a safe, smooth, expedient, and consistent run. The Nordic senior candidate displays confidence in adapting Nordic toboggan transport, belay, and skiing skills to varying terrain and conditions.

### At Senior Level (6)

The Nordic senior candidate demonstrates the ability to operate a Nordic toboggan in a safe and efficient manner using an efficient combination of leadership, skill, abilities, and technique (as measured by the pro-gram's performance objectives using the applicable criteria).The senior candidate exceeds minimal senior patroller standards for stability and control in all terrain and snow conditions, producing a safe, smooth, and consistent run.

### Below Senior Level <6

The Nordic senior candidate is inconsistent in meeting the minimal Nordic toboggan handling requirements (as measured by the program's performance objectives using the applicable criteria).The senior candidate makes occasional or frequent errors in leadership judgment, control, stability, route selection, communication, equipment use, or takes excessive time to grasp and perform skills. The senior candidate fails to meet one or more critical objectives for Nordic toboggan handling or performs skills at a level equivalent to a basic patroller.



## Senior Clinic Training Guide 3 – Nordic Toboggan Transport and Belays

The toboggan transport and belay evaluation may be incorporated into the extended Nordic ski tour evaluation schedule. While on the group ski tour, the senior candidates will be expected to build a toboggan (from available materials) and transport an "injured" person a significant distance, demonstrating good belaying and patient-handling techniques.

With the Nordic toboggan transport and belay core component, the Nordic senior candidate will be able to demonstrate the ability to set up an efficient belay while using effective communication skills and to successfully construct and/or a toboggan. A team effort versus an individual approach will be necessary during the evaluation exercise (see detailed clinic/evaluation objectives,).

### Essential Content

- I. Toboggan construction
  - A. Construct a sturdy toboggan from available materials (which may include the injured person's skis)
    1. Types of Toboggans
      - a) Standard: patient's skis and poles and two shovel handles
      - b) Modified: standard with use of patroller pack device such as shovel blade attachment
      - c) Portable: patrol-manufactured sled (usually rolled plastic or aluminum) carried by patroller
      - d) Commercial: manufactured by Cascade, Sked, Nordhus, etc.
    2. Equipment
      - a) Skis
      - b) Carabiners
      - c) Webbing
      - d) Ropes
      - e) Any other available building materials
  - II. Patient packaging and support
    - A. Properly package and care for the injured skier. (Note: The Nordic senior candidate does not need to demonstrate OEC skills for specific injuries during this phase.)
    - B. Instructors should identify the nature of the injury so the senior candidate can use that information to determine appropriate patient management and proper route selection.
- III. Toboggan handling
  - A. Transport the patient a considerable distance under various conditions, using appropriate moving and static belays. The Nordic senior candidate must demonstrate the ability to improvise in an emergency situation.
  - B. Demonstrate leadership and teamwork during building and transport.
  - C. Terrain
    1. Demonstration and practice
      - a) Mildly rolling to more difficult
      - b) Prepared track and wilderness situations
    2. Evaluation
      - a) Mildly rolling to most difficult
      - b) Prepared track and wilderness situations
  - D. Performance objectives and evaluation criteria
    1. Structurally sound toboggan construction from materials in patrol pack
    2. Leadership in conducting rescue operation
    3. Selection of knots, properly tied knots, and proper rope management
    4. Proper choice of terrain anchor(s) and belay positions
    5. Knowledge of proper belay commands
    6. Effective static and dynamic belay techniques
    7. Roles, responsibilities, and positions of rescuers
    8. Principles and procedures of patient packaging
    9. Balance, stable skiing position
    10. Effective transitions, based on terrain
    11. Smooth, controlled, efficient, and safe toboggan run

### Suggested Instructional Activities

- I. Develop exercises to practice the various components required on the group ski tour.
  - A. Build a toboggan (from available materials)
  - B. Transport an "injured" person a significant distance, demonstrating good belaying and patient handling techniques

### General Instructor Guidelines

The purpose of the Nordic senior program is for

patrollers to obtain expertise and experience through training clinics, evaluation, and feedback. The Nordic senior training (to be done in advance of clinics and evaluation), and clinics and evaluations should include demonstration, experimentation, and progression from basic skills to more complex maneuvers.

