

# *Introductory Nordic Instructor Training Manual*

*Professional ski instructors of America - Central  
3225 W. St. Joseph St.  
Lansing, Michigan 48917*

*Phone: 517 327-0601*

*Fax: 517 321-0495*

*Information E-mail: [info@psia-c.org](mailto:info@psia-c.org)*

*Web address: [www.psia-c.org](http://www.psia-c.org)*

*Third Edition - November 2003*

## *PSIA-C Introductory Nordic Instructors Training Manual*

### *Table of Contents*

<b>Preface</b> .....	Page 1
<b>Introduction to PSIA AND PSIA-C</b> .....	Page 2
<b>Safety - The Key To Fun and Learning</b> .....	Page 3
<b>Skiing Etiquette</b> .....	Page 4
<b>Your Responsibility Code</b> .....	Page 4
<b>Safety checklist</b> .....	Page 5
<b>Safety Quiz</b> .....	Page 6
<b>Have Fun With It!</b> .....	Page 7
<b>Fun Quiz</b> .....	Page 8
<b>Learning Section</b> .....	Page 9
<b>The ATSN Teaching model</b> .....	Page 9
<b>Learning Styles</b> .....	Page 10
<b>Learning Quiz</b> .....	Page 11
<b>The PSIA skiing Model</b> .....	Page 12
<b>The Fundamental Skills of ATSN</b> .....	Page 12
<b>The Recommended Functional Skills of Nordic Skiing:</b> .....	Page 13
<b>The PSIA Nordic Reference Maneuvers - Nordic Track</b> .....	Page 13
<b>The PSIA Nordic Reference Maneuvers - Nordic Downhill</b> .....	Page 14

**Technical Quiz** ..... Page 15

**Sample Lesson Outlines** ..... Page 16

**Show — Instruct — Practice** ..... Page 16

**Beginning Classic Skiing Lesson** ..... Page 17

**Beginning Ski Skating Lesson** ..... Page 17

**Beginning Telemark Downhill Lesson** ..... Page 18

**Bibliography** ..... Page 20

**Quiz Answers** ..... Page 20

**Nordic Basic Instructor Test - Part I, General** ..... Page 21

**Test – Part II, Technique Recognition Nordic  
Basic Instructor** ..... Page 22

**Notes** ..... Page 25

## Preface

The Professional Ski Instructors of America-Central Division has created this manual for the entry level nordic ski instructor. The intention is to provide a program that will help develop the skills required by a new instructor to teach nordic skiing to beginning students.

Applicants for nordic membership should study this manual prior to attending a PSIA-C education event. The open book exam at the end of this manual should be completed.

**Safety, fun and learning**, is the ski instructor's **motto**. With that motto in mind, we have prepared this manual in three sections. The **safety** section is designed to help instructors provide a reasonably safe environment for their students and other skiers around them. Every skier should already be familiar with most topics in the safety section. Breaking down the barriers of fear and establishing a friendly atmosphere where learning can take place are goals for the **fun** section. The **learning** section will describe the basics of the teaching model, learning styles, and skiing model used by PSIA-C.

This manual is not intended to be all inclusive. It will not provide everything an instructor needs to know about ski instruction. It should supply enough information the instructor to become proficient at teaching beginning lessons. Ski instructors should create a personal library of instructional materials containing at least a copy of the PSIA-C Nordic Certification Guide from PSIA-C, Core Concepts for Snowsports Instructors and Nordic Technical Skiing Manual and Teaching Skills from PSIA as starting volumes<sup>1</sup>. Reading these manuals is mandatory for instructors pursuing higher levels of certification.

This manual is designed for use by prospective Nordic track and Nordic downhill instructors. Most sections contain information that is pertinent to both disciplines. Some information, however, may not be applicable to both but is included to maintain continuity within this publication.

The Board of Directors of PSIA-C and the Nordic Education/Certification Committee hope that an instructor will find this manual and test helpful as they begin their membership in the Professional Ski instructors of America-central division.

---

1

At the time of this revision, the Nordic Technical Manual has not been completed by PSIA. It is expected shortly. The skiing model contained in the manual reflects previous PSIA publications and will be updated in future revisions. Please see the bibliography for available PSIA publications.

## **Introduction to PSIA AND PSIA-C**

The Professional Ski Instructors of America (PSIA) was formed at the National Ski School meeting in May 1961. The predecessor to PSIA was the National Ski Association Ski Instructors Certification Committee which grew out of the seven regional instructors associations that have existed since the 1930s. PSIA is now the parent organization for nine divisional associations, one of which is Central Division. Each division is empowered with the autonomy to assess dues, train and certify ski teachers. The purpose of the PSIA divisions is the same now as it was when they were formed, namely, to improve the quality of ski teaching.

Prior to 1976, the United States Ski Association certified nordic ski instructors. At the 1976 convention in Sun Valley, Idaho the USSA requested that PSIA assume the role of training and certification of nordic ski instructors. At the first PSIA Nordic Committee meeting in 1978, the committee formulated plans for a nordic certification program. By November of 1978, a national reciprocity agreement for associate nordic instructors was adopted with the individual divisions conducting the training and certification programs.

The development of an American Teaching Method Nordic began in 1980. This is a methodology of ski instruction at the foundation of which is the consideration of the needs and desires of the student as well as those of the instructor.

The formation of a national certification program in 1981 allowed full reciprocity between divisions for associate and full certified instructors wishing to transfer to another division.

Traditional thoughts about ski teaching and ski technology continue to be challenged. This evolutionary process led to the formation of a unique American Teaching System Nordic (ATSN). The ATSN materials has evolved into the current PSIA teaching and skiing models.. The information presented should be considered current understanding and not the final word on ski teaching technology.

In 1989, the PSIA Nordic Education Committee recommended that the divisions adopt at least two separate nordic certification pathways: nordic track, which includes all of the classical skills, ski skating skills and some downhill techniques, and nordic downhill which includes telemark skiing and other primarily downhill techniques. The PSIA-C Board of Directors approved the dual certification pathways for nordic instructors effective the 1991/92 season. These pathways remain independent so that a member can become certified in one pathway without becoming certified in the other.

