



SSC Tech Specifications

Development - Entry SSC Tech 1, Exit SSC Tech 5

Intraclub - Entry SSC Tech 3, Exit SSC Tech 9

District - Entry SSC Tech 5, Exit SSC Tech 9

State - Entry SSC Tech 7, Exit SSC Tech 9

National - Entry SSC Tech 9

SSC Tech Specifications Explained

SSC Tech 1

- ✦ Start with a push and glide swim underwater, through a hoop, covering a distance of 5 meters.
- ✦ Swim 10 metres full stroke Front Crawl showing basic technique with regular breathing.
- ✦ Swim 10 metres full stroke Back Crawl showing basic technique with regular breathing.
- ✦ Swim 10 metres full stroke Breaststroke showing basic technique with regular breathing.
- ✦ Using a dolphin action, without a float, kick 10 metres on the front.

All stroke development skills for SSC Tech 1 to be completed from a push and glide with appropriate transition, unless otherwise stated.

SSC Tech 2

- ✦ Scull head first, on the back for 5 metres; rotate to front; somersault, scull 5 metres feet first on the back.
- ✦ Kick 20 metres using an efficient Front Crawl leg action, holding a float.
- ✦ Kick 20 metres using an efficient Breaststroke leg action, holding a float.
- ✦ Kick 20 metres using an efficient Back Crawl leg action, arms extended.
- ✦ Swim 25 metres using full stroke Breaststroke showing basic techniques.
- ✦ Swim 25 metres using full stroke Front Crawl showing basic techniques.
- Swim 25 metres using full stroke Back Crawl showing basic techniques.

SSC Tech 3

- ✦ Kick 20 metres, using a Butterfly kick, without a float/kickboard and without using hands, 5 metres underwater and 15 metres at surface.
- ✦ Swim 10 metres full stroke Butterfly showing basic techniques.
- ✦ Swim 50 metres continuously, smoothly, on own choice of stroke(s) showing basic technique throughout and including one turn.
- ✦ Demonstrate a hand touch turn for Front Crawl covering a distance of 5 metres before and after the turn.
- ✦ Swim 25 metres on either Front Crawl or Back Crawl showing efficient technique.
- Swim 25 metres on either Breaststroke or Butterfly showing efficient technique.

SSC Tech 4

- ✦ A sequence combining: push off on back and glide head first, scull for 5 metres, back somersault, feet first scull for 5 metres, rotate 360 degrees in a vertical tucked position.
- ✦ Swim continuously 50 metres on each of two strokes showing efficient technique throughout (10-20 second rest to be taken after 50 metres).
- ✦ Swim 25 metres on each of the other two strokes showing efficient technique (10-20 second rest to be taken after 25 metres).
- ✦ A correct turn for Butterfly covering a minimum of 5 metres before and after the turn.
- ✦ A correct hand touch turn for Back Crawl covering a distance of 5 metres before and 5 metres after the turn.
- ✦ A correct hand touch turn for Breaststroke covering a distance of 5 metres before and after the turn.
- ✦ Kick 50 metres on either front or Back Crawl showing efficient technique. Use a float for Front Crawl and arms extended above for Back Crawl.
- Kick 25 metres on both Breaststroke and Butterfly. Use a float for Breaststroke and arms extended in front for butterfly (5-10 second rest to be taken after 25 metres).



SSC Tech 5

- ✦ A plunge dive into water of at least full reach height holding the streamlined position and covering a distance of at least 5 metres.
- ✦ Torpedo scull, on the back, feet first, hands overhead, for 10 metres with/without leg support.
- ✦ Swim continuously for 150 metres on any stroke or combination of strokes showing efficient technique throughout (covering a minimum of 25 metres on any of the strokes used).

A Front Crawl tumble turn covering a minimum distance of 5 metres before and 5 metres after the turn complete each of the following covering 25 metres on each stroke showing an appropriate turn.

