

Level-4 Skills

Advanced paddling skills, problem solving, group dynamics, and leadership during a multi-day trip in a rough water environment.

Course Description

Upon completion of the course, the student will be able to confidently sea kayak in [class-4](#) water conditions along remote and exposed open coast for an extended trip. The student will be an effective part of a group of peers, able to perform both leadership and supportive roles. This course is a minimum of 5 days long.

General Learning Outcome

Students will be challenged to apply already learned leadership/decision making and paddling skills in the context of a multi-day trip in class-4 or greater conditions. With a strong focus on scenarios and problem solving, this course will develop students' skills appropriate to travelling in remote and/or technically challenging locations while fine tuning new skills such as surf and currents.

Like Level-3 Skills, this five-day course has no formal campcraft skills as part of the syllabus; however, due to the strong focus on advanced skills and leadership on an extended trip with peers, there is a requirement for a minimum of 3 consecutive overnights (which must include at least two different campsite locations).

Prerequisites

- Certification:
 - All participants must have Paddle Canada Level-3 certification.
- Paddling experience:
 - At least 10 day-trips kayaking in [class-3](#) conditions.
 - A minimum of three extended trips totalling 10 or more overnights. The student must show evidence (e.g. weather/sea state logs, photography or video) that they spent a minimum of five days during any trip in class-3 conditions.
 - An ability to confidently roll (on one side) in class-3 conditions is essential.

- Other training:
 - Wilderness first aid certification (36 hours) with CPR is strongly recommended.
 - Restricted Radio Operator's Licence (marine VHF) is strongly recommended.

Course Length

45 hours of instruction (5 days) with an excursion that includes 3 or more consecutive overnights (which must include at least two different campsite locations).

Minimum 30 hours instruction must be on the water.

Class Ratio

2 instructors:6 participants

2 instructors+1 assistant:8 participants

Minimum Staff & Certification

Two instructors are required to teach this course.

At least one instructor must be a Level-4 Instructor and one the other a Level-3 Instructor.

Any assistants must be at least Level-3 Instructors.

Environmental Conditions and Sea State

Instructors should aim to conduct their program within class-4 conditions. Please see [Appendix A: Water Class Definitions](#) on page [205](#) for a specific description of all water classifications.

Class-4 environment: Rugged and exposed coast with long and committed crossings and any combination of the following: strong turbulent currents (≥ 3 knots), strong wind effects (near 20 knots), large swells with a combined sea state 1 metre or more with a moderate to rough sea state, exposed surf beaches (≥ 1 metre), infrequent and sometimes difficult landings which present significant challenges for individual safety and group management. Significant delays in access to land-based assistance can be expected.

It is the instructor's responsibility to ensure that the minimum environmental and sea state conditions required for Level-4 are met. Certification cannot be considered complete if skills were not demonstrated in class-4 conditions.

Prior Learning Evaluation

A prior learning evaluation is not available for this level as students must complete the full training and assessment for certification.

Teaching Notes

Level-4 students should be challenging themselves to the dynamic, moderately intense, and usually manageable physical, psychological, and social hazards associated with paddling in class-4 conditions. Students are expected to solve complicated and complex problems by integrating and adapting the skills and knowledge acquired through earlier training and applied experiences by using innovative and practical solutions.

At Level-4, students should be able to identify and articulate their own goals, and independently seek opportunities to work toward these goals within the context of the program. Instructors are facilitating and coaching, rather than teaching.

At this level, instructors must be willing to let students define most of their own environmental, psychological, and social limits. They must also be willing to let students experience the low severity consequences of their choices. Exposure to potentially moderately severe consequences may be appropriate. Students should have the judgment to solve many of these consequences on their own, or as a group, without direct support from the instructor.

Please note that any suggested teaching times listed are intended to be used as a resource for new instructors only. Instructors can use their discretion to shorten or lengthen suggested times as they see fit.

Required Gear

Students are required to carry a VHF radio as appropriate. The instructor will ensure that Canadian residents are made aware of licensing requirements.

Learning Outcomes

Re-entry and Incident Management

Emergency Response/Communication Plan

The student will develop an emergency response plan suitable for an extended expedition.

Teaching notes:

- This activity can be presented either as part of an in-class group exercise or a take-home homework assignment after the course.
- The assignment can also be based on a real or hypothetical scenario.