The Nordic senior candidate must select the skiing equipment for all elements of the Nordic component. A patrol pack containing equipment and materials normally used in the patrol environment and/or used to complete the senior OEC clinic, must be worn during all Nordic senior skill requirements.

The following guidelines are provided to instructors to facilitate successful clinics and evaluation for all participants.

1. Review instructor scoring calibration. Instructor calibration provides the opportunity to identify critical performance objectives and to discuss the rating scale differences between "Above Senior Level," "At Senior Level," and "Below Senior Level." This discussion provides the opportunity to review the events to be evaluated and the skills to be assessed during each event. Instructors should determine the drills, training activities, and/or scenarios that will be used throughout the clinics and evaluation and the purpose of each.
2. Review the course outline and schedule of events.
3. Review the event logistics with instructors and senior candidates. Discuss rules for the use of chairlifts, equipment, etc.
4. Review the events that will be evaluated with the senior candidates and with each other.
5. Discuss the scoring system, identify critical errors, and outline the performance objectives that will be used to rate performance with the senior candidates and with each other.

Instructors are encouraged to involve other patrollers and instructors in the Nordic senior training program to promote leadership development and to enhance the experience level of all patrollers. It is the event coordinator's responsibility to see that the instructors conducting the clinics and evaluation adhere to the guidelines.

During the senior clinics and evaluation, instructors should:

1. Ask the Nordic senior candidates if they understand the task to be performed and clarify misunderstandings before starting each new event. Communicate the performance objectives

and evaluation criteria to the senior candidates, if appropriate.

2. Give the senior candidates' undivided attention when observing their performance.
3. Give senior candidates feedback on their performance with suggestions for improvement, if appropriate.
4. Provide encouragement and positive feedback when needed and/or when appropriate.
5. Frequently refer to the listed performance objectives when determining a rating or event score.
6. Make notes on the scoring sheet explaining critical errors or overall ratings of "Below Senior Level."

After the clinics and evaluation, instructors should:

1. Discuss any marginal performance to reach a majority opinion about whether a senior candidate performed at senior level.
2. Discuss any conflicting opinions of whether a senior candidate's performance in an event or the entire evaluation met the listed performance objectives. A decision to rate a senior candidate below senior level must be justified by a failure to meet the established performance objectives and evaluation criteria.
3. Provide the opportunity for any Nordic senior candidate to discuss his or her performance with the instructors. Instructors will outline the reasons for the senior candidate's rating in an event or for the overall clinic/evaluation in relation to the established performance objectives and evaluation criteria. This opportunity is especially important for senior candidates who do not perform at senior level.
4. Congratulate Nordic senior candidates who passed and encourage them to get involved with training as instructors.
5. Provide positive feedback and encouragement to those Nordic senior candidates who did not pass. Suggest practice or training opportunities that would improve their performance or deficiencies.
6. Review the day's activities, successes, and failures with each other. Discuss event organization, instructor performance, and senior candidate performance. Also discuss any significant differences of opinion and determine the causes of them, if possible.
7. Provide a means for the Nordic senior candidates and their patrol directors to obtain copies of the written results of the clinics and evaluation.

## Nordic Senior Instructor Qualifications

Any Nordic patroller who has successfully completed the Nordic senior component and the Nordic Toboggan:

Phase II instructor development program is eligible to train and evaluate senior candidates in the Nordic senior components.

Instructors for the Nordic senior program should participate in a planning session where the performance objectives and evaluation criteria are reviewed and agreed upon by the evaluating group.

## Instructor-to-Candidate Ratio

Instructors participating in the Nordic senior training program are expected to participate in all elements. For evaluation, senior candidate groups may be as large as 10, although every effort should be made to keep group size at six or fewer.