In addition PSIA-C adopted four levels of membership which in addition to the Basic Instructor, includes three levels of certification: Certified Level I, Certified Level II, and Certified Level-III. These membership levels are described completely in the PSIA-C Nordic Certification Guide.

## Safety - The Key To Fun and Learning

Although nordic skiing is one of the safest winter recreational sports, the safety of the student must remain the primary concern of every instructor. Unless the student feels that he or she is in a safe and secure setting, fun and learning cannot occur.

During the first lesson, it is normal for a student to become very self-occupied. It is the job of ski instructors to inform students about the outside influences that can affect their skiing experience. The following influence the safety of every ski outing

**Equipment** – Instructors should perform a visual check before each lesson. Is the ski the right length and correct type for the skier and the techniques being taught? Do the boots fit properly and are they on the correct feet? Is the binding in working condition; does it meet the current standards; and does it match the boot? Are the pole straps adjusted properly and are the poles the proper length? Does the student have any loose scarves or other loose clothing that may get caught in the lifts or rope tows? Does the student have on the proper amount of clothing for the weather? Is the student overdressed?

**Cold Weather** – Cold weather can affect students both psychologically and physically. On cold days try to keep the class moving and look for locations that are out of the wind. Whenever possible keep the student's back to the sun for added warmth. Facing away from the sun also permits better student vision. Keep students out of windy areas and blowing snow. Start each lesson with **warm-up exercises** and a few light upper and lower body stretching exercises, with skis off, to help loosen tight muscles.

**Sun Exposure** - Discuss the need for using sunscreen and sunglasses with your students. People new to snowsports may under estimate the possibility for sun injuries in the winter.

**Physical Condition** – Try to judge the student's physical condition and set instructional goals accordingly. Check often for fatigue. A tired skier is more likely to be injured. If the instructor notices fatigue setting in, periodic rest breaks should be added.

**Coping With Accidents and Injuries** - Despite our precautions accidents may occur during ski instruction. You must be prepared respond. Your ski school should have a protocol for responding to accidents. In general:

- Ÿ Take first aid training.
- Ÿ Stay with and avoid moving the injured skier.
- Ÿ Mark uphill of the accident with crossed skis to prevent collisions with other skiers.
- Ÿ Send another adult to contact the ski patrol or call 911. Have a cell phone or other plans in case you are alone with a student.
- Ÿ Fill out accident reports and obtain witness statements as required by your ski school or program.
- Ÿ Do not discuss the accident with anyone other than your supervisor.

**Terrain** – Use the proper terrain for the level and the ability of the students in your class as well as the technique being taught. Terrain selection can enhance or inhibit success. Instructors and students should realize that skiing on terrain that is too advanced early in the skier's development can create defensive habits which later may be hard to eliminate. Incorrect choice of terrain can also lead to inefficient technique or inefficient use of time during the lesson.

**Psychological Condition** – Learn how to recognize fear. Talk about fear and anxiety with the students. Let them know that fear is natural. Move into teaching downhill skills carefully after the basic flatland techniques have been taught. Ask why they are learning to ski, what motivated them to take a lesson, and what are their goals for the lesson.

## Skiing Etiquette

“Your Responsibility Code” contains the rules of the road. Make sure each student is aware of the code. Make it a part of every lesson. How you explain and introduce the Code will influence how the student views it. Simply stating the Code will not get the message across. Try to incorporate Your Responsibility Code into your class handling. Where do you position your class, for instance? When demonstrating, check to make sure there are no oncoming skiers. Introducing the Code in this manner will have a positive affect on students. The instructor is very influential to the new skier. What the instructor does and says is what the student perceives as being proper.

### **Track and trail skiing require additional trail etiquette to improve the skiing experience.**

- Ÿ When there is only one track an overtaking skier must step out and go around the slower skier. It is often beneficial to acknowledge verbally the side on which the faster skier will pass. This passing rule also applies to double track and skating trails. The faster skier should go around and not require some action to be taken by the slower skier in order that a pass be made.
- Ÿ The opposite holds true for racing. A verbal signal of “track” by a faster skier requires that the slower skier yield the track by moving to the side.
- Ÿ Downhill skiers have the right-of-way on two way trails. Skiers skiing uphill must yield and step aside. Skiers should follow all directional indicators on trails to avoid the possibility of collision.
- Ÿ When stopping on a trail or at a trail intersection the skier should move to the side and off the trail so others may pass without difficulty.

It is especially important that those skiing with the skating techniques be taught to respect the set tracks on groomed trails. The setting of tracks is an expensive and time consuming operation at a ski center. These tracks greatly enhance the skiing experience of classical skiers.

## Your Responsibility Code

Skiing can be enjoyed in many ways. At ski areas you may see people using alpine, snowboard, Telemark, cross country or other specialized ski equipment such as that used by disabled or other skiers. Regardless of how you decide to enjoy the sport of skiing, always show courtesy to others and be aware that there are elements of risk in skiing that common sense and personal awareness can help reduce. Observe the code listed below and share with others the responsibility for a great skiing experience.

- Ÿ Always stay in control, and be able to stop or avoid other people or obstacles.
- Ÿ People ahead of you have the right of way. It is your responsibility to avoid them.
- Ÿ You must not stop where you obstruct a trail, or are not visible from above.
- Ÿ When entering a trail, starting downhill, or merging into a trail look uphill and yield to others.
- Ÿ Always use devices to help prevent runaway equipment.
- Ÿ Observe all posted signs and warnings. Keep off closed trails and out of closed areas.
- Ÿ Prior to using any lift, you must have the knowledge and ability to load, ride and unload safely.

Know the code, It’s your responsibility. This is a partial list. Be safety conscious. Your Responsibility Code is officially endorsed by the National Ski Areas Association, National Ski Patrol, Professional Ski Instructors of America, Inc. and Professional Ski Instructors of America – Central

Teaching a student to ski is only part of the job. It is of equal importance to inform students about the entire skiing experience. The first lesson is the perfect time to start the developmental process that will someday fill our ski areas with good safety-minded skiers. The following suggestions are a quick reference to the ski instructor:

## Safety checklist

### Physical Condition

- ÿ Try to judge your student's physical ability.
- ÿ Temper over ambitious students.
- ÿ Do warm-up exercises and light stretching.
- ÿ Rest periodically.
- ÿ Be able to identify frostbite and exhaustion.

