

## APPENDIX L

### REQUIRED ELEMENTS FOR TECHNICAL ROUTINES

Amendments to this Appendix L are the responsibility of the Rules Committee. The Rules Committee can modify this Appendix by recommending changes to the Board of Directors for approval.

#### I. GENERAL REQUIREMENTS:

- A. **Supplementary elements may be added.** Placement is optional. Other than that the specified required elements are performed in the order designated, there are no restrictions on content or choreography. Required elements may be separated by optional components.
- B. **Figure elements** shall be executed according to the requirements described in **Figure Rules IV & V**. Unless otherwise specified in the description, all elements shall be executed high and controlled, in uniform motion, with each section clearly defined. Technical routine figure elements shall be evaluated using the same criteria as for a Figure competition. Where uniform motion is required, it may be at the tempo of the music. Pauses which are not allowed in figure/movement description may not be added. Example: A *Combined Spin* with short pauses after each 180° turn to fit with the accents in the music would not meet the requirements.
- C. **Penalties in Technical Routines:** See Rule IV.C.6.b for description of penalties.
- D. **Procedures:**
1. Three Technical Controllers keep track of Technical routine content, with the Event Referee informing the scoring table if a penalty needs to be applied. Judges do not consider omissions when assigning a score.
  2. Any required element which is incomplete, or has a component part missing, (e.g. *Combined Spin* without a **Vertical Descent**) will be treated as an omitted element.
  3. In case of dispute about required elements, video recording may be used for final decision by the Event Referee.
- E. **Comments:**
1. For **Novice**, Intermediate and Senior Technical Duets and Trios, with the exception of the deck work, ~~and~~ entry **and Element #4 in the Senior Technical Duet**, all elements required and supplementary must be performed simultaneously and all competitors must face the same direction (e.g. they must face the same wall or diagonal). They may not face each other or away from each other. Mirror actions are not permitted (e.g. one competitor cannot lift her left arm “mirroring” the other competitor lifting her right arm).
  2. **For Novice Technical Teams, with the exception of the deck work and entry, all elements required and supplementary must be performed simultaneously and facing the same direction by all Team members. Variations in propulsion and direction facing are permitted only during pattern changes. Mirror actions are not permitted.**
  3. For Intermediate and Senior Technical Teams, with the exception of the Cadence Action, the deck work and entry, all elements required and supplementary must be performed simultaneously and facing the same direction by all Team members except during the circle pattern and ~~the~~ **Intermediate** Platform **Element #1.B**. Variations in propulsion and direction facing are permitted only during pattern changes. Mirror actions are not permitted.
  4. For **10** & under Age Group Duet, Trio and Team Free Routines with Required Technical Elements, all elements must be performed simultaneously and facing the same direction by all competitors. Mirror actions are not permitted during Technical Elements.
  5. If more than one Cadence Action is performed, they may not be separated by another movement done in unison (e.g. a synchronized stroke or hybrid movement cannot separate two cadence actions). However, the 1st cadence action

may begin with competitor 1 and the 2nd action may begin with either competitor 8 or competitor 1. A subsequent cadence action may or may not start before the previous one is complete.

- 6.** A circle should be well-defined with all competitors on the circumference of the circle, equidistant from a common center point, demonstrating symmetry in spacing, positions and action (e.g. facing in, facing out or facing around the circle). If all competitors face the same wall, this pattern might not be recognized as a circle by a Technical Controller or Event Referee.
- 7.** In the arm sequence using eggbeater kick element, arm(s) must be lifted above the water. The arm(s) may be in a variety of positions from just above the surface to maximum height. The eggbeater is performed in an erect sitting position, the lower legs hanging down from the knees toward the pool bottom so that they form a 90° angle with the thighs. With the knees apart as far as possible, the competitor performs a whip kick with alternating legs by making as large a circle as possible with the foot and lower leg.
- 8.** All elements must be performed in the order listed.
- 9.** There is an allowance of 15 seconds plus the allotted time, but there is not a minimum time limit. (Exception: There is a minimum time limit of the allotted time minus 15 seconds in competitions conducted under FINA rules.)
- 10.** **Senior Technical Elements: Duet required elements #4 and #9, and Team required elements #1, #5, #8 and #9 shall not receive individual scores but shall be judged within the remaining 30% of the Execution score.**

