



FSC Outdoor Classroom for Scotland
Advanced Higher Programmes

*FSC programmes are fixed length courses with clearly stated outcomes and links to
SQA Arrangements.*

Advanced Geographical Methods and Techniques
5 days

Please visit

<http://www.field-studies-council.org/outdoorclassroom/scotland/advancedhighergeography.aspx>

for alternative Advanced Higher programmes

OVERVIEW

This programme is designed to meet the needs of the AH *Geographical Methods and Techniques* unit and Core Skills. The students are introduced to a range of geographical methods and techniques within real world, investigative, contexts. Students will be able to reinforce their understanding of geographical concepts, developed at Higher level and will develop skills of independent study, co-operative learning, objective thinking and communication.

PROGRAMME LENGTH

5 Days (4 nights with 12 teaching sessions)

Monday-Friday, Wednesday-Sunday

Groups would normally arrive in time to be taught in the afternoon of the first day and would then be taught on that evening and for three full days subsequently. Groups depart immediately after the morning session on the day of departure.

Day 1	Day 2	Day 3	Day 4	Day 5
Arrive Afternoon & evening sessions	Morning, afternoon & evening sessions	Morning, afternoon & evening sessions	Morning, afternoon & evening sessions	Morning session Depart after Lunch

PROGRAMME CONTENT

Includes:

- Geographical sampling methods
- Data collection using a range of fieldwork techniques
- Analysis and presentation of data
- Investigations into soils, fluvial systems and succession all within walking distance of the centre

Each session is organised as if it were a geographical study, therefore allowing students to gain ideas and practice that will be relevant to planning and completing their own geographical study.

Skills and techniques covered during the programme:

<ul style="list-style-type: none"> • Morphological mapping • Vegetation sampling • Slope measurement and analysis • Soil profile descriptions and analysis • Pebble measurement and analysis: size, shape & rock type • Rural and Urban land use mapping • Surveys: traffic, pedestrian and environmental quality • Questionnaires: design and implementation • Hypothesis/Model testing: Reilly's gravity law 	<ul style="list-style-type: none"> • Sampling: random, systematic, stratified • Recording and handling Data: field sketches, mapping, tables, ratio data • Graphical Presentation: kite and scatter graphs, bipolar analysis • Descriptive Statistics: mean, median, mode, Simpson diversity index • Introductory Statistical Testing: Spearman's rank correlation coefficient, Pearson's product, nearest neighbour, chi squared
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Learning Outcomes/Objectives:

Glacial Geomorphology

Learning Objectives	Learning Outcomes
<ul style="list-style-type: none"> • Understand and describe standard mapping techniques • Use the sample measurements of two contrasting deposits to determine their origin • Interpret the geomorphological landscape of a upland glaciated valley 	<p>All students will:</p> <ul style="list-style-type: none"> • Collect primary data to produce a map, which describes morphological features • Make observations, sample, measure and record size, shape and identify rock type of two contrasting pebble deposits • Interpret landscape features that were created during the last glacial/deglacial periods • Identify risks involved in mapping and measuring exercises and know how to mitigate against them <p>Most students will:</p> <ul style="list-style-type: none"> • Describe how to carry out techniques and justify appropriate use of each • Make detailed interpretations of their map and samples, using background geographical knowledge • Suggest ways in which each technique could be improved <p>Some students will:</p> <ul style="list-style-type: none"> • Describe limitations of each technique and suggest improvements. • Suggest ways in which their own maps could be improved

Soil Profiles and Processes

Learning Objectives	Learning Outcomes
<ul style="list-style-type: none"> • Explain how and why soils change along a catena profile • Outline the ways in which physical characteristics of soils can affect vegetation • Carry out a slope profile and vegetation analysis using standard field techniques 	<p>All students will:</p> <ul style="list-style-type: none"> • Describe the aims and objectives of the investigation and outline hypotheses, which link them • Identify and be able to describe different soil characteristics, by using a range of standard field techniques • Identify any trends in data and relate to geographical theory <p>Most students will:</p> <ul style="list-style-type: none"> • Justify data collection techniques and describe sampling strategies employed during the investigation • Identify anomalous results in their data and be able to explain them • Offer links between different variables to help explain the results of the investigation and draw conclusions • Carry out a Spearman Rank Correlation test to help accept/reject original hypotheses <p>Some students will:</p> <ul style="list-style-type: none"> • Justify sampling strategies employed • Compare different ways of presenting data, outlining benefits and drawbacks of these methods • Complete an evaluation of the investigation, outlining limitations of techniques and validity of conclusions; suggest ways to improve the investigation