### Equipment

- ÿ Is the student's equipment suitable and functional?
- ÿ Are the skis the right length?
- ÿ Perform a visual check of the boot/binding system.
- ÿ Are poles the proper length, do they have baskets, and are the wrist straps adjusted properly?
- ÿ Check the fit of the ski boots.
- ÿ Are the students dressed properly for the current weather conditions?

### Snow and Weather Conditions

- ÿ Consider the weather in the way you conduct your class.
- ÿ Explain the current snow conditions and how this will affect skiing.

### Lifts

- ÿ Prepare students for various types of lifts.
- ÿ Teach students to get on and off at designated loading and unloading areas.
- ÿ Stay in the tracks of surface lifts.
- ÿ Don't swing chairs.
- ÿ Watch out for loose clothing.
- ÿ Always be ready.

### Slope and Trail Traffic

- ÿ Stop to the side of slopes and trails.
- ÿ Explain the blind spots to your students, e.g. around corners, below knolls, etc.
- ÿ Don't stop at the bottom of hills on trails or under chairlifts.
- ÿ Point out intersections if potentially hazardous.
- ÿ Explain grooming and track setting equipment.
- ÿ Do not ski too close to other classes.
- ÿ Keep out of the mainstream of traffic.

### Signs

- ÿ Explain all safety signs and symbols.
- ÿ Explain the importance of obeying these signs and symbols
- ÿ Explain trail rating signs. Green circle, Blue Square, and Black Diamond.

### Teaching Terrain

- ÿ Terrain selection must consider snow conditions and the student's skills.
- ÿ Use proper terrain to relax students so that they may learn.
- ÿ Select terrain with groomed conditions.
- ÿ Ski pack proper learning conditions in case of fresh snow..

### Accidents

- ÿ Have a plan for accidents occurring during your lesson.
- ÿ Take a first aid course.

This is only a partial list of the outside elements that may affect a skier.



### Safety Quiz

Questions One through Six are True or False.

1. The safety of the student should not be of concern to a ski instructor.
2. Ski instructors should make a visual check of students' equipment.
3. The correct choice of terrain may enhance the success of students.
4. Fears that the students have about skiing should not be discussed.
5. It is the responsibility of an instructor to make students aware of Your Responsibility Code.
6. In recreational trail skiing fast skiers yield to slower skiers.
7. Give two ways that cold weather can affect a student.

---

---

8. List the seven points of Your Responsibility Code.

---

---

---

---

---

---

---

## Have Fun With It!

Ski lessons should enhance the fun filled skiing experience! Instructors should address the topics listed below to provide an enjoyable learning atmosphere. The instructor's job and the ski industry as a whole depend on this first-time experience of our future skiers.

### Communication

- ÿ Introduce yourself and learn everyone's name in the first part of the lesson.
- ÿ Use humor whenever possible. People enjoy it, pay more attention, and it makes for a more relaxed atmosphere.
- ÿ Get students involved in the lesson. Ask questions and especially encourage them to ask questions. People learn more with active participation.
- ÿ Communicate with action. Demonstrations are more effective than wordy explanations.

### Individual Attention

- ÿ Treat each student as a special guest.
- ÿ Treat students with respect. They are paying for your services.
- ÿ Speak to each person using his or her name. It makes him or her feel special and feel good about you.
- ÿ Establish eye contact. Occasionally remove your sunglasses or goggles to express special interest and concern. With sun glasses or goggles on, people can only assume that you are looking at them. Important aspects of nonverbal communications are masked by the glasses.
- ÿ Spend a little more time with the struggling student. Just a few more pointers could make the difference between a negative or positive skiing experience.

### Enthusiasm

- ÿ Enthusiasm is contagious. Let your students see how you love skiing, and tell them how much fun it will be for them.
- ÿ Show emotion and excitement. Get the class "fired up." Share their successes with them.
- ÿ Be enthusiastic about your area as well as skiing in general. Make them glad they are there today. Teach them about the wonders of the winter environment.

### Positive Attitude

- ÿ Reward students with praise. Find good things about everyone. Recognize and reward good efforts.
- ÿ Reinforce the positive things that happen and minimize the negative. People learn more from positive reinforcement.
- ÿ Give a lot of "good jobs," but make the reinforcement specific. Some Examples are: "Good job! Your movements are smoother now.", "You are getting more power into your push off.", "Great! Your balance is better and you are gliding farther with each skate.", or "Way to go, your skis didn't skid that time."
- ÿ Address your students errors by giving them the correct movements to replace the errors whenever possible. For example, "Try putting all your weight on one ski at a time" would be better than "stop shuffling".

### Comfort Zone

- ÿ Get to know the students' ability level and pick "fear factor" appropriate terrain for the snow conditions.
- ÿ Don't push people beyond their ability level.
- ÿ Boost confidence by choosing activities with achievable goals. Use small steps in your progressions.
- ÿ Have fun with the skill they already have before adding something new. Too many new skills are overwhelming
- ÿ Watch for students getting cold or tired. This can not only detract from the fun learning experience, but also can be a serious problem.

### Fun Activities

- ÿ Keep things moving. Don't talk them to death.
- ÿ Use a variety of exercises. Don't get hung up on one exercise. If it's not working, take another approach.

- ÿ Play games that have an instructional focus. Follow the leader, red light green light, setting up flag courses and ultimate Frisbee, for example, can add fun and variety for all levels of skiers.

## Fun Quiz

Questions One through Six are True or False.

1. Comprehensive explanation of a maneuver is more effective than your demonstration and the student doing it.
2. If you use humor with your students, they tend to pay more attention and learn more.
3. Using students' names when talking to them lets them know that you care.
4. Students learn more when they ask questions and you ask them questions.
5. Students don't like eye contact with an instructor.
6. Choosing appropriate terrain can make your students more comfortable.