Training and Evaluation Instructor-to-Candidate Ratio

Instructors	Nordic Senior Candidates
2 to 3	up to 6
3 to 4	6 to 10

## Evaluation Techniques

The evaluation's emphasis will be on whether the Nordic senior candidate accomplishes the objectives of the components in a complete and confident manner using techniques appropriate to the terrain. The NSP Board of Directors recognizes that each division may have a unique situation that would require a different evaluation emphasis (e.g., terrain, equipment) and, therefore, the evaluation should not focus on minor details of technique.

Some errors are due to simple misunderstanding or improper instruction and can be corrected on the spot. Explain the error and retest on site. If there is any possibility that a senior candidate is not performing up to his or her ability because of external factors such as improper or worn-off wax or unsuitable or defective equipment, give him or her an opportunity to retest after taking corrective action.

Evaluation can be conducted in a continuous process that includes review, demonstration, practice,

and evaluation. Or the evaluation can follow the clinic, which would include only review, demonstration, and practice. The component objectives can be evaluated during the ski tour or by demonstration since ski tours provide a continuous evaluation format for coaching and evaluating each of the elements. Also, continuous evaluation provides the instructors with a good opportunity to assess the senior candidate's ability to demonstrate the required skills and to combine all of the elements into an efficient ski technique.

For the purpose of quality control and uniformity, the Nordic senior candidate will be evaluated using known criteria in uniform circumstances (to the extent that available terrain and local conditions permit). Determination of the locations and type of hill and/or course to be used for Nordic senior evaluation should be established in advance. The evaluation will concentrate on control, style, and ability to handle the terrain, rather than on testing basic skiing maneuvers.

This assessment is meant to gauge how well the senior candidate knows his or her own capabilities and operates within them and whether the senior candidates could participate in an emergency search and rescue operation in severe weather and terrain after the completion of the clinic and evaluation.

## Sample Nordic/BC Senior Clinic and Evaluation Schedule

Instructors may use the following clinic schedule as a guide for developing a clinic that will work best in their division and at the area where the clinic will occur. Remember that time schedules should not impact the performance process. The goal of the Nordic senior clinics is to enable the senior candidate to satisfy the performance objectives.

## Continuous Evaluation Format

### Suggested time: 1 day

Shelter building, Fire, Medical Scenarios, etc. are to be worked into the day as terrain, teaching opportunities, and group size dictate.

LUNCH is ad hoc as terrain and schedule allow

8:00 a.m.

Welcome and introductions

8:15 a.m.

Objectives of Nordic senior clinic and evaluation

8:30 a.m.

Ski skills clinic and evaluation

Incorporate demonstration, practice, and continuous evaluation. Include warm-up exercises for:

- Track or prepared surface techniques
- Off-track techniques

11:00 a.m.

- Endurance tour preparation

1:00 p.m.

- Group tour

- Toboggan construction
- Toboggan handling and belay

5:30 p.m.

- Critique and feedback on performance

- Using the standard rating form, review the Nordic senior candidate's performance on Nordic skills with other instructors and then with each senior candidate.

## Evaluation

Under the rating section of the score sheet, Nordic senior instructors are encouraged to adopt a plus or minus system after the numbered performance objectives to record observations quickly. This will assist in determining the overall rating for a specific event. The instructors should compare their scores with one another and reach a majority opinion on the senior candidate's performance of each maneuver. They then assign an overall rating based on the scores of each maneuver. A senior candidate must receive majority scores of 6 or better in each maneuver to pass the Nordic senior component successfully.

Nordic Senior performance evaluation forms are found in the appendix.

## Alternate Evaluation Formats

Alternate evaluation formats that meet or exceed National (this document), Division, Regional, and Patrol needs and objectives are permitted and welcome. Please submit an outline of the alternate format to the National Program Director so that it can be reviewed and incorporated into the final version of this document.

## NORDIC/ BC PROFICIENCY PERFORMANCE EVALUATION SCORE SHEET

Candidate \_\_\_\_\_

NSP # \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

Location: \_\_\_\_\_

Terrain Requirement: Mildly rolling and good track or prepared surfaces. Note that for senior the track and area should be a good test of skier's ability.