**NOVICE REQUIRED TECHNICAL ELEMENTS**  
**New for the 2010-2013 Quadrennium**

<b>NOVICE SOLO, DUET, TRIO AND TEAM (1:30)</b> Elements 1-5 are to be performed in the order listed.
<b>1.</b> Head First Standard Scull in <b>Back Layout Position</b> .
<b>2.</b> Figure #310 Somersault, Back Tuck, to the completion of at least a 90° rotation.
<b>3.</b> Side flutter on either side, followed by an arm sweep to a <b>Front Layout Position</b> , followed by a pull into a <b>Surface Front Pike Position</b> .
<b>4. Split Position.</b>
<b>5.</b> Figure #101 Ballet Leg, Single, while traveling.
<b>6.</b> Required Strokes: Any two of the three listed strokes must be performed in the routine. The strokes may appear in any order-and at any point in the routine. Each stroke must be performed with at least three repetitions with no intervening actions. The proper kick must be done with the proper arm strokes. The three listed strokes are: a. Breaststroke: Head may be in or out. b. Backstroke: Stops at top of the arm stroke are allowed. c. Sidestroke: Head up or down.
<b>7.</b> With the exception of the deck work and entry, all elements – required and supplementary – must be performed simultaneously and facing the same direction by all competitors. Mirror actions are not permitted. See E.1 <b>and 2</b> .

**INTERMEDIATE REQUIRED TECHNICAL ELEMENTS (2010-2013)**

<b>INTERMEDIATE SOLO – 2:00</b> <b>INTERMEDIATE DUET/TRIO – 2:20</b> Elements 1-7 are to be performed in the order listed.	<b>INTERMEDIATE TEAM – 2:50</b> Elements 1-8 are to be performed in the order listed.
<p><b>1.</b> From a <b>Crane Position</b>, the horizontal leg is lifted to a <b>Vertical Position</b>, followed by a <i>Vertical Descent</i>.</p>	<p><b>1.A.</b> From a <b>Crane Position</b>, the horizontal leg is lifted to a <b>Vertical Position</b>, followed by a <i>Vertical Descent</i>.  <b>1.B.</b> Acrobatic Move – one Platform or Stack:</p> <ul style="list-style-type: none"> <li>➤ PLATFORM requirements:                             <ul style="list-style-type: none"> <li>a. One person supported at or above the surface.</li> <li>b. Underwater set-up is optional, but all remaining competitors must be involved.</li> <li>c. Must rise and descend once with supported person maintaining contact with the lifters.</li> <li>d. Person being supported must rise head-first.</li> </ul> </li> <li>➤ STACK requirements:                             <ul style="list-style-type: none"> <li>a. Two stacks are required. (Exception: Teams with only 4 or 5 competitors may perform one stack.)</li> <li>b. One person lifted head-first in each stack.</li> <li>c. Underwater set-up is optional, but all remaining competitors must be involved.</li> <li>d. Each stack performs simultaneous identical movements facing the same direction.</li> <li>e. Each stack must rise and descend once with supported person maintaining contact with lifters.</li> </ul> </li> </ul> <p><b>12 &amp; under Teams must perform 1.A.</b>  <b>13 &amp; over Teams may choose to perform either 1.A or 1.B.</b></p>
<p><b>2.</b> Boost - a rapid, head-first rise, with a maximum amount of the body above the surface of the water with no arms raised above the surface as the body reaches maximum height. The Boost is begun with the body totally underwater or with the back of the head and/or torso flush with the surface. The Boost is completed upon total submergence.</p>	<p><b>2.</b> Boost - a rapid, head-first rise, with a maximum amount of the body above the surface of the water with no arms raised above the surface as the body reaches maximum height. The Boost is begun with the body totally underwater or with the back of the head and/or torso flush with the surface. The Boost is completed upon total submergence.</p>
<p><b>3.</b> Arm sequence using eggbeater kick – must follow immediately after the Boost; travel forward and/or sideways with no arms out of the water.</p>	<p><b>3.</b> Arm sequence using eggbeater kick – must follow immediately after the Boost; travel forward and/or sideways with no arms out of the water.</p>
<p><b>4.</b> Figure #360 Walkover Front.</p>	<p><b>4.</b> Figure #360 Walkover Front.</p>