Questions Seven and Eight are Multiple Choice

7. What is contagious?
  - a. Getting cold and tired.
  - b. Enthusiasm.
  - c. Negative reinforcement.
8. Students who have fun during a lesson are more apt to:
  - a. Come back again.
  - b. Recommend ski school to friends.
  - c. Learn better.
  - d. All the above.

## Learning Section

The American Teaching System, or ATS, is the primary system used for snow ski teaching in the United States. ATS is dynamic, it is constantly upgraded and improved as new information becomes available. Originally developed by the Alpine Education Committee, ATS has been adapted to meet the needs of the Nordic disciplines as the American Teaching System Nordic, or ATSN. The American Teaching System Nordic has two primary components: the Teaching Model and the Skiing Model. The Teaching Model is how we teach; the Skiing Model is what we teach.

### The ATSN Teaching model

The PSIA Teaching Model is a teaching and learning process that is student centered, outcome based, experiential, guest-service driven and based on a student/instructor learning partnership.

#### 1. Select an Attainable Goal or Objective.

- Y Agree upon the goal with the student.
- Y Consider the lesson time limitations.
- Y Be realistic.

#### 2. Teach to the Objective or Goal.

- Y Choose each activity/exercise to help achieve the end goal.
- Y Eliminate doing things that will not directly help the students achieve their goal.

#### 3. Use things that insure learning the goal (Principles of Learning).

- Y Anticipatory Set – Get the students excited about what they are going to learn.
- Y Activate Prior Knowledge – Help students recall previously learned skills.
- Y Transfer – Use small learning steps based on the known skills of the students.
- Y Modeling – Show and tell the students what you want them to do
- Y Focus – Focus on the performance of the most important part of the activity or exercise.
- Y Check for Understanding – Make sure the students know what you want them to do.
- Y Active Participation – Keep the students moving and doing.

#### 4. Monitor and Adjust the Students' Performance.

- Y Movement Analysis – Carefully watch the students' movement patterns.
- Y Reinforcement – Provide positive feedback.
- Y Adjust – Have the students make the necessary adjustments by changing the students' focus or by changing your choice of activity/exercise.

#### 5. Provide Closure.

- Y Show how the activities achieved the goal.
- Y Provide the students with practice activities.
- Y Invite the students back to ski with you again so you can evaluate their progress.
- Y Insure that students are aware of goals for their next lesson.

#### 6. Address risk awareness in the presentation of the lesson.

#### 7. Exhibit professional appearance and behavior throughout the lesson.

For more information see PSIA-C Nordic Certification Guide

## Learning Styles

Good teachers must also be aware of the learning styles of those they teach. The effective instructor must take inventory of his or her group and adapt his teaching style to the learning styles of his or her class. The following is a list of some learning styles. Try to determine which learning style best fits the student and teach to that style. Try to assist students to learn via all styles to promote the highest level of achievement.

If a student just is not “getting it”, you may be using a teaching method that doesn’t work with the student’s learning style. Switch teaching styles to find one that will work. When teaching a class it is important to use a variety of teaching styles simply because the students will have a variety of learning styles

**Doers** – tend to be pragmatic, practical and functional; they are searchers who see a purpose in learning; they are good problem solvers and work well with others. The doer will be constantly on the move; standing and waiting are not for them.

**Feelers** – usually receptive learners; they learn predominantly through “gut” intuition. They try many things to find a way. They learn by doing and by evaluating on the way. The feeler will learn sports easily. If instruction is mostly analytical, the feeler will lose interest quickly.

**Watchers** – like to get the picture and know the purpose of practice. They need to watch others, are good listeners, introspective and contemplative. The watcher tends to hang back in the group, studying everyone’s performance. This student will do well following right behind the instructor.

**Thinkers** – are analytical, logical, thorough and theoretical. They would rather read than listen to lectures, and are often loners or dreamers. At times they are meticulous to a level of obsession. The thinker may have read books or articles before taking his first lesson and will need detailed explanations from the instructor in order to understand the task.

## Learning Quiz

Questions One and Two are Multiple Choice.

1. In order to select an attainable goal, the instructor must:
  - a. Agree upon the goal with the student.
  - b. Consider the lesson time limitations.
  - c. Be realistic.
  - d. All of the above.
  
2. Providing a closure to the lesson helps the student:
  - a. Know when the area closes.
  - b. Know when the lesson is over.
  - c. See how the activities during the lesson achieved the goal.

Questions Three and Four are True or False.

3. Students should be kept moving and doing.
4. To reinforce learning, a student should receive a lot of negative feedback.

5. What are four types of learners?

---

---

---

---

-

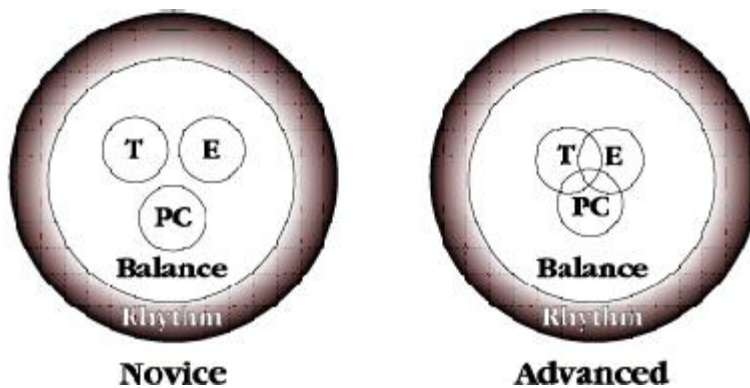
## The PSIA skiing Model

There are three facets of the American Teaching System Nordic (ATSN) Skiing Model with which the nordic Basic Instructor should be familiar: the fundamental skills and skill blending; the skills approach to teaching/learning; and the nordic reference maneuvers.

### The Fundamental Skills of ATSN

The skills approach assumes that there are just a few primary skills which, when blended and coordinated properly, produce functional and efficient skiing. These skills have been shown to be balancing movements, edging movements, pressure control movements and rotary control movements.