Risk Analysis and Mitigation Strategies

The student will:

- demonstrate that they have developed and practiced effective leadership skills and a risk-averse approach to paddling in advanced environments,
- exercise strong leadership on and off the water, including the ability to manage and resolve inter-group conflict,
- lead the group in progressively more challenging scenarios, requiring comprehensive incident responses, up to the point of transfer of care,
- consistently demonstrate safe leadership in an advanced, dynamic paddling environment, and
- demonstrate the attributes of effective expedition behaviour.

Teaching notes:

- Instructors should demonstrate, in all aspects of course delivery, a comprehensive approach to risk assessment.
- Debrief with students their planning and response decisions and actions for further learning.
- See [Appendix B: Risk Assessment and Mitigation Frameworks](#) on page [206](#) for examples and online resources for further learning.

Emergency On-water Repairs

The student will participate in complex scenarios related to on-water repairs where the group is unable to land on shore to solve the problem. Topics can include (but not limited to):

- improvised hatch cover,
- punctured or cracked deck/hull, or
- broken seat pan or backband.

Incident Management and Decision-making Scenarios

The student will:

- demonstrate sound judgment by assessing the situation and developing a plan (before starting the rescue) that will help the victim in a timely and confident manner, yet will ensure that other group participants are also safe, and
- demonstrate critical thinking and paddling skills to manage incidents.

Teaching notes:

- Scenarios should be realistically designed so that students are presented with situations where they are challenged by several issues at once, such that the victim's health, equipment or conditions deteriorate throughout the length of the scenario. For example, the consequences of a dislocated shoulder might be that a person becomes hypothermic (since they are not paddling) or even semi-conscious due to pain.
- Example scenarios could include:
 - lost or broken paddling equipment and/or kayak,
 - sea sickness, injury or hypothermia management,
 - lost paddler,
 - re-entry from surf zone,
 - injury in a surf zone,
 - extraction of paddler(s) off rocks, or
 - towing an injured or seasick paddler for an extended length of distance (e.g. 3 nautical miles).
- Some scenarios should be developed that allow for all students in the class to participate.

- Debrief with students their planning and response decisions and actions for further learning.

Peer Debriefing Strategies Following an Incident

The student will:

- state the importance and emotional benefits of debriefing the incident as well as the potential for emotional damage if done incorrectly, and
- give examples of various potential strategies for debriefing and dealing with an incident after the fact.

Teaching notes:

- The intent of this topic is to give students a high-level awareness of the importance of talking about or working through a critical incident after the fact. It is not intended to become a crisis counselling session as you are not trained to be a professional crisis counsellor.
- Please see [Appendix D: Resources for Debriefing Following an Incident](#) on page 214 for suggested resources and further learning.

Towing

The student will:

- demonstrate safe and effective use of various towing techniques and scenarios in class-4 conditions,
- release a towline under tension, including from a capsized position,
- confidently and quickly deploy a short or long tow line. After towing is completed, they can safely manage the rope to minimise entanglement,
- confidently apply non-rope towing techniques in class-3 conditions including (but not limited to) bulldozing or shove paddle shove, and
- integrate towing into other incident management scenarios.

Rolling in Class-4 Conditions

The student will:

- demonstrate a reliable and confident roll on both sides in Level-4 conditions with a high degree of success (e.g. 3 of 4 attempts). This is a requirement for certification. The student will not swim between consecutive attempts,

- demonstrate an understanding that rolling on different sides has different resistance in current and waves, and be able to identify the side with least resistance, and
- demonstrate a re-enter and roll.

Re-entry

The student will:

- perform several re-entries (assisted and unassisted) and adapt them to a range of sea conditions, including rescuing an incapacitated or passive swimmer, and
- demonstrate the ability to bring an injured paddler away from rocks or dynamic water using a variety of methods and complete a re-entry in calmer waters or on shore.

Teaching notes:

- Emphasis should be placed on the assistant assessing the situation to develop the best re-entry plan and ensure that other participants in the group are also kept out of the situation.
- While there is no specific time deadline to complete the re-entry, students should be encouraged to move quickly and confidently to get back in their boats without rushing or losing any equipment.

Paddling Skills

The student will demonstrate the application of all paddling skills from Level-3 and use them effectively in dynamic class-4 conditions.

Launching and Landing along Difficult Shorelines

The student will:

- demonstrate safe and effective launches and landings along difficult or inaccessible shorelines including beaches with breaking surf,
- demonstrate a safe and effective group launch from an exposed and rocky shoreline, and
- demonstrate a safe and effective group launch along difficult or inaccessible shorelines.

Teaching notes:

- Students should be given the opportunity to first perform with unloaded kayaks.
- Instructors must ensure that this is done in gentle paddling conditions with minimal wind or surf.
- Extreme care must be taken to ensure that boats and gear aren't damaged during this activity.

