



# Level 4: Whitewater Packrafting Skills Course

## Skills Course Overview

This course is designed as a program emphasizing safety, enjoyment, and skill development. The skills and knowledge gained through this course can set the stage for a lifetime of exploration, adventures, a healthy lifestyle, appreciation of water and the natural world, lasting memories with family and friends, and a rewarding experience for all - we paddle because it is fun.

*This course is appropriate for all packrafts including traditional decked, non-decked, and self-bailing vessels. The evaluating Instructor, Instructor Trainer, or Instructor Trainer Educator must conduct the course from a packraft.*

*To adequately perform the required maneuvers of this course venue, thigh straps are strongly encouraged.*

## Skills Course Prerequisites

- Acknowledgment of personal compliance with the [ACA Essential Eligibility Criteria \(EEC\)](#).
- No prior paddling experience or training is required to participate in this course

## Course Duration

The course duration should be adjusted to best fit the needs and goals of the participants. Up to 1 day (8 hours).

## Course Location / Accessible Venues

Moving water on rivers including class II-III sections. *A rapid class includes rapids at the lower and upper ends of the difficulty range, designated “-“ and “+” respectively.*

Ideally, this course should include a brief approach to the venue, carrying the deflated packraft.

## **Course Size**

5 Participants : 1 Instructor; with an additional qualified assistant, the ratio can be 10 : 2.

## **Instructor**

This assessment course may be offered by Level 4: Whitewater Packrafting ACA Instructors, Instructor Trainers, or Instructor Trainer Educators.

## **Succeeding Courses**

- Level 4: Whitewater Packrafting Assessment, or Certification Course

## **Course Outline**

The sequence of this course should be adjusted to best fit the participant's needs, class location, time allowance, and craft being used.

## **Introduction, Logistics, and Expectations**

*Learning objectives - students should have a basic understanding of the ACA and its policies, how and where this course is being conducted, and acceptable student behavior.*

- Welcome! We're so glad that you've chosen to further your paddling experience and education by attending this course! Let's review a few highlights about the ACA
- Let's talk about the course itinerary, expectations, and limitations
- Lay of the land (and water): the logistics of this venue
- Review liability waiver, assumption of risk, challenge by choice, and medical disclosure
- Life jacket policy: always wear while on the water
- Describe and follow safe boating practices (behavior, substance abuse, on water and land etiquette, respecting private property, and Leave No Trace ethics)

- Promotion of a packraft “Culture of Safety”

## **Paddling and Packrafting Environment**

*Learning objectives - students should understand the following factors as they relate to the planning and execution of a paddling trip.*

- Water
- Weather
- Wind
- Waves
- Approach to the water

## **Personal Preparation**

*Learning objectives - students should understand the critical components of trip planning, including how to prepare their equipment and craft for a safe departure and return.*

- Describe and follow safe boating practices (behavior, substance abuse, on water and land etiquette, Leave No Trace ethics)
- Review elements of a float plan (who, what, when, where, filing practices)
- Personal ability
- Swimming ability
- Water comfort and confidence
- Fitness, conditioning, and warm up to reduce injury
- Safe paddle and boat handling
- Safety and rescue considerations
- Personal equipment (reviewed by instructor)
- Judgment: in addition to learning hard skills, the importance of developing personal judgment and group responsibility increases on more difficult paddling venues

## **Getting Started**

*Learning objectives - students should understand the logistics of a packrafting trip prior to arriving at the put-in.*

- Trip Planning – 6Ps: Prior Proper Planning Prevents Poor Performance
  - Review elements of a float plan (who, what, when, where, filing practices)
  - Sourcing local beta such as river sections, flows, weather, etc. (i.e., online groups, guidebooks, websites, apps, businesses, gauges, etc.)
  - Local rules, regulations, and permitting requirements
  - Shuttle logistics
- Storing, packing, inflating, deflating and transporting a packraft
- Launching and landing craft
  - Posture, safety, comfort, rocking and balance
  - Boarding, three points of contact, weight kept low, etc.
- Address proper rigging, fit, and release of thigh straps\*
- Calmly exit the packraft after a controlled capsize, using proper body position and contact with the boat and paddle
  - When exiting the packraft with a spray skirt after capsize: must be modeled at least two ways: (1) utilizing the spray skirt grab loop, (2) releasing the skirt off the hip/hull tubes, or (3) driving knee up through the spray skirt\*
- Emptying packrafts after a capsize
- Safe and effective body mechanics
- Types of strokes: power, turning
- Parts of strokes: CPR (catch, power, recovery), control, correction
- Use of larger torso muscles
- Avoidance of positions that contribute to shoulder injury or dislocations
- Communication
  - Paddle, hand, and whistle signals
- Basic navigation using a map and compass

*\*Skills not required for those participants paddling a packraft without a spray skirt / thigh straps*

## **Equipment**

*Learning objectives - students should understand the equipment (both personal and group equipment) needed for packrafting, including appropriate use, maintenance, and care.*

- Packraft
  - Types and parts: sizes, geometry, deck, combing, skirt, self-bailer, cargo zippers
  - Outfitting: comfort, safety, entrapment hazards
  - Outfitting: thigh straps, seat height and position, backrest, perimeter lines, tails, locking carabiners
  - Stability
  - Tracking
- Paddle: parts, materials, sizing, hand position
  - How to hold the paddle in correct orientation and grip for effective paddling
- Spray skirts: types and materials, grab loop\*
- Life jacket: types, materials, fit
- Helmet types and use
- Thigh straps\*
- Throw ropes
  - Types of ropes, materials, options
  - Where to carry and stow
  - Deployment and re-stuffing
- Packing of equipment
  - Methods of packing and transporting packraft and associated gear
  - Securing backpacks and other cargo to, or inside, the boat