This is a diagrammatic representation of the improved blend of skills in advanced skiers that produce rhythm in skiing. (T= Turning and Rotary Control; E=Edge Control; and PC=Pressure Control.):



### Relaxation and Rhythm

Relaxation is the most important element of skiing. There are three components to relaxation.

- Y Relaxing unused muscles as much as possible.
- Y Relaxing propulsion muscles immediately after their contraction is completed.
- Y Relaxing the mind. Being in a right brain performance state (see the PSIA–C Nordic Certification Guide).

Rhythm refers to the right amount of force applied with the right timing and sequence.

### Balance Control Movements

An efficient skier is generally never in true “balance” for even an instant of time. Most people understand balance to mean not falling down. Balance control movements refer to something different: the control of the continual state of imbalance. Controlling the timing and precision of these movements produces efficient skiing. Increasing the range of these movements in three dimensions produces faster skiing.

### Edge Control Movements

Edge control refers to the application and adjustment of the angle(s) between the skis’ base surface(s) and the snow surface.

### Pressure Control Movements

Pressure control encompasses movements that may increase pressure, decrease pressure and/or change pressure distribution on the skis. For nordic skiing, it also includes movements that determine pressure applied by the poles.

## **Rotary (Turning) Control Movements**

Rotary movements involve rotation or a circular motion around some axis of the body and circular movements originating from certain joints. Controlling these movements involves limiting or encouraging them as required.

Edge control, pressure control and rotary control movements all interact to enhance balance control. In turn, all movements along with relaxation interact to produce proper rhythm. As a skier improves, the interactions among these skills strengthen. This is symbolized in the graphic on the previous page.

## **The Recommended Functional Skills of Nordic Skiing:**

- Y Sliding on skis
- Y Grip/Push off
- Y Gliding on one ski
- Y Edging
- Y Moving from ski to ski (Weight Transfer)
- Y Skidding
- Y Pole Pushing
- Y Steering,
- Y Turning

The purpose of using the skills approach to ski instruction and learning is that the set of functional skills serves as tools which an instructor uses to analyze a student's performance. This analysis, in turn, leads to the formation of a lesson plan for that student.

In most cases, a error in movement will be caused by the student having trouble with more than one skill. Isolating the trouble areas and addressing them one at a time is the best way to correct errors. Try to recognize the root cause of the error rather than just the error's obvious manifestation. For example, odd poling movements are often caused by balance problems. Trying to correct the poling movement directly may not be productive, while working on balance may fix the poling movement.

There are other sets of functional skills that could be used to analyze a student's performance. For instance, an instructor could visualize a diagonal stride as a blend of five fundamentals: body position, weight transfer, arm swing, kick and recovery, and use of poles. The functional skills listed above, however, form the most fundamental set. This will have special advantage later in your professional career as you learn the details of skiing mechanics.

The skills approach has other advantages. It helps instructors describe all aspects of nordic skiing in terms of either generating or controlling speed. In addition, the fundamental skills support more specific functional skills. The functional skills can be learned separately and combined in various ways to allow students to execute all of the techniques of nordic skiing.

## **The PSIA Nordic Reference Maneuvers - Nordic Track**

### **Classical Skiing**

- Y Diagonal Stride
- Y Double Pole
- Y Double Pole with Kick
- Y Herringbone
- Y Uphill Diagonal Stride



**Ski Skating**

- Ÿ No poles skate
- Ÿ Diagonal V-Skate
- Ÿ Marathon Skate
- Ÿ V-1 Skate
- Ÿ V-2 Skate
- Ÿ V-2 Alternate Skate

**Downhill - Nordic Track maneuvers**

- Ÿ Skate turn
- Ÿ Step turn
- Ÿ Straight run and tuck in and out of a track
- Ÿ Wedge Turn
- Ÿ Wedge Telemark
- Ÿ Open Stance Parallel
- Ÿ Open Stance Telemark

**The PSIA Nordic Reference Maneuvers - Nordic Downhill**

- Ÿ Wedge Turn
- Ÿ Wedge Telemark
- Ÿ Open Stance Parallel
- Ÿ Open Stance Telemark
- Ÿ Dynamic Parallel
- Ÿ Dynamic Telemark
- Ÿ Skating on telemark skis

These reference maneuvers make up the PSIA Nordic Skiing Model and were selected both as a representative list, and because they serve as a check of a skier's progress in skill development. They do not include all possible variations of nordic techniques.

What is good skiing? How do we identify what a good skier is? What are the essential maneuvers of classic, skate and nordic downhill skiing? Most of us, while watching skiers, are able to point out the “good” skiers. We recognize the difference between a V-1 skate and a V-2 skate, and between a basic Telemark and a dynamic Telemark. Why?

A proper blend of the fundamental skills provides us with a very clear way of identifying a model of “good” skiing, comprised of the distinct maneuvers of track skiing and nordic downhill skiing. In ATS: Alpine Skiing, this model is referred to as the Center Line. “The Center Line represents the framework and reference point for the development and application of the fundamental skills. It provides a model of contemporary skiing represented by specific skiing maneuvers.” The purpose of the alpine Center Line technique sequence is to provide a controlled development of fundamental skill blending.

The term Center Line, for as long as it has been used in the lexicon of ATS, has been a source of confusion for the nordic instructor. Because of the differences between the nordic and alpine interpretations on the Center Line, nordic instructors choose to refer to the Center Line as the reference maneuvers of track skiing and nordic downhill skiing.

The reference maneuvers are valuable because they provide us with a visual image of elegant, efficient, precise skiing, yet they allow for parameters of acceptability at a variety of ability levels. These parameters are established by the fundamental skills and the common skill features of the reference maneuvers. Both the ski tourer skiing on ungroomed terrain and the racer skiing on a groomed trail may exhibit acceptable skiing within the parameters set forth by the appropriate reference maneuver.

The reference maneuvers furnish us with a distinct product that allows us to more clearly define the objectives of our lessons. They are visually marketable to our students and assist them in identifying and pursuing their own individual lesson outcomes. The outcome oriented nature of the reference maneuvers is a valuable analytical tool that we can use to evaluate performance at all levels of skiing development. We can use the same model to assess the level of skill and achievement of a skiing novice or an accomplished racer.