Paddling in Swell or Current

The student will:

- state the inherent risks of paddling in current and the potential consequences of crossing currents in a loaded kayak,
- demonstrate safe technique and boat control while paddling in swell or current in class-4 conditions, and
- demonstrate sustained paddling over swell or current of approximately 3 knots.

Paddling in Sustained Wind with a Loaded Kayak

The student will demonstrate maneuvers to maintain control of a loaded sea kayak in strong winds including paddling upwind/downwind and confidently turning around to rejoin or help other group members.

Travelling along Inaccessible Shorelines

The student will:

- be made aware of the inherent risks of paddling close to rocks, and
- demonstrate safe technique and boat control while paddling in rock gardens and along rocky shorelines in class-4 conditions.

Surfing

The student will:

- gain confidence with the basic concepts of kayak surfing in the context of catching small waves or landing in a surf zone,
- review bottom turns, experiment with linking bottom and top turns if conditions permit,



Teaching Tip:

Surfing is slated roughly as a 2 to 3 hour teaching block. Instructors wishing to spend more time should adjust overall course length accordingly.

- demonstrate comfort to enter and exit the surf zone with confidence,
- demonstrate dropping in and staying on a wave,
- demonstrate proper surfing etiquette and awareness of safety rules, and
- state the inherent dangers of surfing as well as the importance of avoiding surfing with loaded kayaks.

Teaching notes:

- This activity should be taught in a surf zone in class-4 or less conditions with waist to shoulder high waves. This can be taught either at a small surf break or in deep water where appropriate.
- Instructors should review Level-2 and Level-3 surf content and safety considerations prior to any new activities.

Paddling in Currents

The student will:

- gain confidence with the basic concepts and techniques of paddling in currents,
- ferry across current, choosing a ferry angle and maintaining it during a crossing,
- use line of sight/ranges to stay on course and set a proper ferry angle,
- eddy in and out of currents,
- cross eddy lines with confidence and demonstrate proper edge control,
- paddle upstream, taking advantage of back eddies and slower current,
- paddle downstream, pulling out into the current and maintaining control while staying in the downstream current, and
- hold ground in current; using landmarks to understand where you are and where you are moving towards.



Teaching Tip:

Paddling in Currents is slated roughly as a 2 to 3 hour teaching block. Instructors wishing to spend more time should adjust overall course length accordingly.

Teaching notes:

- Instructors should review Level-2 and Level-3 course content related to currents and safety considerations prior to any new activities.

General Knowledge

The student will demonstrate confident application of all knowledge items outlined in Level-3.

Leadership, Group Awareness, Judgment & Decision Making

The student will:

- demonstrate effective leadership by guiding classmates along a section of exposed ocean coast paying attention to their position for maximum effectiveness and the group's needs,
- take charge, maintain control and make sound decisions among a group of peers during incident management scenarios including ensuring that other members of the group stay out of harm's way,
- evaluate the risk level of a situation and position him or herself in the group to be effective during a possible incident,
- keep a group together to maintain communication, and
- communicate effectively with members of the group any changes to itinerary or proposed route.

Teaching note:

- See [Appendix F: Outdoor Leadership](#) on page [216](#) for more resources and further learning.

Weather Interpretation and Forecasting

The student will:

- understand and apply weather concepts to short-term forecasting & expedition risk management,
- maintain an expedition log during the course with multiple daily data points, reports, buoys and personal observations, and
- develop a forecast for the next 6 to 36 hours by observing local weather and sea state conditions.

Waves & Currents

The student will:

- identify and explain how bathymetry can affect sea state, wave shapes and current speed. Provide local examples,
- state how to identify beach rip currents as well as techniques for escape,
- explain how waves form and provide examples of common patterns for beaches and headlands,
- identify potential route considerations due to local weather impacts,
- demonstrate the ability to estimate both current and wind speed from a combination of tables and observations when paddling in an environment with current, and
- use the above estimates to plan and execute either a crossing or a transition around a headland that is at least 2 nautical miles.

Tides & Current Calculation

The student will:

- demonstrate the mathematical calculations and application of the rule of twelfths to a high level of precision,
- demonstrate the mathematical calculations and application of the 50/90 rule to a high level of precision,
- understand tidal and current considerations and calculations for expedition route planning,
- demonstrate calculations and practical application of vectors, and
- apply knowledge of tide & current calculations from the seat of the kayak rather than the classroom or kitchen table.

Teaching note:

- Instructors should review tides & current theory from both level-2 & level-3 before progressing to new material.