Butterfly	-	Back Crawl
Back Crawl	-	Breaststroke
Breaststroke	-	Front Crawl

Swim 4 x 25m of any stroke showing correct use of the pace clock for start time and rest periods.

SSC Tech 6

- ✦ 3 pre swim loosening exercises.
 - ✦ Swim Front Crawl, head up, and propel a ball for a distance of 15 metres, controlling it throughout. At the end of the 15 metres tread water, pick up the ball with one hand, and throw it to land in a floating hoop positioned 5 metres away.
 - ✦ On the back, scull head first for 10 metres, back somersault, and scull feet first for 10 metres, show a star float holding a position for at least 5 seconds.
 - ✦ From a push and glide on the back perform a back circle with body stretched throughout.
 - ✦ Swim continuously for 10 minutes using two different competitive strokes and changing every length between an alternating and simultaneous stroke. Efficient technique must be shown throughout.
 - ✦ From a push swim 4 x 50 metres on Front Crawl with 10-15 seconds rest between 50 metre. Efficient technique and control of stroke and pace must be shown throughout.
 - ✦ From a push swim 50 metres on any stroke and use the pace clock to accurately time the swim (+/- 1 second).
 - ✦ Kick for 3 mins continuously changing every length between an alternating and simultaneous kick without using the hands for propulsion.
- From a push, swim continuously for 100m on a stroke other than Front Crawl, maintaining efficient technique throughout.

SSC Tech 7

- ✦ A Front Crawl racing start, including the correct response to commands and the transition to the stroke.
 - ✦ A Back Crawl racing start, including the transition to the stroke.
 - ✦ A Breaststroke racing start including the transition to the stroke.
 - ✦ Swim one length (min. 20 metres) combining an alternating arm action and a simultaneous leg kick.
 - ✦ Swim one length (min. 20 metres) combining a simultaneous arm action and an alternating leg kick.
 - ✦ From a racing start demonstrate an individual medley covering one length on each stroke (min. 20 metres on each stroke). Efficient technique must be shown throughout.
 - ✦ A Back Crawl tumble turn covering a minimum distance of 5 metres before and after the turn.
 - ✦ Swim 4 x 1 length on Front Crawl or Back Crawl accurately counting the number of single arm strokes for each length. Rest 15-20 seconds between each length.
 - ✦ Swim 4 x 1 length on Butterfly or Breaststroke accurately counting the number of strokes for each length. Rest 15 – 20 seconds between each length.
- Swim 100 metres on own choice of stroke showing a correct start, turn and finish and showing efficient technique throughout.



SSC Tech 8

- ✦ Push off just below the surface, holding a streamlined position, arms fully extended above the head for 5 metres on the front and 3 metres on the back.
- ✦ In a horizontal position, scull, traveling head first with hands at the side (using a figure of eight action for 5 metres on the front (canoe) and 5 metres on the back (standard)).
- ✦ Show these 3 different methods of treading water; 2 for 20 secs.; 1 for 10 secs.; with a short rest between; a) flutter kick; b) breaststroke kick; 3) egg beater kick.
- ✦ Show consistent ability to use the pace clock accurately (+/- 1 sec.) for starting on 4 single length swims.
- ✦ Show an efficient stroke on 3 of the competitive strokes held for 1 length (= min. 20m, max. 25m).

Perform each of the following drills for 1 length on each:

- Freestyle: 45 degree catch up drill with control of entry and breathing bilaterally.
- Backstroke: 3 strokes 'Rainbow BK', 3 strokes single arm splash in shoulder out; 3 strokes single arm (opposite arm) splash in shoulder out non-stroking arm at side.
- Breaststroke: arms in front, hands locked, breathe then kick and glide.
- Butterfly: from streamline, complete 1 arm stroke getting breath at the beginning of arm movement, after recovery of arms face hits the water first (before arms) diving into the water deep enough so the bottom and feet clearly break the surface maintaining streamline after entry for 2-3 seconds; repeat.