It is critical to keep in mind that the reference maneuvers should be used not as the final ends of achievement, but as markers for skiers' development and skill acquisition. As instructors we encounter students with a vast diversity of backgrounds. They approach the learning environment with a multitude of fitness levels, athletic predisposition, past skiing experiences and body types. Though we try to define the reference maneuvers using precise language, we must constantly remind ourselves that we are still teaching people and this requires a variety of interpretations and stylistic variations of the reference maneuvers. It is equally important to expose our students to maneuvers and movement patterns that go beyond the precisely defined reference maneuvers. Typically, expanded growth and accelerated learning occur when students are exposed to a greater variety of movements, provided these movements are still anchored by the fundamental skills.

## Technical Quiz

1. What do the letters ATSN stand for?

---

2. Identify the system used for nordic ski teaching in the United States?

---

3. The Nordic Skiing Model is:

- a. A guide post for the measurement of a skier's progress.
- b. A model of final form skiing.

4. ATSN concentrates on the development of:

- a. Many complex maneuvers that make up the final forms.
- b. A few basic skills which are common to each standard on the Center Line.

Questions Five through Eight are True or False.

5. Nordic maneuvers are complex movements that are often difficult to learn when taught as a whole.

6. Weight Transfer is the movement from one ski to another.

7. Pressure control encompasses movements that may increase or decrease pressure and/or change pressure distribution on the skis.

8. All skiing is fundamentally related by the fundamental skills of ATSN.

## Sample Lesson Outlines

This section includes sample lesson outlines for basic instructors teaching beginning skiers. The outline format has been used so that you may add exercises as you become more familiar with ski teaching. Instructors should use these comments as a base of teaching knowledge which is built upon with experience.

Now that you know that there are different learning styles, you may pick and choose the exercises that fit the needs of the students you are working with. The sample lessons that follow contain proven exercises, but they may not fit every situation. As you learn more about your students, you will discover when and how to use the different exercises and approaches.

The challenge in teaching is combining technical knowledge with the ability to teach all kinds of people, each with different abilities and limitations. When you use this section of the workbook, try to identify the Skiing Model of ATSN. Recognition of the basic skills will enhance your ability to match the skill development to the needs of the students. The American Teaching System Nordic suggests a basic presentation that includes the following teaching cycle:

**Introduction:** Introducing the lesson.

**Body of Lesson:**

Ÿ Determine Goals

Ÿ Plan the Lesson Objectives

Ÿ Show — Instruct — Practice (The three part basic ATSN presentation of skills.)

Ÿ Checking for Understanding

Ÿ

**Summary:** Summarizing the lesson.

### Show — Instruct — Practice

**Show:** Demonstrate the skill so that the class can observe prior to your instruction. A demonstration should be presented anytime a new skill is introduced, or when the instructor senses the students need a good visual image to further learning.

**Instruct:** Give the students a short, simple to understand explanation of what to do. Too much verbal instruction confuses the student and complicates learning.

**Practice:** Practice should consume the most time in learning a skill. Students must test and experiment with skills in order to experience the movement. More instruction may follow after the students have practiced and can then better relate to the lesson.

To show a skill takes a minute, to instruct takes another, and practice takes the remainder. People learn through practice. The instructor provides exercises to correct observed errors and provides individual attention once the students have practiced.

## Beginning Classic Skiing Lesson

This beginning lesson progression is intended for skiers new to nordic track skiing. It is appropriate for those who have never skied, and those with an alpine background. This lesson fits in the one hour time frame that is typical for beginner lessons offered by nordic ski centers. Extend the time of the beginning lesson with caution. Fatigue may set in and the lesson may become unproductive after an hour.

Teaching terrain should include a flat area with a length of classic tracks and a gentle hill with a flat top and a flat run out that a beginner can safely straight run.

It is important to allow enough time for the up and downhill portion of the lesson. The beginners' success on hills will have a bigger impact on fun and safety than having an ideal stride. The up and downhill lesson should take at least half of the lesson.

**Goal:** To learn the skills needed to tour green (least difficult) trails skiing safely while having a fun experience. This includes basic stride technique, uphill, and downhill techniques.

### Progression (Beginning Classical Skiing Lesson)

- ÿ Ski walking with or without poles. This is simply imitating the ski motion without skis on.
- ÿ Practice gliding on one ski. Scooters and one ski stride. Try gliding on both sides.
- ÿ Put on both skis. Practice falling down and getting up.
- ÿ Turn around in place without looking at the skis. Star turns.
- ÿ Stride without poles.
- ÿ Stride with poles.
- ÿ Stride with poles again thinking about getting a relaxed push on the poles.
- ÿ Move the class to a practice hill.
- ÿ Demonstrate the herringbone and get the class up the hill.
- ÿ Work on straight runs. Go for a relaxed centered stance with ankle and knee flex.
- ÿ Practice falling and getting up on the hill.
- ÿ Stride uphill, as possible, without using the herringbone.
- ÿ Rock back and forth to find the point of best balance while standing still.
- ÿ Flex and extend to avoid a rigid pose while skiing downhill.
- ÿ Depending on snow conditions, step, hop or brush feet into a wedge.
- ÿ Ski downhill widening and closing the wedge. Maintain ankle and knee flex.
- ÿ From the wedge, turn apply more pressure to the outside ski and guide both skis into a turn across the hill to a stop.
- ÿ Turn both directions to a stop.
- ÿ Set up a course with flags or cones for linked turn practice. This gives the you a chance to spend more time with students struggling with turn basics while the others practice.
- ÿ From the wedge, add more edging on both skis to create a braking wedge.
- ÿ Practice stops in the middle hill.

## Beginning Ski Skating Lesson

Learning to ski skate requires good ski to ski balance, gliding, and poling abilities, skills often lacking in novice skiers. Hence, introductory skate lessons are recommended for skiers with some previous skiing experience. Diagonal stride skiers can often balance ski to ski and propel themselves with poling and leg extension, but need to improve edging and out of track balance. Alpine skiers often have good sliding balance and may already skate a little, but need to work on skis to ski movements and balance, poling and propulsion skills. All these skiers need to learn the details of basic skate techniques. This sample progression is designed to introduce such skiers to the wonderful world of Nordic ski skating, although their skills and needs are very different and require the instructor to

be especially creative.

