

1 INTERACTIVE PRE-COURSE LESSON & VIDEO- 30 MIN*

*A link to our 30 minute Pre-Course Lessons and video will be provided in your logistics package after course registration.

The Indoor portion:

- Part I: Introductions & Pre-Course Quiz
- Part II: Avalanche Phenomenon Power Point
- Part III: Avalanche Travel Equipment & Companion Rescue Clinic
- Part IV: Avalanche Bulletin/Avaluator 2 & Pre-Trip Planning Session

Part I: Introductions & Pre-Course Quiz

- Lesson 1: Pre-course quiz

Part II: Avalanche Phenomenon Power Point

- Lessons 2-20: Snowpack: Crystals & Layers
- Snow Crystal types
- Weak layers
- Interactive Animation: Snow crystal metamorphosis/re-crystallization/Temperature Gradient
- Persistent weak layers
- Lessons 21-42: Terrain:
- Avalanche Phenomenon
- Avalanche Terrain: Slope Incline, Anchor Density, Terrain Shape
- Avalanche Path & Slope Recognition
- Start Zones
- Alpine, Treeline & Below Treeline Terrain
- Avalanche Types
- Avalanche Triggers
- Avalanche Terrain Exposure Scale
- Lessons 43-64: Environmental Factors in Avalanche Formation Terrain

- Slope Aspects: North, South, East, West
- Elevations: Alpine, Treeline, Below Treeline
- Load on a slope
- Sun & Solar Radiation
- Temperature
- Wind
- Snowpack Variability
- Lessons 65-83: Avalanche Hazard Mitigation
- Safe Terrain Selection
- Snowpack Tests
- Strategic Approach
- Lessons 84-92: Avalanche Danger Resources
- Avalanche Danger Scale
- Avalanche Bulletin
- Weather Resources
- Conditions Resources
- Other important resources
- Lessons 93 – 95: Human Factors
- Human Factors
- Case Study

Part III: Avalanche Travel Equipment & Companion Rescue Clinic

- Lesson 96-100: Equipment and Companion Rescue Technique Familiarization
- Transceivers: Use and Demo
- Companion Rescue Training: Using our new proprietary CTM (Configurable Training Mat)
- Avalanche Probe
- Avalanche Shovel
- Avalanche Air Bag and Backcountry Ski/Freeride backpack

Part IV: Avalanche Bulletin/Avaluator 2 & Pre-Trip Planning Session

- Lesson 100-104: Pre-Trip Planning
- CAC Avaluator Trip Planner
- Trip Planner Form

- Proprietary Online Trip Planner Tool & Resources
- Next Days Plan
- Lesson 105: Decision Making Competence

The outdoor portion:

- Field Session 1: Trailhead procedures
- Equipment Check
- Signal Check
- Quick Intro to Backcountry Equipment Use
- Field Session 2: Companion Rescue:
 - Avalanche Incident Scene Assessment
 - Rescue Organization
 - Avalanche Transceiver Coarse Search
 - Avalanche Transceiver Fine Search
 - Pinpointing with Avalanche Probe
 - Conveyor Belt Digging Technique
 - Companion Rescue Practice
 - Companion Rescue Test
- Field Session 3: Travel in avalanche terrain
 - Situational Awareness
 - Students take turns behind the instructor noting changes in terrain, conditions, weather and avalanche indicators
 - Conservative Terrain Selection & Track setting
 - Consider the current avalanche problems: What, When, Where, What is the trigger, How big
- Field Session 4: Snowpack and/or avalanche observations
 - Snowpack layers
 - Layers of Concern
 - Using Snow Study Kit
 - Noting Red Flag/Class 'A' Indicators
 - Avalanches, Wumphing, Shooting Cracks
- Field Session 5: Snowpack tests
 - Compression Test, Shovel Sheer Test, Rutschblock, Hand Sheer Test
 - Find the layers of concern, test and discuss the hazard they pose
 - ATES scale (simple, challenging, complex)
 - Slope Assessment; use Avaluator 2 Slope Assessment
 - Avalanche types and sizes Common triggers
- Field Session 6: Descent in avalanche terrain

- Mitigation techniques: Avoidance, Conservative Approach, Re-grouping

**Notice: MSAA pledges to always cover all of the critical skill sets. However, though rare, conditions or other constraints may cause for certain lessons to not be appropriate or safe to undertake. Be sure to address your instructor at the time if you have any concerns.”