

# ARGYLL OUTDOOR NAVIGATION TRAINING SYLLABUS

04 January 2010

17:30

SERIAL	SUBJECT	LESSON TO BE TAUGHT	LEARNING OUTCOME
1	<b>General</b>		
a	General description of the map	To introduce the make up of a map	Fully understand how a map is made
b	Scale of maps	Explain the different scales of maps	Understand the relation of map scale to the ground.
c	Conventional Signs	Use of conventional signs	To be able to interpret conventional signs.
d	Measuring Distances	Explain the different methods of measuring distance on the map	How to estimate distance on the map, also to measure fairly accurate distances.
e	National Grid Lines	Explain the use of grid lines and reasons why	Understand the use of grid lines
2	<b>Grid References</b>		
a	Eastings and Northings	Explain the principle behind eastings and northings	Implement the use of eastings and northings correctly
b	4 Figure Grid Reference	How to plot and take a 4 figure grid reference, and when we would use.	Understand the rule when and how to use a 4 figure grid reference.
c	6 and 8 Figure Grid Reference	Teach how to take and plot 6 and 8 figure grid references to and from the map	Take and plot 6 and 8 figure grid references using the correct method.
d	Romer	Explanation and demonstrate the use of the romer	To relate the correct romer scale to the correct map and plot and take grid references using the romer.
3	<b>Contours and Relief</b>		
a	Contour Interpretation	Explain the two aspects of contour interpretation	Understand the relation of contours and the shape of the terrain.
b	Rules for contours	Understand the rules for contours on both 1:50,000 and 1:25,000 scale maps	Be able to identify both intermediate and index contour lines. Understand what spot heights and trig points are and where located.
c	Concave ,Convex and Uniform Slopes	Teach how to identify different slopes on both the map and ground	Understand the difference of slopes and how they can either hinder or assist when planning a route.
d	Other Landforms	Explain and show other types of landforms	Be able to identify other landforms and their names i,e ridge, spur etc.
4	<b>Points of the Compass</b>		
a	Cardinal and Intermediate points	Explain the four main cardinal points and the four intermediate points	Full understand these compass points
b	North Points	Teach the difference between, Magnetic, True and Grid North	Understand fully these three north points and their uses.

c	Grid Magnetic Angle	Explain in full how to calculate the GMA for the current year, and reason why.	Fully understand how to calculate the GMA and locate on the map where this information can be found.
5	<b>The Compass</b>		
a	Lightweight Compass	Explain and demonstrate the use of the compass and all its component parts.	Fully understand the compass and its uses.
b	Prismatic Compass	Explain and demonstrate	Have a working knowledge of the Prismatic Compass.
c	Compass Maintenance	How to maintain the compass and keep in a working condition	To be able to carry out simple maintenance.
6	<b>Bearings</b>		
a	Magnetic, Grid and True Bearings	Explain the difference between the three types of bearings	Fully understand the differences

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b	Magnetic Bearing	Demonstrate how to take a magnetic bearing	Confidently take a magnetic bearing
c	Grid Bearing	Explain and demonstrate how to take a grid bearing from the map	Confidently take a grid bearing from the map to a high degree of accuracy
d	True Bearing	Explain how to calculate a true bearing from either one of the other two bearings	Understand the principle behind the conversion of a true bearing.
e	Applying Bearings	Explain and demonstrate how to convert a grid bearing to a magnetic bearing.	To be able to take a grid bearing from the map and convert to a magnetic bearing.
f	Applying Bearings	Explain and demonstrate how to convert a magnetic bearing to a grid bearing.	To be able to take a magnetic bearing and convert to a grid bearing and apply to the map.
g	Backbearing	Explain the principles of a backbearing	Understand the use of a backbearing and apply
7	<b>Navigational Strategies</b>		
a	Intersection	Explain and demonstrate the method of intersection and when to apply	Understand intersection and can apply
b	Re-section	Explain and demonstrate re-section and its advantages	Will be able to apply re-section and plot position on the map.
c	Pinpointing Position	Explain and demonstrate how to locate your position on the map by pinpointing	Will be able to find position on the map in relation to the terrain
d	Linear features	Explain what is meant by a linear feature	Understand what a linear feature is and how to use during navigation.

e	Collecting feature	Explain what is meant by a collecting feature	Fully understand what is meant by a collecting feature is and its uses during navigation cross country
f	Aiming Off	Explain the use and benefit of aiming off	Understand the method and when to use aiming off
g	Attack point	Explain when and where to use the method attack point	Understand why and apply the method attack point.
8	<b>Global Positioning System (GPS)</b>		
a	Theory	The background to the GPS and its use and advantages and disadvantages	Understand the basics
b	Practical	Explain and demonstrate the input of grid references way points,	Will be able to input grid references and decipher a six figure grid reference from the GPS. Also switch from the OS grid system to latitude and longitude. Input a series of way points and follow on the ground.
9	<b>Exercises</b>		
a	Navigation exercise during daylight	Navigation using paths and tracks and crossing open terrain over a distance of 5 to 8 kilometres	Will be able to put into practice all aspects of training and be able travel over a set distance confidently over any type of terrain in all weathers
b	Night Navigation Exercise	Travel by night over different types of terrain to a distance of 3 to 5 kilometres.	Move confidently at night using all methods taught for travelling at night over open terrain.
c	GPS Navigation Exercise during daylight	Same as serial 9a. But with GPs with map and compass as a back up	Same as aerial 9a.
d	GPS Night Navigation Exercise	Same as serial 9b	Same as serial 9b

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