<p><b>INTERMEDIATE REQUIRED TECHNICAL ELEMENTS</b> (continued) <b>2010-2013</b></p>	
<p><b>INTERMEDIATE SOLO, DUET AND TRIO TECHNICAL ELEMENTS</b> (continued)</p>	<p><b>INTERMEDIATE TEAM TECHNICAL ELEMENTS</b> (continued)</p>
<p><b>5.</b> Traveling Ballet Leg combination – to include the following 3 surface positions in any order: <b>Bent Knee Back Layout</b> with the right leg; <b>Bent Knee Back Layout</b> with the left leg; <b>Ballet Leg</b> with the right or left leg.</p>	<p><b>5.</b> Traveling Ballet Leg combination – to include the following 3 surface positions in any order: <b>Bent Knee Back Layout</b> with the right leg; <b>Bent Knee Back Layout</b> with the left leg; <b>Ballet Leg</b> with the right or left leg.</p>
<p><b>6.</b> <b>Bent Knee Vertical Position</b> followed by a <i>close to Vertical Position</i> and completed with a <i>Vertical Descent</i>.</p>	<p><b>6.</b> <b>Bent Knee Vertical Position</b> followed by a <i>close to Vertical Position</i> and completed with a <i>Vertical Descent</i>.</p>
<p><b>7.</b> <i>Thrust</i> to a <b>Vertical Position</b> followed by a <i>Vertical Descent</i> at the same tempo as the <i>Thrust</i>.</p>	<p><b>7.</b> <i>Thrust</i> to a <b>Vertical Position</b> followed by a <i>Vertical Descent</i> at the same tempo as the <i>Thrust</i>.</p>
<p><b>8.</b> With the exception of the deck work and entry, all elements – required and supplementary – must be performed simultaneously and facing the same direction by all competitors. Mirror actions are not permitted. See E.1.</p>	<p><b>8.</b> Cadence Action – identical movement(s) performed sequentially one-by-one by all Team members. When more than one cadence action is performed, they must be consecutive, and not separated by other optional or required elements. A subsequent cadence action may or may not start before the previous one is completed. See E.5.</p>
	<p><b>9.</b> The pattern formations must include a straight line or a circle. See E.6 for circle comments.</p>
	<p><b>10.</b> With the exception of the Cadence Action, the deck work and entry, all elements – required and supplementary – must be performed simultaneously and facing the same direction by all Team members except during the circle pattern and the Platform. Variations in propulsion and direction facing are permitted only during pattern changes. Mirror actions are not permitted. See E.3.</p>

**AGE GROUP 10 & UNDER (2010-2013)**  
**FREE ROUTINE WITH REQUIRED TECHNICAL ELEMENTS**  
**10 & UNDER AGE GROUP SOLO (2:00), DUET/TRIO (2:20) AND TEAM (2:50)**

Elements 1-6 are to be performed in the order listed.
<b>1. Crane, Vertical Bent Knee, or Vertical Position.</b>
<b>2.</b> Boost - a rapid, head-first rise, with a maximum amount of the body above the surface of the water. One or both arms must be lifted above the surface as the body reaches maximum height. The Boost is begun with the body totally underwater or with the back of the head and/or torso flush with the surface. The Boost is completed upon total submergence.
<b>3.</b> Arm sequence using eggbeater kick - must follow immediately after the Boost; travel forward and/or sideways and contain a sequence of arm movements which includes one arm or both arms out of the water at the same time.
<b>4. Split Position.</b>
<b>5. Right or Left Ballet Leg Position.</b>
<b>6.</b> <i>Thrust</i> to a <b>Vertical Position</b> followed by a <i>Vertical Descent</i> at the same tempo as the <i>Thrust</i> .
<b>7.</b> All elements must be performed simultaneously and facing the same direction by all competitors. Mirror actions are not permitted during Technical Elements. See E.4.