Succession in a Hydrosere

Learning Objectives	Learning Outcomes
<ul style="list-style-type: none"> • To understand how ecosystems change over time • To relate changes in the ecosystem to the main physical (abiotic) factors affecting the environment • To use a range of standard fieldwork and analysis techniques 	<p>All students will:</p> <ul style="list-style-type: none"> • Record changes in vegetation (biotic) and physical changes (abiotic) along an interrupted transect • Describe data collection methods and sampling strategies in detail • Understand and explain the process of succession • Present primary data using appropriate methods <p>Most students will:</p> <ul style="list-style-type: none"> • Justify data collection techniques used during the investigation, stating advantages over other techniques • Identify anomalous data • Carry out a Spearman Rank Correlation on their primary data and explain results in relation to confidence limits • Determine diversity along their transect using the Simpson-Yule method <p>Some students will:</p> <ul style="list-style-type: none"> • Explain trends shown in primary data and suggest reasons for them. • Evaluate the reliability of their findings and suggest how data could be improved

Fluvial Systems

Learning Objectives	Learning Outcomes
<ul style="list-style-type: none"> • Describe how a river changes with distance downstream and explain how river variables interrelate • Describe river landforms observed during the day and consider how they are formed • Describe how land-use may relate to drainage basin characteristics 	<p>All students will:</p> <ul style="list-style-type: none"> • Describe the aims and objectives of the investigation and outline hypotheses, which link them • Collect primary data to test hypotheses relating to downstream changes. • Identify landforms created by river processes • Pick out trends from their data that relate to learning objectives • Identifying risks involved in the investigation and ways to manage those risks <p>Most students will:</p> <ul style="list-style-type: none"> • Justify data collection techniques and describe sampling strategies employed during the investigation • Describe downstream changes related to stream order • Identify sampling sites using OS map and grid reference • Identify anomalous results in their data and be able to explain them • Offer links between different river variables to help explain the results of the investigation and draw conclusions • Carry out a Pearson Product test to help accept/reject original hypotheses, using their own field data <p>Some students will:</p> <ul style="list-style-type: none"> • Use OS extracts to help justify sampling strategies employed. Compare different ways of presenting data, outlining benefits and drawbacks of these methods • Compare different ways of presenting data, outlining the benefits and drawbacks of each • Complete an evaluation of the investigation, outlining limitations of techniques and validity of conclusions; suggest ways to improve the investigation

Rural Settlement Patterns

Learning Objectives	Learning Outcomes
<ul style="list-style-type: none"> • To determine characteristics, including function and opportunities within different rural towns • Determine the effect of tourism on two rural towns • Critically assess methods and techniques used in the study of these settlements 	<p>All students will:</p> <ul style="list-style-type: none"> • Record the services and determine function of two different rural towns • Use secondary and primary data to determine the sphere of influence of the towns <p>Most students will:</p> <ul style="list-style-type: none"> • Record service function in different towns in a rural area and suggest why the number of services and type of service may vary between them • Assess the tourism potential for the towns and suggest why this may vary. • Use primary and secondary data to identify the main characteristics of each town • Collect/use a mixture of qualitative, quantitative, secondary and primary data • Carry out a Chi² test on primary data and relate it to given confidence limits <p>Some students will:</p> <ul style="list-style-type: none"> • Critically assess urban models and theories in relation to these towns, suggesting advantages and disadvantages of the techniques • Suggest advantages and disadvantages of using qualitative, quantitative, secondary and primary data • Outline the limitations involved in the investigation

FSC KINDROGAN

Located in rural Perthshire, at the edge of the Cairngorms National Park FSC Kindrogan is 11 miles from Pitlochry's mainline train station and close to the A9. The Centre itself is set in wooded grounds on the banks of the River Ardle and lies within easy reach of some of the most inspiring landforms in the Scottish Highlands and a rich range of wildlife habitats.



KD

Kindrogan

Tel: 01250 870150

TO BOOK THIS PROGRAMME, SIMPLY:

1. Choose the time of the year you would like to attend
2. Check availability online(HYPERLINK) or contact FSC Kindrogan

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The FSC prides itself on being flexible. If you can't find a programme to meet your exact requirements a course specifically tailored to meet your needs can be developed. To discuss this, contact the centre of your choice. Fees will depend on what time of year you would like to visit and your length of stay but will be more expensive than FSC programmes at peak periods.