

Geological mapping in deformed terrains: foundation skills

Intended audience

The course is aimed at student and professional geologists who are expected to work, or anticipate working in regions where polyphase deformation and metamorphism have affected mainly meta-sedimentary sequences.

Course objectives

Practical fieldwork mapping forms the core of the 10 day course. Evening presentations consider lithologies, metamorphism, the development of structure during ductile deformation, superficial deposit lithologies and landforms and their interpretation. The emphasis is on the development of good practical skills in observation, recording and interpretation at the outcrop, together with the production of good field maps. Students will be introduced to field mapping techniques consistent with BGS methods.

Participants will develop skills in the techniques required to:

- Make systematic observations and descriptions.
- Apply appropriate lithological names.
- Assess the nature and degree of metamorphism.
- Build a local lithostratigraphy.
- Elucidate the relationships between rocks units.
- Delineate the major folds and other structures.
- Delineate and classify geomorphological landforms and associated superficial deposits.
- Determine the broad deformation history of a region of polyphase folding, based on field evidence.

Course description

The course aims to provide a grounding in mapping skills necessary for work in such terrains, including basic vocabularies that can be used to describe the rocks and superficial deposits, and the development of objective observational skills.

The course is based in a large house in Kingussie at present, where the course team self-caters. The mapping area includes relatively low-lying land and some open upland. The bedrock comprises metamorphosed and variably deformed meta-sedimentary rocks, with some meta-igneous and igneous lithologies. The superficial deposits include glacial deposits of various sorts and their associated landforms.

Course duration

10 days

Delivery mode

Field based course

Course fee

Fee variable dependent on season and course numbers. Includes field accommodation and meals

Date(s)

Spring and Autumn

Location

The mapping area used for this course is in the Spey valley in the central Scottish Highlands, lying to the west of the A9 and the village of Kincaig