**Goal:** To learn fundamental ski skating skills. To negotiate flat trails and gentle uphill. Diagonal V Skate, No pole skate, V-1 skate, and discover an exciting new way to travel over snow.

**Progression:**

- ÿ Warm up with stretching and relaxation exercises related to ski skating. An especially good warm up is doing dryland demonstrations of basic skating motions.
  - ÿ Double pole in tracks to review proper poling and gliding on skis.
  - ÿ Demonstrate no pole skating, out of tracks.
  - ÿ Have students no pole skate with one ski on, concentrating on body position, lateral movement of the ski, edging, gliding, and arm swing/timing. Repeat on other foot.
  - ÿ Students no pole skate with both skis, using flat or slight downhill to emphasis glide.
  - ÿ Ski high to emphasis relaxation. Ski low to emphasis edging. Experiment with each.
  - ÿ No pole skating using drills that emphasis stable upper body.
  - ÿ Demonstrate diagonal skate with the addition of poles. Have students do the diagonal skate.
  - ÿ Demonstrate V-1 on a gentle uphill.
  - ÿ With skis off, demonstrate V-1 timing and have students try it.
  - ÿ With both skis on, students try the V-1 on flat terrain concentrating on timing.
  - ÿ Have student attempt V-1 on a gentle uphill.
- Have student practice all V-1 drill on both sides.

**Beginning Telemark Downhill Lesson**

We recommend that skiers wishing to learn telemark turns should already have some skiing experience, either Alpine or Nordic skiing. Skiers coming from an Alpine background will usually have some advantage over Nordic skiers. This lesson assumes that the skiers already have an understanding of edge control, wedges to stop and turn, and basic downhill skills (i.e. getting up after a fall on a hill). The lesson progression is geared for both Nordic downhill and Nordic track equipment. Drill that are specific to shaped skis have been omitted.

**Goal:** To learn the basics of the telemark turn. To learn proper stance in the telemark position, gliding in a telemark position, telemark turns on easy terrain, and linked telemark turns. The goal is to have the basic skills for good telemark turns on very gentle slopes.

**Progression: (Beginning Telemark Lesson)**

Warm up and relaxation exercises - These exercises are done in the lodge with boots off.:

- ÿ Student has feet together, instructor tugs on hands, student strides forward to catch balance
- ÿ Have student hold that position, and tug hand again, student will naturally tend to assume a telemark position to resist the pull. This proves the fore/aft stability of telemark stance.
- ÿ Work on proper stance so that feet are not too far apart or student is too low.
- ÿ Have students shuffle in telemark position, paying particular attention to putting pressure on rear foot.

On snow work:

- ÿ Athletic Stance – lowered stable body form
- ÿ Telemark Stance – even pressure front and rear foot. Upper body erect. A good telemark stance is about 90% of a telemark turn
- ÿ Telemark Straight Runs – student goes down very gentle slope in telemark stance. Flex and extend to avoid a rigid stance.
- ÿ Telemark Shuffle Run – student goes across the same slope making lead changes.
- ÿ Walk on the Wild Side – student shuffles across the fall line, then down the fall line (through a turn) and the across the fall line.

- Ÿ Single Telemark Turn – student stands in a telemark position and move knees and ankles in the direction of turn to roll the skis on edge. Wait for turn to develop. Don't rise out of telemark position. Hold it through turn completion. (garland)
- Ÿ Linked uphill telemark turns – garlands with traverse between turns. Practice edging and releasing, edging and releasing.
- Ÿ Single downhill turns – one turn at a time, going down fall line, on gentle terrain
- Ÿ Shuffle Run to Linked Turns – on gentle terrain begin with lead changes to begin linking turns
- Ÿ Linked turns on gentle slope.

**Other suggestions:** Work on bunny hill. Walk up part way, the skis allow it and it will keep students warm. Don't even ride the lift for much of the lesson. If it isn't working then the terrain is too steep.

After class review the key points and encourage students to put on heavy socks and do the telemark shuffle at home on a hard, polished surface. Experiment with pressure distribution. Pick up front foot to feel what having 100% of pressure on the back foot really feels like. For most new telemark skiers, 50% of the pressure on the back foot feels like they have 100% pressure on the back foot.

## **Bibliography**

*ATS Nordic Handbook*, PSIA, 1992

ATS Nordic Skiing, PSIA, 1995 (In print, but soon to be superseded)

Core Concepts for Snowsports PSIA, 2001

Nordic Technical Skiing Manual and Teaching Skills PSIA (Soon to be available)

PSIA-C Nordic Certification Guide PSIA-C, 1992

## **Quiz Answers**

### **Safety Quiz Answers**

1. F, 2. T, 3. T, 4. F, 5. T, 6. T

7. Physically and Psychologically

8. Ski under control and in such a manner that you can stop or avoid other skiers or objects.

When skiing downhill or overtaking another skier, you must avoid the skier below you.

You must not stop where you obstruct a trail or are not visible from above.

When entering a trail or starting downhill, yield to other skiers.

All skiers shall wear retention straps or other devices to help prevent runaway skis.

You shall keep off closed trails and posted areas and observe all posted signs.

Avoid personal actions which are wasteful or endanger the environment.

### **Fun Quiz Answers**

1. F, 2. T, 3. T, 4. T, 5. F, 6. T, 7. b, 8. D.

### **Learning Quiz Answers**

1. d, 2. c, 3. T, 4. F, 5. Doer, Feeler, Watcher, Thinker.

### **Technical Quiz Answers:**

1. American Teaching System Nordic, 2. American Teaching System Nordic, 3. a., 4. b., 5. T, 6. T, 7. T, 8. T.

### Nordic Basic Instructor Test - Part I, General

Applicants for membership should study this manual and complete this open book written examination. This exam is to be evaluated at the first PSIA-C education event attended.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Nordic Discipline                      Nordic Track              Nordic Downhill

1. List the seven points of Your Responsibility Code.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Ski lessons should be started with: (Multiple Choice)

- a. Skiing in tight circles around the instructor.
- b. A few light upper and lower body stretches.
- c. Some strenuous aerobic exercises.

