Level 5: Advanced Whitewater Kayaking Skills Course

Skills Course Overview

This course is designed as a short 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.

If you're a student who would like a resource to prepare for this course, ACA is pleased to provide a free online paddling safety course, here. A certificate of completion is included!

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

Course Duration

2 days (16 hours) or more.

Course Location / Accessible Venues

Moving water on rivers up to and including class III-IV sections. *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.

Instructor

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

Succeeding Courses

- Level 5: Advanced Whitewater Kayaking Assessment 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

- 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

Note: The intent of this course is not introducing new material as much as it is refining, upgrading, and expanding upon strokes and maneuvers already mastered in previous courses/experiences.

Personal Preparation & Getting Started

- 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)

- Discuss current weather conditions, forecasts, and other environmental hazards (wind, water, weather, waves)
- Discuss importance of developing good judgment, group responsibility, management, and dynamics
- Warm up to reduce injury
- Evaluate individual's swimming ability, water comfort, and confidence prior to beginning the trip
- 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.)
    - Safety and rescue tools
    - Repair kit
    - First aid kit (appropriate to training)
- Review securing boat for transport on car or trailer using proper tie downs, straps, or knots
    - Knots: Figure-8, bowline, truckers hitch, and 2 half hitches
- Prepare boat for departure: stowing gear securely and ensuring it is balanced
- Appropriately use communication (paddle, hand, and whistle) signals

Paddling Techniques and Mechanics

- Body Mechanics
    - Ranges of motion: tuck, twist, hinge
        - Posture enhances twist, balance, and comfort
        - Torso rotation while utilizing large muscle groups improves reach
    - Correct body positioning, paddle placement, "the paddler's box," minimizes risk to shoulders
        - 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
- Boat Factors
    - Carving versus skidding: affected by steadiness, range of boat heel, and power application
    - Glide: determined by boat pitch, yaw, and roll
    - Hull Design: resistance of the boat through water
    - Steering and corrections: done at both ends of boat depending on the situation
    - Pivot point of boat: 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 boat 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

River Hydrology Features and Associated Risks

- Currents
- Rocks (upstream and downstream Vs)
- Ledges and low head dams (horizon lines)
- Pins and entrapment
- Strainers/sieves
- Bends
- Undercut rocks or ice
- Dams/flow diversion structures and pipelines
- Holes and hydraulics

Safety and Rescue

- Principles of Rescue
    - Use of safe rescue strategies such as T-RETHROG (Talk, Reach, Throw, Row, Go) including throwable buoyancy aids and throw bag use
    - Rescue Priorities: people, boat, paddle, gear
    - Responsibilities of the group, rescuer, swimmers
    - Appropriate use of rescue and safety gear
    - Emergency procedures
- River running strategies
    - River classifications (understanding of Class I - VI)
    - Scouting on shore and by boat
    - Portaging and lining
    - Group organization on the river
- Self care and care of other group members
    - Importance of fueling, hydration, clothing/insulation, and sun protection
    - Cold shock, hypothermia, and hyperthermia: prevention and treatment

- Calmly exit the boat after a capsize, using proper body position and contact with the craft 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 skirt off the hip
- Self rescue: swim 20 feet (6 meters) to shore in moving water using defensive and offensive techniques
- Strategies and techniques for boat recovery including bumping, bulldozing, towing, or swimming a boat to shore
- Swimmer tow options
- Self and assisted swimmer re-entry techniques (i.e., heel hook, rescue sling, etc.)
- Assisted rescues: boat over boat or side by side or others appropriate to conditions
- Unresponsive paddler rescue
- Throw rope use
- One, two, and three person wading with a paddle
- Entrapments with stabilization line
- Boat pins: strong arm, rope/vector, and simple mechanical advantage strategies
- Emptying water from the boat (on shore, bailers, pumps, etc.)

Conclusion and Wrap Up

- 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)

Taking an ACA Safety & Rescue course for further training on rescue is strongly suggested

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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.