II. Geometric/Descriptive analysis

A. Orientation of lines and planes

1. Lines

- a) Trend
- b) Plunge
- c) Recording the data

2. Planes

- a) Dip
- b) Strike
- c) Dip direction
- d) Recording the data

3. Line in a plane

- a) Rake or pitch
- b) Recording the data

B. Contour representations of lines and planes

1. Topographic contours

2. Structure contours

3. Linear features on contour maps

4. Topography and structure

- a) Outcrop patterns
- b) Cross-sections

5. Time-structure contours

C. Stereographic representation of lines and planes

1. Principles

- a) Principle of stereographic (equal-angle) projection
- b) Wulff net
- c) Primitive, great and small circles

2. Basic plotting operations

- a) Plot of a line
- b) Plot of a plane and its pole
- c) Plot of a line in a plane

3. Calculations

- a) Plane common to two lines
- b) Angle between two lines
- c) Line perpendicular to two lines
- d) Intersection of two planes
- e) Plane perpendicular to two planes
- f) Angle between two planes

III. Primary structures

A. Map-scale structures: stratigraphy

1. Map-scale units

- a) Formations, groups, members
- b) Thickness calculations

2. Unconformities

- a) Disconformity
- b) Angular unconformity
- c) Nonconformity

B. Primary structures in sedimentary rocks

- a) Bedding, lamination
- b) Bedforms and cross-stratification
- c) Sole markings
- d) Trace fossils
- e) Structures generated by soft-sediment deformation

C. Primary structures in igneous rocks

1. Intrusions

2. Volcanic rocks