

# SMC ROCK CLIMBING LEVEL 1 TRAINING COURSE SYLLABUS

## RCK 1.1

Reference: Mountaineering: The Freedom of the Hills, 8<sup>th</sup> Edition, The Mountaineers, Seattle WA

### ORIENTATION

Meet and Greet Activity

Welcome to SMC

- Mission: Connect, Learn, Climb
- Membership advantages and benefits

Overview of RCK Courses

RCK 1 Learning Objectives

### SAFETY AND OVERVIEW

Rock Climbing vs. Other Sports

Inherent Risks of Mountaineering

- Objective Hazards (p. 488-489)
- Subjective Hazards (p. 488-489)
- Risk Management as a member of a team (p. 489-494)

Managing Risk (p. 485-494)

Scope of Modern Rock Climbing

Training for Rock Climbing

SMC opportunities for rock climbing

### ROCK CLIMBING CONCEPTS

Rating Systems

- YDS: Class 1-5.14
- Grade I-VI

Rock Features

- Face
- Slab
- Crack
- Ridge or Arete
- Buttress
- Gendarme

Style and Ethics

### ROCK CLIMBING PERSONAL GEAR

Clothing and Layering

Rock shoes and Approach Shoes: Types and Uses

- Slipper vs. boot
- Rubber

Harnesses Types and Uses

- Rock climbing harnesses
- Mountaineering harnesses
- Safety

Climbing Ropes Types and Uses

- Static vs. dynamic ropes
- Kernmantle construction
- Rope length
- Strength
- UIAA Falls
- Impact force

Cordage Types and Uses

- Sizes and strength
- Importance and usage

Webbing / Runners Types and Uses

- Nylon vs. Kevlar
- Importance and usage

Carabiners Overview

- Showcase various styles
- Strength rating
- Safety

Locking Carabiners Types and Uses

- Types of locking mechanisms
- HMS type

Non-Locking Carabiners Types and Uses

- Gates: solid vs. bent vs. wire
- Opposite and opposed

Helmets Types and Uses

- Mountaineering helmet
- Sport climbing helmet

Belay / Rappel Devices Types and Uses

- Tube-slot
- ATC
- GriGri

Specialized Equipment

- Chalkbag
- Rope Bag
- Crash pad

### ESSENTIAL KNOTS

- Fig 8 Follow Through (p. 141)
- Fig 8 on a Bight (p. 141)
- Clove Hitch (p. 143)

- Prusik Hitch (p. 145)
- Munter Hitch (p. 147)
- Klemheist, with webbing
- Fishermans Knot

### CLIMBING BASIC SKILLS

Top roping vs. lead climbing

Coiling the Rope

Safety Checks

Common Errors Overview of belaying

- Definition
- Importance and usage
- Trust and responsibility

### BELAYING

Belaying Overview

Responsibility and Trust

Elements of the belay

- Guide hand, brake hand
- Belay device and locking carabiner
- Belay anchor

Assembling a harness belay

3 Responsibilities of a belayer

- Manage slack
- Brake hand never leaves rope
- Be ready to brake

Belay stance and location

Belay set up

Belay Methods

- Slip-slap-slide
- Pull-Lock-Under-Slide (PLUS)

Catching a falling climber

Belay Stances

- Braced
- Sitting
- Standing
- Anchored

Belaying from the anchor vs. from the harness

Catching a falling climber

### BELAYING PRACTICE

In small groups we'll practice a reliable, safe belaying technique with a back up belayer

## RCK 1.2

### ORIENTATION AND SAFETY

Welcome and orientation  
Safety and safe zones  
In case of emergency

### ROCK CLIMBING PRINCIPLES

Climbing Movement

- Body position
- Footwork
- Balance

Climbing Efficiently

- Focus on speed and safety
- Climb with your eyes
- Use footwork
- Maintain three points of contact

Rock Climbing Technique

- 3rd and 4th class scrambling
- Slab
- Face
- Crack, chimney and off-width

### ROCK CLIMBING TECHNIQUE

Scrambling

- Identifying 3rd class and 4th class
- 3 points of contact at all times
- Demonstration and practice on a circuit

Spotting

- Concepts and demonstration
- Practice

Climbing in terrain with loose rock

- Movement as a member of a team
- Safe zones

Legs

- Use your feet to climb, hands for balance
- Don't move your foot until you know where to put it
- Precision placement
- Smaller steps
- Relax heel

Arms

- Support mechanism to maintain balance
- Keep straight
- Shake out

Slab Climbing Skills

- Body position over your feet

- Friction: surface area and coefficient of friction

Face Climbing Skills

Footwork

- Smearing
- Edging
- "Keen eye" precision placement
- Keep your foot still

Handholds

- Open grip
- Cling grip
- Ring grip
- Pinch grip

Manteling

Crack Climbing Skills

- Finger jams
- Hand and fist jams
- Arm bars
- Stemming
- Off-width
- Toe jams, foot jams and stacking

Chimney climbing

### LOWERING AND COMMUNICATION

Climbing Communication

- On belay, belay on. Off belay, belay off.
- Climbing, Climb on.
- Rock!
- Slack, tension
- That's me
- Watch me
- Rope!
- Got me? Ready to Lower
- Lowering

Lowering

- Concepts and safety
- Lowering position demonstration
- Practice

Safety Checks

- Harness double-back check
- Belay set up check
- Helmet-to-Helmet check and practice

Practice Climbing Communication

### TOP ROPE CLIMBING

We'll split into at least two equal groups to practice climbing, belaying and lowering as

well as setting up the belay and commands.

### ROCK CLIMBING TECHNIQUE

We'll continue climbing on top rope on routes up to 5.9 with a focus on more advanced technique

Key Principles of Climbing Movement

- Combining techniques into "choreography"
- Strive for control rather than success at all costs
- Be keenly observant
- Plan your moves
- Never pass up an opportunity to rest
- Balance, position and weight transfer
- Follow line of least resistance
- Climb precisely, fluidly, and relaxed

### INTERMEDIATE ROCK CLIMBING TECHNIQUE

Climbing Efficiently and Safely (p.214-238)

- Focus on relaxing and conservation of energy (p.214)
- Footwork is your foundation (p.215)
- Always check for loose holds (p.215-216)

Rock Climbing Technique

- Downclimbing 4th class terrain facing in (p.236-237)
- Chimneys (p.228-231)
- Lieback (p.222-223, 232-233)
- Undercling (p.222-223)