**SENIOR/FINA REQUIRED TECHNICAL ELEMENTS**  
**New for the 2010-2013 Quadrennium**

<b>SENIOR/FINA SOLO – 2:00</b> Elements 1-6 are to be performed in the order listed.	<b>SENIOR/FINA DUET – 2:20</b> Elements 1-8 are to be performed in the order listed.
<p>1. From a <b>Front Pike Position</b>, a <i>Full Twist</i> is executed as the extended legs are lifted to a <b>Vertical Position</b>. Continuing in the same direction, a <i>Full Twist</i> is executed followed by a <i>Continuous Spin</i> of 1440° (4 rotations). [DD 3.3]</p>	<p>1. 240 c - Albatross Twirl is executed until completion of the rotation, followed by a <i>Continuous Spin</i> of 1440° (4 rotations). [DD 3.3]</p>
<p>2. <i>Rocket Split</i> is executed to an <b>Airborne Split Position</b>, maintaining maximum height the front leg is lifted vertically as the back leg moves to a <b>Bent Knee Vertical Position</b>. The vertical leg is lowered backward toward the surface as the bent leg extends forward to assume an <b>Airborne Split Position</b>. [DD 3.1]</p>	<p>2. From a <b>Back Layout Position</b>, traveling ballet leg combination beginning with a straight leg lift to a <b>Ballet Leg Position</b>. The horizontal leg is lifted to a <b>Ballet Leg Double Position</b>. Maintaining the <b>Ballet Leg Double Position</b> a rotation of 360° is executed, the first leg is lowered to a <b>Ballet Leg Position</b>, the second leg is lowered to a <b>Back Layout Position</b>. The legs are held straight throughout the element. [DD 2.5]</p>
<p>3. Boost – a rapid head-first rise, with a maximum amount of the body above the surface of the water. Both arms must be lifted at or above the shoulder line as the body reaches maximum height. A descent is executed until the competitor is completely submerged. Immediately afterwards, a second boost with both arms above the surface is executed. A second descent is executed until the competitor is completely submerged. [DD 2.5]</p>	<p>3. Rocket Split - A <i>Thrust</i> to a <b>Vertical Position</b> followed by two rapid alternating <b>Airborne Split Positions</b>, followed by a join to a <b>Vertical Position</b> with maximum height. A <i>Vertical Descent</i> is executed. [DD 3.4]</p>
<p>4. Beginning with a straight leg lift to a <b>Ballet Leg Position</b>, 116 - Catalarc is executed with compulsory head first travel while assuming the ballet leg. [DD 2.9]</p>	<p>4. A connected action – connected, joined or intertwined movements. Lifts, throws and platforms are not included.</p>
<p>5. <i>Combined Spin</i> is executed. A <i>descending Spin</i> of 1080° (3 rotations) followed, without a pause, by an equal <i>ascending Spin</i> in the same direction. [DD 3.0]</p>	<p>5. Maintaining a <b>Fishtail Position</b>, three rapid <i>Full Twists</i> are executed at maximum height. [DD 2.9]</p>
<p>6. From a Submerged <b>Back Pike Position</b>, 307e - Flying Fish Spinning 360° is executed. [DD 3.2]</p>	<p>6. Boost – a rapid head-first rise, with a maximum amount of the body above the surface of the water. Both arms must be lifted at or above the shoulder line as the body reaches maximum height. A descent is executed until the competitor is completely submerged. [DD 1.7]</p>
	<p>7. From a <b>Split Position</b>, rotation of a 180° is executed as the legs are symmetrically lifted and closed to a <b>Vertical Position</b> followed by a <i>Half Twist</i> in the same direction. A <i>Twirl</i> is executed in the opposite direction; completed by a <i>Continuous Spin</i> of 1080° (3 rotations) in the same direction as the <i>Half Twist</i>. <i>Half Twist</i>, <i>Twirl</i> and <i>Continuous Spin</i> to be executed in <b>Vertical Position</b>. [DD 2.3]</p>

