BCU Coastal Navigation and Tidal Planning Training Syllabus

Course Philosophy
This course is designed for those paddlers carrying out coastal journeys including islands up to 2 nautical miles offshore in areas of tidal movement up to 2 knots and winds of up to force 4 and is suitable for those seeking their 4 star award sea. This course is designed to compliment the areas covered in the 4 star leader training.

Course Aims
The aim of this course is to give the student the tools to enable them to plan and navigate effectively on coastal journeys in moderate sea conditions. This will include the following aspects:

- To interpret sources of information including maps, charts, coastal pilots and tide tables
- To navigate on the water using visual references and simple pilotage techniques e.g. transits, dead reckoning and a compass
- To be able to source, interpret and apply a weather forecast to the marine environment
- By the end of the course each student should have planned at least 2 coastal journeys that they can take home as references for further trip planning
- Students should also be aware of the range of resources they require to plan trips in the coastal environment
- Although not part of the syllabus of the course, students should be made aware of the role of the Coastguard and the value of liaising with them

Equipment required for course

- Silva type 4 or similar compass suitable for map work.
- 2B pencils & rubber
- Notebook

Equipment provided by tutor and required for effective journey planning

- Breton plotter
- Parallel rules
- Dividers
- 2B Pencils
- Pilots / Sailing Directions / sea kayak guides e.g.Oilean.
- Charts
- Maps
- Tide tables (Local relevant to pilot and charts)

Venue & Duration
This is a theory-based course and will take place indoors.

The course is of 8 hrs duration, (1 day or several modules) at the end of the course students will receive a logbook entry and certificate as evidence of training completed.

Whilst this is a theory-based course the intention is that it is highly practical and not a lectured syllabus. The students should participate in a variety of practical planning exercises using the variety of resources provided. This must constitute a minimum of 50% of the course time.

Staffing & Ratios
Ratio 1:8 Registered BCU Coastal Navigation and Tidal Planning Tutor
Ratio 1:12 As above plus BCU Level 3 Sea Kayak Coach

(12 is seen as a working maximum on this course – due to course constraints re practical chart work exercises)

Course content
The course information will fall into three main areas and the key aspects covered under each of these are highlighted below.

1. Environmental considerations

Weather

- Cause and effect of weather systems and fronts.
- The Beaufort scale and associated sea conditions.
- Obtaining and interpreting a sea area forecast.
- The interpretation of a synoptic chart.
- Other sources of weather forecasts.
- Combination of effects to create extreme and unpredictable tidal ranges (known as proxigean tides)

Tides

- The basic cause and effect of tidal movement on a daily and monthly basis.
- Cause and effect of changes in air pressure on tidal range.
- Where to obtain tidal information including range.
- The effect of wind and land features on tidal movement.
- The rule of constants, 12ths, 3rds.
- The awareness and understanding of tidal anomalies.

2. Sources of information

OS Maps & Charts

- The understanding and application of Latitude and Longitude.
- The understanding and application of scale and measurement using Nautical miles as well as kilometres.
- How to take a true and magnetic bearing from OS maps and charts.
- How to interpret the variety of information on OS maps and charts.
- The advantages and disadvantages of OS maps and charts.

Pilots (Admiralty and Sailing Directions)

- The sourcing, understanding and application of information from the coastal pilot.
- The transferring of relevant pilot information on to an OS map.

Other Sources Information

- The value of information from local sources including sea kayak guides, local clubs and mariners.

3. Coastal planning

Trip planning

- The various factors to take into account when planning a trip including calculation of timings, group skill level, logistics, and environmental factors.
- How to calculate Estimated Time of Departure (ETD) and Estimated Time of Arrival (ETA) from looking at Crux points.
- How to create and use a tidal planning table
- How to create and use a pictorial image of the relevant tidal movements.

The application of navigation theory

- How to calculate bearings for short crossings of tidal waters.
- How to apply timing calculations on the water
- To be aware of time made good when utilising tidal flow
- How to relate map/chart information to the coastal environment
- How to use a natural transits, dead reckoning, and estimated positioning.