**CHARTWORK ESSENTIALS**

**Course to Steer**

1. You know where you are now – the FIX
2. You know the direction you want to go – the GROUND TRACK to your DESTINATION
3. You can find the TIDE – for the time of your passage, starting at the TIME of the FIX.
4. Then draw the BOAT SPEED from the TIDE T to arc across the Ground Track at X.

COURSE TO STEER \( \theta(T) \) = Bearing of T to X.

Speed over ground SOG = Distance FIX to X

Time to Destination = \( \frac{\text{Distance FIX to D}}{\text{SOG}} \) x 60

(for one hour passage)

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**Estimated Position**

1. You know when and where you started – the FIX
2. You know the boat’s heading \( \theta(T) \) and speed (or distance run). Draw the heading and distance from the fix to the DR position.
3. You want to know where you are – the EP
4. You can find the TIDE – for the time of your passage, starting at the TIME of the FIX.
5. Draw the tide from the DR to the EP - that’s it!

Course Over Ground = Fix to EP

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**Tide height; depth to anchor**

Find the Height of tide when you arrive, from the tide curve for this port.

Find the Fall of tide to Low Water = Ht now – Ht at Low Water

Depth required = Fall + Draught D + Clearance required C