Questions Three through Six are True or False.

- 3. Lessons should be taught on terrain that is beyond the students' current skill level.
- 4. Fear is unnatural in ski lessons and should not be allowed.
- 5. Students' goals do not have to be realistic.
- 6. Verbal instruction is better than having the students actively participating in the lesson.
- 7. What is the three part basic ATSN presentation of skills?

\_\_\_\_\_ — \_\_\_\_\_ — \_\_\_\_\_

8. List four types of learners.

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

9. Learning everyone's name in the class: (Multiple Choice)

- a. Takes too much time in the lesson.
- b. Is too confusing for the instructor.
- c. Makes the lesson seem more personal to the student.

10. Which are more effective?

- a. Demonstrations.
- b. Wordy explanations.



Questions Eleven through Thirteen are True or False.

- 11. Students are not amused and may be intimidated by humor in class.
- 12. A good instructor will use a variety of exercises.
- 13. Skiing etiquette should be included during lessons.
- 14. What is the ski instructor's motto?

\_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

15. What does ATSN stand for? \_\_\_\_\_.

16. What are the five fundamental skills in ATSN?

\_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_.

### Test – Part II, Technique Recognition Nordic Basic Instructor

Instructions:

- Nordic track applicants complete Questions Seventeen through Twenty-two.
- Nordic downhill applicants complete Questions Twenty-one through Twenty-five.

Identify the following techniques by placing the correct letter in the blank spaces provided:

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| _____ 17. Double Pole               | _____ 18. Diagonal Stride           |
| _____ 19. Diagonal Skate            | _____ 20. V-1 Skate                 |
| _____ 21. Wedge Turn                | _____ 22. Basic Telemark Turn       |
| _____ 23. Wedge Christy Turn        | _____ 24. Open Stance Telemark Turn |
| _____ 25. Open Stance Parallel Turn |                                     |



*A*



*B*



*C*



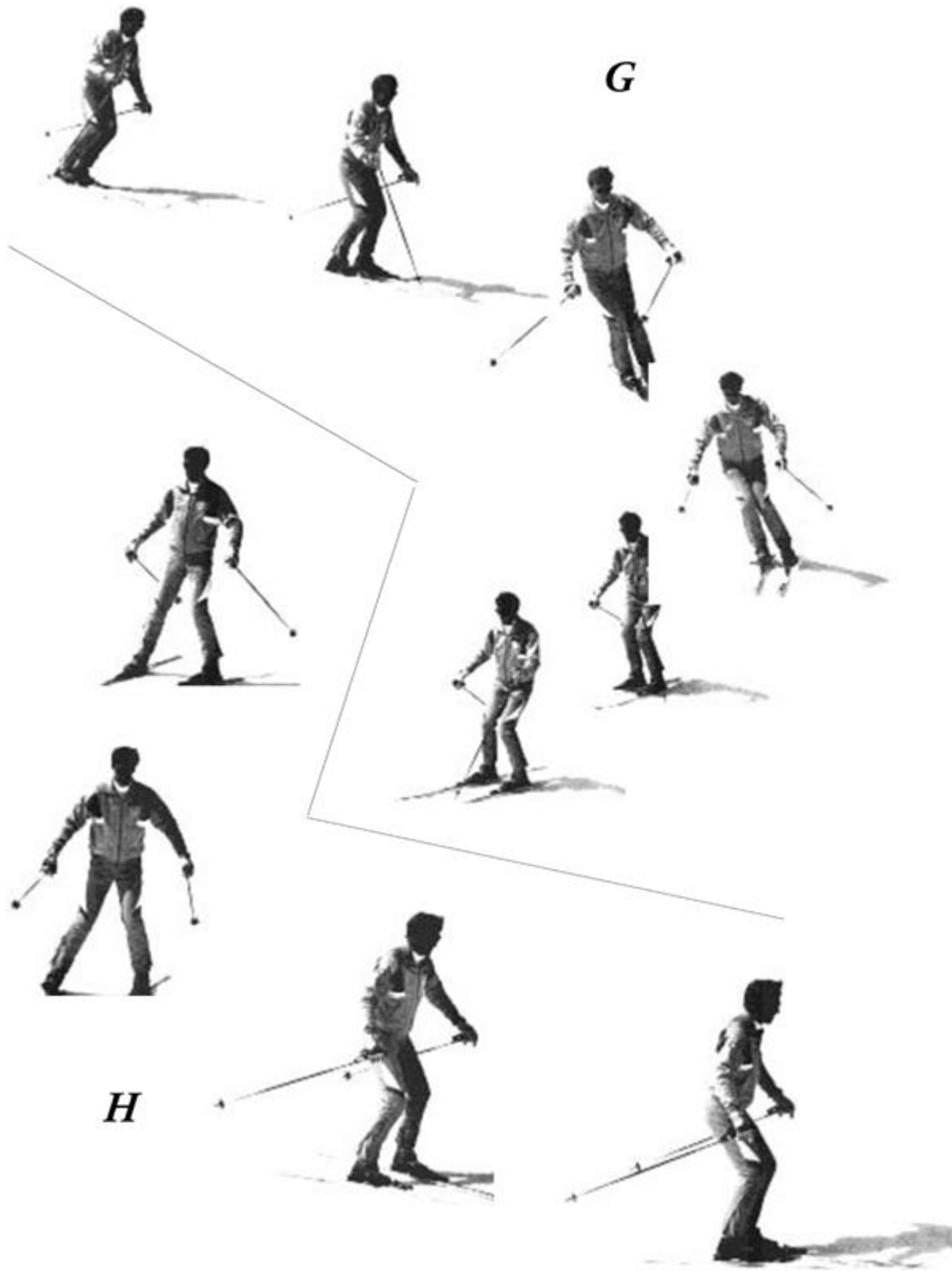
*D*

*E*



*F*







*I*



## **Notes**