Open Water Navigation and Tidal Planning Syllabus

Course philosophy

This course is designed for those paddlers carrying out challenging sea journeys including open crossings in areas of strong complex tidal movement (in excess of 3knots) and is a prerequisite for those seeking their British Canoeing 5 Star Sea Leader award. However, anyone wishing to undertake challenging journeys on the sea using a kayak would find the technical and theoretical aspects not only useful, but essential for safe travel in the marine environment! The course is designed to complement the areas covered in the British Canoeing 5 Star Sea 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 open water journeys in advanced sea conditions. It should increase the knowledge and awareness of the paddler and therefore improve their seamanship. This will include the following aspects:

- to interpret sources of relevant information including maps, charts, coastal pilots, tide tables and tidal stream atlases
- dynamic interpretation of weather systems
- to apply the above relevant information in calculating vectors and negotiating open crossings and/or coastlines with no landing zones and/or tide races and overfalls
- to develop the necessary knowledge to navigate on the water using advanced pilotage techniques in poor visibility or hours of darkness
- by the end of the course each student should have planned at least 2 open crossings 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 any sea area

Prerequisites

Students need to have completed British Canoeing Coastal Navigation Training or recognised equivalent. For recognised equivalents see “Alternative Qualifications for Navigation and Tidal Planning Courses” available from the Home Nation websites.

Equipment required for course by students

- Silva type 4 or similar compass suitable for map work
- suitable chart plotter
- 2B pencils and rubber
- notebook

Recommended course book

Sea Kayak Navigation, Franco Ferrero (2nd Edition, 2007).

Venue and duration

The course is a minimum of 8 hours duration, (1-day or several modules).

Whilst this is a shore-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 60% of the course time.

Provider requirements

BCU Open Water Navigation and Tidal Planning Provider.

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 - students should understand synoptic chart and dynamic interpretation of weather information, including:

- how to interpret a synoptic chart and the ability to predict weather conditions at sea from the chart
- how to recognise effects of change through weather observations
- working knowledge of the shipping forecast

Tides - students should have a comprehensive knowledge and understanding of the cause and effect of tides and tidal streams.

2. Open water tidal planning

Students should be able to extrapolate information in order to plan trips in open water environments and have a detailed knowledge of the following:

- the various factors to take into account when planning a trip in advanced sea conditions including calculation of timings, group skill level, logistics and environmental factors
- how to determine the best Estimated Time of Departure (ETD) and Estimated Time of Arrival (ETA) from looking at tidal gates in the open water environment
- the importance of estimating speed over the water especially in open water crossings
- the importance of planning escape routes / options within the plan
- the importance of making all planning as accurate as possible prior to departure due to the risk of compounding errors in practical open water navigation
- the understanding and application of information contained in a tidal stream atlas and tidal diamonds
- how to use a computation of rates table to gain accurate tidal stream rates
- an understanding of the limitations of the speed of a kayak regarding making crossings in areas of strong tides

- the variety of methods used to plan an open crossing with an emphasis on the accuracy of using hourly tidal vector plots

3. The practical application of navigation theory

Practical planning exercises.

Additional knowledge to the Coastal Navigation Course;

- how to calculate bearings on the deck for crossings of strongly tidal waters
- how to estimate position in open water using map and compass
- how to estimate the speed of the tidal stream when out on the water