



# Level 2: Essentials of River Safety & Rescue 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.

ACA's Safety and Rescue courses teach recognition and avoidance of common river hazards, execution of self-rescue techniques, and simple rescues for paddlers in distress. Emphasis is placed both on personal safety and simple, commonly used skills. Scenarios will provide an opportunity for participants to practice their skills both individually and within a team/group context.

## Course Objectives

- Promote proactive prevention of river accidents and
- Develop and practice key self-rescue
- Identify and avoid river hazards by understanding hydrology, hazards, and river features
- Focus on fast, low-risk strategies for early management of river accidents
- Practice methods for recovering swimmers, and loose boats and equipment

## Skills Course Prerequisites

- Acknowledgment of personal compliance with the ACA Essential Eligibility Criteria (EEC).
- Participants should be in good health and overall fitness, possess solid swimming ability, and be comfortable swimming in moving current during river drills

## **Minimum Personal Equipment for Class**

Life jacket designed for whitewater use, whitewater helmet, protective clothing suitable for extended swimming in cold water, protective footwear, boat, paddle, whistle, and a throw rope.

## **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**

Sections of rivers rated class I-II, where limited maneuvering in current is required to avoid obstacles. *A rapid class includes rapids at the lower and upper ends of the difficulty range, designated “-“ and “+” respectively.*

A deep chute of water with well-defined eddy lines and no immediate hazards or risks below. Protected space is needed for on-land work with adequate shelter for inclement weather.

## **Course Size**

12 Participants : 1 Instructor; with an additional instructor, the ratio can be 24 : 2. The maximum number of participants permitted is 24.

## **Instructor**

This course may be offered by Level 2: Essentials of River Safety & Rescue ACA Instructors, Instructor Trainers, or Instructor Trainer Educators.

## **Succeeding Courses**

- Level 2: Essentials of River Safety & Rescue 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)

The following is a general summary of course content for the **Level 2: Essentials of River Safety & Rescue** course. Safety and Rescue Instructors should use this document as a general guide for conducting programs. Depending on the program, specific content points might be studied and practiced in depth, briefly reviewed, or skipped entirely. Specific program content should be adjusted as necessary to accommodate student skills, goals and experience, as well as weather and water conditions during the program.

**Definitions of key terms and skills can be found in the ACA River Safety & Rescue Terminology Handbook.**

### **Personal Preparation**

- Personal ability
- Swimming ability
- Water comfort & confidence

- Fitness, conditioning, and warm up
- Safe paddle and boat handling
- Safety and rescue considerations
- Personal equipment (reviewed by instructor)

## **The Paddling Environment**

- Weather conditions and forecasts
- International scale of river difficulty
- Characteristics of current
- River levels and streamflow (CFS)
- Subjective vs. objective hazards
- Effective river/rapid scouting strategies
- River features and hazards
  - Downstream and Upstream Vs/chutes
  - Eddies and Eddy Lines
  - Waves/Wave Holes
  - Holes/Hydraulics
  - Ledges / Horizon lines
  - Strainers: types, typical locations
  - Rocks/Pillows
  - Cold water immersion/response
  - Dams / Flow Diversion Structures / Pipelines
  - Undercut Rocks / Ice
  - Flush drowning

## **Personal Protective Equipment (PPE)**

- Helmet

- Life jacket
- Footwear
- Craft and paddle
- Thermal protection
- Accessories: knife, whistle, food, etc.
- Craft specific PPE (i.e. SUP leashes)

## **Personal Rescue Equipment (PRE)**

- Tubular webbing
- Locking carabiners
- Throw rope

## **Rescue Strategy**

- Personal Preparation: swimming ability, confidence, fitness and conditioning
- Strategies to prevent or minimize incidents
- Trip organization and planning principles: float plans, emergency action plans
- Communication: hand/paddle and whistle signals
- C.L.A.P. - Communication, Line of Sight, Avoidance, Position of maximum usefulness
- Incident timeline
- Rescue priorities
- Responsibilities of swimmer
- Phases of rescue:
  - S.T.O.P - Stop, Think, Observe, Plan
  - L.A.S.T - Location, Assess/Access, Stabilize, Transport
- Rescue management: leadership, safety, rescuers, subject (stable and unstable)
- Establishing acceptable level of risk: Can I [do this]? Should I [do this]?

- Liability Issues: duty to act, breach of duty, harm, standard of care, abandonment
- Ethical issues: moral vs. legal obligations
- Medical issues and considerations
- Rescue strategies for common river scenarios:
  - Swimmer with/without equipment in current
  - Paddlers & Equipment on rocks in current
  - Boat pins with/without paddler
  - Entrapment

## **Wading Skills**

- Causes and prevention of foot entrapment
- Formal vs. informal wading techniques
- Factors that impact success in wading: depth, force, composition of river bottom, number of waders, etc.
- Strengths, limitations, advantages, disadvantages, and risks of wading techniques
- Four-point crawl
- Single person assisted wade
- Two-person wade
- Wading applications for foot/boat entrapments

## **Swimming Skills**

- Strategies to minimize risk of foot entrapment
- Techniques for successful exits from current to eddies
- Defensive swimming position
- Aggressive swimming position
- Defensive to aggressive transitions
- Ferry techniques: defensive and aggressive swimming

- Self-rescue: swimming with equipment
- Swimming techniques for: waves, hydraulics, and drops
- Strategies to conserve energy: short aggressive sprints, “porpoising” for in-water scouting, appropriate timing, etc.
- Managing holes and drops
- Swiftwater entries: in and out of water starting positions
- Techniques for successful downstream swim of a rapid

## **Throw Rope Skills**

- Characteristics of throw ropes: rope diameter, length, construction material, and bag design
- Rope management and safety strategies
- Rope care
- Rope hazards
- Throwing and recovery zones
- Factors impacting throw accuracy and success: stationary and moving targets
- Single person throw rope techniques: underhand, overhand, and sidearm
- Two-person throw bag techniques: split bag toss
- Bag re-stuffing techniques
- Advantages and disadvantages: bag and coil throwing techniques
- Rope coiling methods and throw techniques: butterfly and coil
- Rope receiving techniques
- Communication with swimmers
- Techniques for handling multiple swimmers
- Vectors pull to assist with landing swimmers
- Belay techniques
  - Hip belay, seated belay, and back-up belay

- Dynamic and friction belay
- Pendulum use for crossing current

## **Rigging Skills**

- Knots: components of good knots, dressing, terminology, strengths, and limitations
- Tie and properly dress
  - Figure 8 family: standard, on bight, follow-through
  - Overhand Family for webbing: overhand on a bight, overhand bend

## **Craft Based Rescues**

- Advantages and disadvantages during rescues of various crafts: canoe, kayak, SUP, raft, etc.
- Paddle recovery options
- Strategies for boat recovery
- Self-rescue: swimming with equipment
- Swimmer tow options
- Swimmer re-entry/re-mount techniques
- Craft bumping/bulldozing
- Craft towing (without use of Quick Release Rescue Harness (QRHS) and tether)
- Craft specific rescues including pins
  - Pin mechanics
  - Types of craft pins
  - Boat-based techniques for pins
  - Control and haul lines
  - Strong arm method
- Unresponsive paddle rescue

## **Scenarios**

Simulated rescue skill development sessions and scenarios will be used throughout the course to:

- Model and utilize effective risk management and rescue strategies
- Highlight essential skills for the course level and venue
- Increase skill and experience level of students
- Maximize learning outcomes for all students

## **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)

*Note: participants are encouraged to reference the [ACA River Safety & Rescue Terminology Handbook](#) for further information and education.*

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