SENIOR/FINA REQUIRED TECHNICAL ELEMENTS <i>(continued)</i> New for the 2010-2013 Quadrennium	SENIOR/FINA DUET TECHNICAL ELEMENTS <i>(continued)</i>
	8. <i>Thrust</i> followed by a rapid <i>360° Spin</i> . [DD 2.2]
	9. With the exception of the deck work, entry and a connected action, all elements – required and supplementary – must be performed simultaneously and facing the same direction by both competitors. Mirror actions are not permitted.

**SENIOR/FINA REQUIRED TECHNICAL ELEMENTS** (continued)  
**New for the 2010-2013 Quadrennium**

<p><b>SENIOR/FINA TEAM – 2:50</b>  Elements 1-7 are to be performed in the order listed.</p>
<p><b>1.</b> Acrobatic move –Jump  a. Two simultaneous jumps are required.  b. Underwater set-up is optional, but all remaining competitors must be involved.  c. Each jump performs simultaneous identical movements facing the same direction.  d. Each jump must rise once with supported person becoming airborne at peak of lift.</p>
<p><b>2.</b> A <i>Thrust</i> is executed to a <b>Vertical Position</b>, maintaining maximum height a <i>Twirl</i> is executed as one leg is lowered to a <b>Bent Knee Vertical Position</b>. A <i>Vertical Descent</i> is executed as the bent knee is extended to meet the vertical leg at the ankles submerge with the same tempo as <i>Thrust</i>. [DD 2.3]</p>
<p><b>3.</b> 435 - Nova is executed to the completion of a <b>Bent Knee Surface Arch Position</b>; the legs are simultaneously lifted to a <b>Vertical Position</b> as the bent knee is extended. A <i>Continuous Spin</i> of 1080° (3 rotations) is executed until heels reach the surface, without submergence, followed by a rapid <i>Spin Up 180°</i>. A <i>Vertical Descent</i> is executed at the same tempo as the <i>Spin Up 180°</i>. [DD 2.9]</p>
<p><b>4.</b> Boost – a rapid head-first rise, with a maximum amount of the body above the surface of the water. Both arms must be lifted at or above the shoulder line as the body reaches maximum height. A descent is executed until the competitor is completely submerged. [DD 1.7]</p>
<p><b>5.</b> Cadence Action with legs – identical leg movement(s) performed sequentially one-by-one by all Team members. When more than one cadence action is performed, they must be consecutive, and not separated by other optional or required elements. There shall be at least 2 consecutive pattern changes during the cadence action.</p>
<p><b>6.</b> From a <b>Front Pike Position</b>, porpoise lift is executed to a <b>Vertical Position</b>. A <i>Full Twist</i> is executed, then the legs are lowered symmetrically to a <b>Split Position</b>. A <i>Walkout Front</i> is executed. [DD 2.9]</p>
<p><b>7.</b> <i>Rocket Split</i> is executed to an <b>Airborne Split Position</b>, maintaining maximum height the legs are lifted to a <b>Vertical Position</b> as <i>Twirl</i> is executed with a rapid <i>Vertical Descent</i>. [DD 2.6]</p>
<p><b>8.</b> The pattern formations must include a straight line and circle</p>
<p><b>9.</b> With exception of the deck work, entry and the Cadence Action, all elements – required and supplementary – must be performed simultaneously and facing the same direction by all Team members except during the circle pattern. Variations in propulsion and direction facing are permitted only during pattern changes and underwater actions. Mirror actions are not permitted.</p>