- ✦ Show efficient kicking held over 1 length (= min. 20m, max. 25m) on each of the 4 competitive strokes using a float only on freestyle and breaststroke; hands at the side on backstroke; arms fully extended in front on butterfly.

- ✦ Perform an efficient turn for each of the 4 competitive strokes swimming for 5 metres in and out of the wall.

Perform an efficient start for each of the 4 competitive strokes, holding a streamlined position with arms fully extended above the head for a minimum of 5 metres from the point of entry.

SSC Tech 9

Scull in a horizontal position for 10 metres using 2 of the following methods performed separately.

Head first on the back, hands at the side.

Feet first on the back, hands at the side.

Feet first on the back, arms fully extended above the head.

Head first on the front, arms fully extended above the head (a gently flutter kick is permitted).

With the hands held at the side using 2 of the following methods, tread water for 20 secs. On each and continue for a further 5 secs. Holding 1 hand above the surface;

flutter kick

breaststroke kick

egg beater kick

show consistent ability to use the pace clock accurately (+/- 1 sec.) to time:

- short rest periods (5/10 secs.) in between 4 single length repeat swims.
- one swim over 2 lengths.
- turn around time for 4 single lengths on 1 min.

- ✦ Show the following 6 loosening exercises, performed with control and accuracy: a) arms forward and back b) arms give yourself a hug c) arms monkey d) arms speed skater e) leg forward and back f) leg crossover (see SSC Meet Dryland Warmup).

- ✦ Show effective swimming on 1 stroke held over 4 lengths.

- ✦ Show effective swimming on another stroke held over 2 lengths.

- ✦ Show effective swimming on 2 other strokes held over 1 length.

- ✦ Perform the following 2 drills for a minimum of 20m up to a maximum of 25m on each of the 4 competitive strokes:

- Freestyle: a) kicking + single arm, arm in front, breathe to pulling side every 3 pulls and return head to centre b) as above, but alternate pulling arm after every 3 pulls.



- **Backstroke:** a) kicking + single arm, the other arm at the side
b) kicking + single arm, the other arm at the side, alternate pulling arm after every 3 pulls.
- **Breaststroke:** a) 3 kicks + 1 pull with long stretch between each kick
b) alternate 3 kicks + 1 pull; 2 kicks + 1 pull; 1 kick + 1 pull with long stretch between each kick.
- **Butterfly:** a) 4 kicks + 1 pull, hands held in front between each pull
b) 4 kicks+1 pull, 3 kicks +1 pull; 2 kicks+1 pull, hands held in front between each pull.
- Show efficient kicking on each of the 4 competitive strokes over 1 length using a kick board only on front crawl and breaststroke.
- Swim 2 lengths showing efficient start; turn; finish on 1 front stroke and on back stroke.
- Swim 1 length showing efficient start; turn on another stroke.
- Swim 1 length showing efficient turn; finish on another stroke.
- Swim 6 x 1 length on a stroke of personal choice, holding a consistent time (+/- 2 secs).
Swim 3 x 2 lengths on another stroke of personal choice, holding a consistent time (+/- 3 secs).

(1 length is a min of 20m and up to a max. of 25m)



SSC Specific Stroke Technique Descriptors

Basic Front Crawl

- Body Position** - horizontal, straight, streamlined, face in water
- Feet and Legs** - in line with body; close to surface; steady alternate kick; whole leg movement with feet and toes pointed; small splash
- Hands and Arms** - alternating action with controlled entry in front; fingers first; pull close to the body and towards the thighs; over the water circular recovery action
- Breathing** - controlled turn of head to the side; regular pattern; ensure exchange of air
- Timing** - coordination of kicking, pulling and breathing into a continuous movement

