



## AMERICAN CANOE ASSOCIATION COASTAL KAYAKING STROKES AND MANEUVERS REFINEMENT

**COURSE OVERVIEW:** To assist coastal kayakers at all levels in refining basic strokes and maneuvers. It may be beneficial to re-take this course at different levels of skill progression.

**COURSE OBJECTIVES:** Using on-water practice, classroom discussion and video analysis, participants will *practice* following strokes/maneuvers *to increase* efficiency, fluidity and control:

- Forward stroke
- Sweep stroke
- Reverse strokes
- Beam draw (In water recovery)
- Sculling draw
- Scull for support
- Low brace
- High brace
- Static brace turns
- Bow rudder
- Side slip (Hanging draw)
- Stern rudder

**Prerequisite(s):** Participation in Essentials of Kayak Touring, Basic Coastal Kayak, or equivalent

**Minimum Personal Equipment for the course:**

Properly sized and outfitted sea kayaks with front and rear flotation and related paddling and safety equipment (I.e. paddles, PFDs, spray skirts, paddle floats, bilge pumps & wet suits if necessary).

**Course Duration:** 7-8 Hours

**Course Location:** Optimum conditions are flat water (minimal current, waves less than one foot and winds less than 10 knots), near enough to shore for video recording.

**Course Ratio:** 1 Instructor to every 5 students (1:5) / 2:10 with an additional instructor or qualified assistant

**Successive Courses:** Open Water skills, Surf, Tidal Currents, Rough Water.

### **Introduction & Expectations** (15 Minutes)

- Enrollment/ Registration/ Liability
- Introductions/ Expectations
- Course Itinerary

### **Dry-land presentation** (45 Minutes)

- The dynamics of boat control
- The pressurized bow and free stern
- Shaft and blade angles, catch and release points, the box, torso rotation and driving the foot pegs
- Edging to unlock the trailing keel
- Working with wind

### **On-water Presentations**

#### **Strokes:**

#### **Forward Stroke**

- Comfortable extension forward and maintain box
- Hands at shoulder height and “in plane”
- Drive foot peg on the same side as the stroke
- Torso rotation (10 o'clock to 2 o'clock)
- Short stroke (in at feet out at hips)
- *Relatively* high shaft angle (depending on boat, anatomy, paddle length etc.)

#### **Sweep Stroke**

- Torso rotation (windup)
- Blade in at feet just below water
- In flat water, follow blade with eyes. In rough water, look through turn
- Maintain box & drive w/ on-water peg
- Catch, release = bow to stern waterline
- More edge = less waterline
- Low shaft angle for maximum extension

#### **Reverse Strokes**

#### **(to propel, maneuver, stop)**

*Method A.* Same initial set-up for propulsion, maneuvering and emergency stops

- Maintain paddler's box, rotate torso around spine, (don't lean back), place back face flat on water, 45 degrees off keel line (will require that you edge the boat)
- Unwind torso while rotating wrist up & forward to keep back face loaded, blade just below surface

- To correct heading, hold edge longer and finish stroke further toward the bow
- Practice technique w/ reverse figure 8's.

*Method B.* Different initial set-up for propulsion than for sweeps

- To propel or stop, position paddle parallel to the boat, back face down.
- Begin catch near 6 O'clock position and drive back face forward along the boat's longitudinal axis
- To sweep, position paddle parallel to boat, back face out, blade near 6 o'clock position
- Drive back face out in an arc toward the bow, edging toward the on-water blade

#### **Beam Draw (In water recovery)**

- Face your work (rotate torso)
- Anchor off-water arm across chest
- Sight over off-water wrist
- Control w/ on-water hand
- Extend shaft and pull power face to boat
- Blade deep in water
- Rotate wrist and slice away for re-set

#### **Sculling Draw**

- Rotate torso to face your work
- Anchor both elbows and power with torso
- Vertical shaft
- Angle leading edge of blade slightly away
- Rotate wrist to change leading edge
- Short strokes (1-2 ft arc, 6-18 inches out)

#### **Sculling for Support**

- From high brace position, power face down
- Flat shaft angle
- Blade at surface, slight climbing blade angle
- Control w/ on-water hand
- Torso over water
- Don't push down, create lift by pushing blade fore & aft w/ slightly high leading edge

## **Braces**

### **Low Brace**

- Flat shaft angle
- Elbow over shaft
- Maintain reference grip
- Use back face to create “depth charge”
- Hip snap to recovery

### **High Brace**

- Flat shaft angle
- Elbow under shaft
- Slap power face on water
- Hip snap to recovery

## **Maneuvers**

### **Low/High Brace Turn**

- Establish hull speed!
- Set up nose momentum with outside edge
- Transition quickly to inside edge
- Extend paddle blade and delay contact with the water
- Use back/power face with slightly climbing blade angle, and hold brace (do not jam forward until recovery)
- Recover with hip snap
- Transition to forward stroke

### **Bow Rudder**

- Establish hull speed!
- Initiate turn (outside edge & sweep)
- Submerge blade just forward of pivot point (usually just forward of 3-9 line)
- Rotate wrist slightly to open leading edge and load power face
- Control with on-water hand and allow off-water hand to drop to a comfortable fulcrum position
- Don't over-expose power face
- Adjust as hull speed decreases

### **Stationary Draw**

#### **(Hanging Draw, Side Slip)**

- Establish hull speed!
- Rotate to face your work
- Maintain box & extend paddle away
- Slice blade from aft quarter forward into place at about the 3 or 9 position as you edge the boat away from the paddle.
- Rotate on-water wrist to keep leading edge angled slightly outward, away from boat.

- Search for the sweet spot. Too far forward draws the bow. Too far aft draws the stern.
- Option “B”, transition from forward stroke to same blade placement and edge toward blade

### **Stern Rudder**

- Establish hull speed!
- Blade in water at stern quarter, with back face away from boat
- Slight edge to outside of turn
- Load back face to turn toward blade
- Load power face to turn away

### **Videotaping of Strokes (45 Minutes)**

### **Transfer to Classroom (45 Minutes)**

### **Video Playback & Analysis (90 Minutes)**

(If timing and logistics allow, students may be given time to practice strokes again on-water.)

### **Feedback**

Students will be given feedback on their ability to:

- Identify component parts of each stroke
- Perform each stroke by connecting component parts with smooth transition, fluidity and control

### **Conclusion & Wrap-up (30 Minutes)**

Student debrief and written critique

### **References:**

2001 *Tim Bates, Randy Carlson, Greg Eliason*  
ACA  
*Coastal Kayaking Outlines,*  
1998 *Shelley Johnson, Woman's Guide To Sea Kayaking,*  
1997 *Nigel Foster, Nigel's Fosters Sea Kayaking*  
*Derek Hutchinson, The Complete Book Of Sea Kayaking*

**NOTES:** The great risk in getting too specific about technique is that specifics become dogma. Every point of technique listed here could be wrong, or at least no closer to right than one we have not mentioned. There are at least as many ways to make a sea kayak maneuver, as there are to skin the proverbial cat. The detailed descriptions above are intended to assist the “thinking” student in conceptualizing how a stroke or maneuver could be done. It should not be taken as the final word on anything. As boats, equipment, bodies and minds evolve, new ways

of doing old things will certainly arise. Let this outline act as a guide, not as a rule book. Think of this as a work in progress.