- Entrapment hazards
- Attachment points
- Weight distribution
- Cargo zippers
- Equipment care and maintenance
  - Packraft
  - Drysuits
  - Packs and other equipment
- Packraft repair
  - Home repair techniques and materials
  - Field repair techniques and materials
- Review of additional personal and group gear, including, but not limited to
  - Environmental supplies (food, water, appropriate clothing, sunscreen, etc.)
  - Navigational and signaling tools (maps, charts, whistle, etc.)
  - Extra paddle
  - Dewatering device
  - Rescue equipment (sling for reentry)
  - Survival equipment (head lamp, fire starting devices, signaling equipment)
  - Packraft repair kit
  - First aid kit (appropriate to training)
  - Bug spray, sun protection
  - Storage systems (dry bags, dry boxes)
- Review proper techniques to safely lift and carry the fully loaded boat on shore
- Making safe gear choices while considering weight sensitivity

## **River Hydrology, Features, and Hazards**

*Learning objectives - students should understand basic river hydrology and be able to identify different river features and hazards.*

- Currents, volume, speed, direction, and changes caused by streambed features
- Upstream and downstream Vs, chutes
- Eddies
- Eddy lines
- Waves
- Wave holes
- Bends
- Ledges and low head dams (horizon lines)
- Strainers/sieves
- Rocks
- Pillows
- Holes and hydraulics
- Wood hazards
- Undercut rocks or ice
- Dams/flow diversion structures and pipelines
- Pins and entrapment
- Man-made obstacles such as bridge pilings or debris
- In addition:
  - How each of the above changes with river levels
  - How each of the above impacts a boat and why

## **River Running**

*Learning objectives - students should understand the concepts of river etiquette and strategies for having a fun and safe day on the water.*

Strategies in running rivers:

- Spacing
  - Avoid tunnel vision
  - Paddle your own route
- Scouting
- Portaging
- Group organization on the river:
  - Cohesiveness (lead, sweep boats, etc.)
  - Safety boats, group members with repair kits, first aid kits, and first aid and CPR training
  - Communication and signaling
- Discuss danger vs. difficulty

## **Safety and Rescue**

*Learning objectives - students should understand the handling of common emergency situations on the river.*

- Exercising judgment, safety as a state of mind
  - Discuss the safety implications of access to remote paddling environments
- Principles of Rescue
  - Rescue Priorities: people, boat, paddle, gear
  - Responsibilities of the group, rescuer, swimmers
  - Appropriate use of rescue and safety gear
  - Emergency procedures
- Types of Rescue
  - Self-Rescue
    - Swimming in current
    - Body/boat position
    - Handling equipment



- Emptying boats
- Techniques for re-entry
- Responding to sudden deflation (popped boat or accident cargo fly opening)
- Boat assisted rescue
  - Assisted re-entry
  - Bow and stern towing for a tired swimmer
  - Towing or bulldozing a capsized boat
- Shoreline Rescue
  - Extension rescues,
  - Use of throw ropes/bags
  - Pinned craft
- Wading principles
  - Avoiding foot entrapment
  - Limitations (water depth and speed, bottom conditions, downstream hazards, debris in water)
  - One and two person techniques

## Strokes

*Learning objective - students should understand and be able to demonstrate the different paddle strokes used to maneuver a packraft.*

- Stroke components: catch, propulsion, recovery (CPR), control and correction
- Safe and effective body mechanics
- Types of strokes: power, turning
  - Forward Sweep
  - Reverse sweep
  - Back (to stop and go in reverse)

- Draw (to move sideways)
- Bow Draw and Duffek
- Stationary draw (to control turn or sideslip)
- Sculling draw/brace
- Sweep
- Stern draw
- Forward Stroke
- Rudder
- Boof stroke
- Low brace and high brace to avoid capsize

## **Maneuvers**

*Learning objectives - students should understand and be able to demonstrate dynamic raft maneuvers in course venue.*

- J-lean / heeling the boat
- Spin: boat pivots in place
- Abeam: boat moves sideways without headway
- Forward: boat goes forward in a reasonably straight line
- Stopping: boat stops within a reasonable distance
- Turns: boat turns in a broad arc while underway
- Veering, carving, and paddling the “inside circle”
- Eddy turns
  - Deep into eddy vs. near eddy line
- Peel outs
  - Deep into current vs. pivot near eddy line
- Ferries
  - Facing upstream to move laterally with control

- Facing downstream (to stop in current and move laterally to avoid hazards)
- C-turns (eddy turn and peel out from the same side of an eddy)
- S-turns (eddy turn on one side of an eddy, peeling out from the other side)
- Surfing

## Conclusion and Wrap Up

*Learning objectives - students should understand the importance of continuing education and practice. The instructor should debrief the course and hand out any pertinent materials.*

- This has been a great class! Let's talk through what we've learned with a group debrief and/or individual feedback
- Course limitations: there is always more to learn, and the skills and concepts we discussed require more practice and experience
- First aid and CPR training is a very valuable tool and could make the difference between a "near miss" and an emergency requiring outside rescue / first responders
- Paddling is a lifetime sport - there are local organizations, clubs, events, competitions, and classes through which you can continue your learning and build community. Get connected!
- Handouts and reference materials (if applicable)

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This curriculum is managed by the ACA Packrafting Committee. To connect with the leadership of this committee, please view the SEIC Committee rosters on [the ACA website](#).