Efficient Front Crawl

- Body Position** - horizontal, straight, streamlined, face in water. Hips slightly lower than shoulder; eyes looking slightly forward and downward; rotation of shoulder and upper body; head steady and central except for smooth turning to the side to breathe
- Feet and Legs** - in line with body; close to surface; steady alternate kick; whole leg movement with feet and toes pointed; small splash; knees slightly bent; legs and feet pass close to each other; action originating at the hips and finishing with feet pushing against water
- Hands and Arms** - Entry – hand slides into water, elbow is bent; entry between shoulder and head; finger then wrist, then elbow entry
 - Propulsion – after entry, the hand moves directly downward into the catch position; presses under the body, then pushes backwards and outwards towards the thighs
 - Recovery – elbow leaves the water first followed by wrist and hand; the arm moves over the water in a circular arc maintaining slight bend in elbow
- Breathing** - controlled turn of head to the side; regular pattern; ensure exchange of air; air blown moderately into water during stroking action so that complete just before mouth clears; inhalation taken quickly; head return to central position
- Timing** - coordination of kicking, pulling and breathing into a continuous movement and consistent movement pattern; smooth controlled stroke

Effective Front Crawl

- Body Position** - increased shoulder and upper body rotation enables more power to be applied in the pull
- Feet and Legs** - controlled and steady for longer swims and lower speeds; faster and powerful for shorter swims and faster speeds
- Hands and Arms** - quick entry with arm to catch position fingers deep and slight lengthening of finish of the pull increases the distance obtained from each stroke
- Breathing** - the ability to breathe with ease to either side balances the stroke
- Timing** - the relationship of stroke length and stroke rate should be developed and varies with each individual and with the speed and distance requirements of the swim



Basic Back Crawl

Body Position

- almost horizontal, straight, streamlined, back of head in the water

Feet and Legs

- in line with the body; steady alternating kick, whole leg movement with feet and toes pointed making a small splash; knees under the surface

Hands and Arms

- alternating circular action over and under the water; controlled hand entry overhead at full stretch in line with the shoulder; hand and arm pulls round by the side to the thigh

Breathing

- breath is exchanged regularly as required

Timing

- coordination of kicking and pulling into a continuous movement

Efficient Back Crawl

Body Position

- almost horizontal, straight, streamlined, back of the head in the water and held perfectly still in a central position; chest clear of the surface with hips and seat slightly submerged; controlled rolling of the shoulders; shoulders clear of the surface; eyes looking upward and slightly forward

Feet and Legs

- in line with the body; a positive alternating kicking action; legs coming close to the surface but the knees kept under; whole leg movement with the knees bending slightly and legs passing close to each other; feet pointed and slightly in-toed, with toes making a slight splash at surface

Hands and Arm

- Entry – controlled with a straight elbow; hand placed into the water, palm facing out and little finger first, in line with the shoulder; continues down as the shoulders roll to that side
- Propulsion – at the deepest point after entry, elbow bends and hand pressed downwards, facing the pool bottom, before sweeping towards the thigh and up to the surface
- Recovery – the shoulder leads, lifting up and round as the hand leaves the water thumb first; the elbow is kept straight as the arm lifts straight up and above the shoulder to the entry point

Breathing

- occurs naturally but regularly in relation to the effort phases of the arms

Timing

- coordination of kicking and pulling into a continuous, consistent movement pattern; smooth controlled stroke

Effective Back Crawl

Body Position

- increased shoulder and upper body rotation, while keeping the head steady, enables more power to be applied in the pull

Feet and Legs

- a continuous, powerful kick provides stability for the lower body

Hands and Arms

- a controlled entry and deep catch with the shoulder roll followed by a strong bent elbow pull right through to the thigh increases the power and distance obtained from each stroke

Breathing

- controlled regular breathing related to the effort phases of the stroke

Timing

- the relationship of stroke length and stroke rate should be developed and varies with each individual and with the requirements of the swim



