



Level 5: Advanced Whitewater Kayaking Skills Course

Course Overview

The **Advanced Whitewater Kayaking** course is designed to refine and extend the judgment and technique of intermediate paddlers on class III to IV whitewater. This course is not to be taught on water of greater difficulty than class IV. To introduce advanced techniques including boat control, playboating and river running as appropriate to the site.

Judgment, Safety and Rescue Objectives

This course will use on-the-water scenarios to assess risk, evaluate rapid features and complexities, develop strategies, and nurture good judgment. Course will emphasize use of proactive, aggressive rescue skills stressing self reliance. This course should only be taken by those with a reliable river roll and rescue skills.

Course Prerequisites

- Acknowledgment of personal compliance with the [ACA Essential Eligibility Criteria \(EEC\)](#).
- Completion of an ACA Level 4: Whitewater Kayaking course or equivalent skills
- Proficiency and experience in executing all strokes, maneuvers and techniques needed for paddling on class III whitewater
- A reliable roll and the ability to aggressively rescue required
- Participation in a Swiftwater rescue course strongly recommended

Course Location / Accessible Venues

Minimum of class III whitewater / maximum of class IV whitewater. Site should include a variety of features to meet the course objectives. *A rapid class includes rapids at the lower and upper ends of the difficulty range, designated “-“ and “+” respectively.*

Course Size

3 Participants : 1 Instructor; with an additional qualified assistant, the ratio can be 6 : 2. The maximum number of participants permitted is 6.

For additional details, see [SEIC Policy Manual Chapter 6](#).

Instructor

This course may be offered by Level 5: Advanced Whitewater Kayaking ACA Instructors, Instructor Trainers, or Instructor Trainer Educators.

Course Duration:

One day (8 hours) minimum.

Succeeding Courses

- Level 5: Advanced Whitewater Kayaking Skills Assessment

Course Outline

The following is a general summary of course content for the Advanced Whitewater Kayaking skills course. The content covered and sequence of instruction should be adjusted to best fit the participant's needs, class location and time allowance.

Introduction, Expectations, and Logistics

- Welcome, introductions, paperwork
- Student and Instructor course expectations and limitations
- Course itinerary and site logistics
- Review waiver, assumption of risk, challenge by choice, medical disclosure
- About the ACA
- PFD policy (always wear on water)
- Appropriate personal behavior
 - No alcohol / substance abuse
 - Proper etiquette on and off the water
 - Respect private property
 - Practice Leave No Trace ethics

Paddling Environment

- Wind
- Waves
- Weather
- Water

Personal Preparation

- Personal ability
- Swimming ability
- Water comfort and confidence
- Fitness, conditioning, and warm up
- 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.

Individual Development

Judgment

Unlike on easier whitewater where the emphasis is on hard skills that are easily defined, on advanced whitewater judgment and personal and group responsibility are of key importance.

Self Awareness

- Understanding your level of anxiety
- Understanding your personal style and risk tolerance
- Responsibility to the group
- River and group awareness
- Rapid analysis scenarios

Self Evaluation

- What moves are required to successfully run the rapid?
 - Can I perform the required moves?
- What are the consequences of missing the required moves?
 - Am I willing to accept these consequences?
 - What if?
 - Rescue considerations

Group Evaluation

- Skill level of the group
- Size of the group
- Group consequences
- Condition of the group

Water Reading

- Changes to current speed and direction caused by streambed features

Safety and Rescue

- Principles of Rescue
 - Use of safe rescue strategies such as T-RETHROG (Talk, Reach, Throw, Row, Go)
 - Rescue priorities: people, kayak, paddle, gear
 - Responsibilities of: rescuer, group, swimmers
- Expose students to appropriate rescue techniques
- Recommend taking a separate Swiftwater Rescue course

Swimming and Wading Skills

- Understand the risks associated with standing and walking in the types of environments mentioned above (including entanglement and environmental hazards)
- Strategies to minimize risk of foot entrapment
- Strengths, limitations, advantages, disadvantages, and risks of wading techniques
- Actively participate in scenarios that apply wading skills for rescues
- Wading applications for foot / kayak entrapments
- Defensive and aggressive swimming positions, and transitions
- Techniques for successful exits from current to eddies
- Self-rescue: swimming with equipment
- Strategies to conserve energy
- Techniques for successful downstream swim of a rapid
- Swimming techniques for: waves, hydraulics, and drops
- Strategies for managing strainers in the appropriate venue

Kayak-based Rescues

- Advantages and disadvantages during rescues of various kayaks (e.g., play boats, creek boats, inflatable kayaks)
- Calmly exit the kayak after capsize, using proper body position and contact with the kayak and paddle. When exiting the kayak with a spray skirt after capsize, must be modeled two ways: (1) utilizing the spray skirt grab loop and (2) releasing the spray skirt off the hip
- Paddle recovery options
- Strategies for kayak recovery
- Swimmer tow options
- Swimmer re-entry / re-mount techniques (e.g., stern entry, heel hook, rescue sling, paddle float)
- Kayak bumping / bulldozing
- Kayak towing
- Kayak specific rescues (e.g., boat over boat, boat to boat, scoop)
- Unresponsive paddler rescue
- Emptying water from kayak (e.g., on-shore, bailers, pumps)

Throw Rope Skills

- Throwing techniques
- Receiving techniques
- Belaying techniques
- Rope management and safety strategies
- Rope coiling methods and throwing techniques

Paddling Techniques and Mechanics

Body Mechanics

- Three ranges of motion; tuck, twist, C [example; roll]
 - Posture enhances twist, balance, and comfort
 - Torso rotation while utilizing large muscle groups improves reach
- Minimize shoulder problems; correct body positioning, paddle placement; the box
 - Power transfer varies with flexibility and strength
 - Advantages of turning torso into boat's new direction versus steering with stern strokes
- Lower body balance
 - Value of warm up and stretching to increase flexibility and recovery
 - Heeling (J-lean), fake leans, head dinks

Kayak Factors

- Carving versus skidding: affected by steadiness, range of kayak heel, and power application
- Glide: determined by kayak pitch, yaw, and roll
- Hull design: resistance of the kayak through water
- Steering and corrections: done at both ends of kayak depending on the situation
- Pivot point of kayak: changes with speed
- Pressure control to transfer force: feet, knees, and pelvic thrust
- Outfitting: to improve efficiency of force transfer

Blade Factors

- Propulsive: blade close to kayak centerline to minimize turning [vertical paddle]
- Turning: blade far from centerline and pivot point to maximize turn effectiveness
 - Vary power, blade angle, and distance from pivot point for fine control
 - Define quadrants [angle relative to boat]
 - Define blade angle; degrees, open, closed, etc.
- Moving the boat is the object
 - Blade angle relative to direction of travel
 - Efficiency of force application: pull instead of punch
 - Accelerate blade and recover quickly to increase stroke rate
 - Stroke timing

Conclusion and Wrap Up

- Group debrief / individual feedback
- Course limitations
- Importance of First Aid and CPR
- Importance of additional instruction, practice, experience

- Importance of appropriate level of safety and rescue training
- Life sport / paddling options
- Local paddling groups / clubs
- Handouts / reference materials
- ACA membership forms
- Course evaluation
- Participation cards

Note:

The intent of this course is to refine and upgrade the paddler's skills. It is not introducing new material as much as it is refining and fine tuning strokes and maneuvers already taught in previous courses. For example, in this class, catching an eddy is not the real focus, but how it is caught and catching it in a number of ways.

© American Canoe Association

Date of last revision: 12/31/2023

<https://americancanoe.org>

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