Skill	Elements						Score	Comments
	Weight Transfer	Body Position	Timing	Arm Swing & Poling	Edging/ Pressure	Balance		
<b>Classical Technique Skills</b>								
Diagonal Stride					N/A			
Uphill Diagonal					N/A			
Double Pole	N/A				N/A			
Dble. Pole w/Kick					N/A			
Ability to Glide								
Herringbone								
Sidestep	N/A	N/A						
Traverse	N/A	N/A	N/A	N/A	N/A	N/A	P F	
Kick Turn	N/A	N/A	N/A	N/A	N/A	N/A	P F	
<b>Skating Technique Skills</b>								
Diagonal Stride								
V1-Skate								
V2-Skate								
V2-Alternate Skate								
Marathon Skate								

<b>Downhill Technique Skills</b>								
Skill	Elements						Score	Comments
	U/L Body Separation	Counter Rotation	Foot Steering	Edging/ Pressure	Pole Timing	Hand Position		
Straight Run								
Gliding Wedge								
Braking Wedge								
Step Turn								
Skate Turn								
Stem Turn								
Wedge Turn								



Wedge Christie								
Parallel Turn								
Telemark Turns								
Controlled Fall	N/A	N/A	N/A	N/A	N/A	N/A	P F	
Pole Drag	N/A	N/A	N/A	N/A	N/A	N/A	P F	
<b>Backcounty Ski Skills</b>								
In Addition to the above Ski Skills								
Uphill with skins, ski crampons, waxless base, etc. with and without heel lifters								
Transition to and from skins								
Cross Slope Travel								
Side Slip/ Falling Leaf								

Toboggan & Rescue Skills	
<b>CRITICAL STANDARD:</b> Is transportation and belay smooth, controlled, efficient, and safe?	
Objective	Comments
1. Structurally sound toboggan construction from materials in patrol pack.	
2. Load and secure patient appropriately	
3. Haul loaded toboggan a minimum of 0.5 kilometers (with 3 additional people)	
4. Toboggan should remain sturdy after 0.5k pull	
5. Leadership in conducting rescue operation.	
6. Selection, properly tied knots, and proper rope management.	
7. Proper choice of terrain anchors and belay positions.	
8. Knowledge of proper belay commands.	
9. Effective static and dynamic belay techniques.	
10. Roles, responsibilities, and positions of rescuers.	
11. Effective transitions.	
<b>OVERALL RATING FOR NORDIC SENIOR TOBOGGAN</b> (Note: These scores represent the majority opinion of the instructors. Do not assign an overall rating until a majority opinion has been determined.)	

Back Country Survival Skills	
<b>CRITICAL STANDARD:</b> Is transportation and belay smooth, controlled, efficient, and safe?	
Objective	Comments
1. Construct and maintain a matchless fire on snow and boil ½ liter of water. (No Stoves)	
2. Build an emergency shelter capable of sheltering 2 people overnight.	
Navigation	
1. Locate current position on map using UTM, Lat/Long, or Township and Range	
2. Using Dead Reckoning, navigate to an appropriate destination	
3. Demonstrate GPS Skills (enter waypoint via coordinates & current location, convert UTM to Lat/Lon or vsv, select appropriate datum, navigate to waypoint, select return course, create track)	

4. Demonstrate Map and compass skills (Triangulation, resection, bearing, heading, etc.)	
5. Demonstrate route selection and hazard identification.	
<b>Other</b>	
1. Show repair kit during pre-test pack check.	
2. Perform field repairs, real or simulated as requested by evaluators	
<b>Tour</b>	
Tour should encompass as many evaluative components as possible to simulate real world situations, and meet the criteria set forth in the manual and by the evaluators. Tour should be long enough to do skills on trail.	
1. Endurance	
2. Medical (Assess and field treat and Senior OEC level scenario. Assume any patient will be suffering from Hypothermia, Hypoglycemia, & Dehydration)	

Examiner/ IOR \_\_\_\_\_ NSP # \_\_\_\_\_

\_\_\_\_\_  
(Signature) Pass Fail (circle one)