Basic Breaststroke	
Body Position	- stretched, streamlined on the front following the kick; lifting of the head and shoulders to breathe during the pull
Feet and Legs	- simultaneous kick; bring feet towards the seat; flatten and turn out; kick round and back in a circular pattern, and bring the feet and legs together again at full stretch
Hands and Arms	- from stretch position, both hands press out and round in a small circular action in front of the shoulders
Breathing	- lifting the head to the front during the arm action and before each kick
Timing	- from the front extended position, the hands and arms pull during which action the breath is taken followed by the kick and a return to the extended position
Efficient Breaststroke	
Body Position	- from a stretched streamlined position, with the head in line, face in the water; the head and upper body will rise and fall in relation to the kick, pull and breathing pattern
Feet and Legs	- Recovery – from the extended position, the knees bend, drawing the heels up close to the seat and still under the water; knees behind the seat and about hip width apart - Catch – both feet flatten and turn out into the characteristic “frog” position - Propulsion – the flat feet kick back, round and slightly downward, with the soles and instep pressing on the water until the legs are almost straight when the feet point and come together fully extended
Hands and Arms	- Catch – from the full stretch position, the hands, facing slightly outwards and down, press out sideways to a “Y” position just wide of the shoulders - Propulsion – the hands lead the forearms in a downwards and inwards circling action, bringing the hands close together under the chin; the hands face each other with the elbows and upper arms following them in - Recovery – with no hesitation, the hands and forearms move smoothly and continuously under the chin and stretch forward to the starting position
Breathing	- once in each stroke cycle, to the front as the hands and arms perform the outward scull and before the kick
Timing	- from the fully stretched position, the arms pull, the breath is taken, the arms begin to recover then the legs recover and kick back to the stretch position; pull, breathe, kick and stretch
Effective Breaststroke	
Body Position	- an undulating, wave-like flow during the whole stroke cycle with a stretched streamline position at the conclusion of the kick
Feet and Legs	- a strong accelerating drive of the feet backwards
Hands and Arms	- emphasis on the strong inward sweep of the hand and forearms leading immediately into the controlled drive forward to the full stretch position; maintain a fast rhythm
Breathing	- controlled regular breathing, inhaling during the arm pulling action and exhaling towards the end of the stretch will provide the best timing
Timing	- the relationship of stroke length and stroke rate varies with each individual and with the requirements of the swim, and should be developed



Basic Butterfly Body Position	- lying on the front, varying with the undulation throughout the stroke cycle
Feet and Legs	- a simultaneous kick, starting at the seat; the movement travels down through the legs to the feet; toes pointed
Hands and Arms	- a simultaneous circling action, hands enter the water in front of the shoulder and press slightly outwards then pull in and under the body though towards the hips; hands swing low over the water back to entry position
Breathing Timing	- lifting the head to the front during the arm action - kick; pull; kick; recover; breath taken during the pull
Efficient Butterfly Body Position	- from the extended position, hand stretched out in front; with the head in line and face in the water the head and upper body will rise and fall in relation to the undulation from the kick, pull and breathing pattern
Feet and Legs	- full undulating movement of the hips, legs and feet; the seat lifts and lowers; the knees bend and straighten; feet and toes are long and pointed
Hands and Arms	- Entry – the hands enter in front, in line between the shoulder and head - Propulsion – following entry, the hands then move slightly out and down to the catch position; sweep in under the body, then back and through the hips - Recovery – a smooth double arm recovery over the surface
Breathing	- the head is lifted to the front with the chin forward before the hands complete their push through to the legs
Timing	- a steady constant undulation with two kicks to each arm cycle; breathing once during each stroke cycle or each alternate cycle
Effective Butterfly Body Position	- face in the water before the hands enter will improve streamlining
Feet and Legs	- a strong, rhythmic, whip-like kick, beginning at the seat and flowing through to the toes
Hands and Arms	- emphasizing the catch, pulling under the body and following through to the thighs will provide power and distance in each stroke
Breathing Timing	- controlled regular breathing related to the effort phases of the stroke - emphasis on a steady, rhythmic and controlled balance of kick and pull enables the stroke to be swum continuously over longer distances