

**DEPARTMENT OF GEOLOGY  
UNIVERSITY OF DELHI  
DELHI-110007**

**Ph. D. in Geology**

**Courses of Teaching**

**COURSE I: Analysis of Geological Materials and quantitative Methods in Geology**

Advance petrological and spectrochemical techniques for example Inductively coupled plasma & X-ray fluorescence, X-ray and electron diffraction and electron probe microanalysis , scanning and transmission electron microscopy.

Multivariate Analysis: Multivariate data in Geological studies, principal component analysis. Factor analysis, Discriminant function Analysis, cluster Analysis, Hotelling  $m^2$  statistics.

Numerical Analysis: Definition, solution of non linear and linear equations.

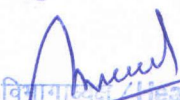
Programming language, program development process , Development goals, system design, language selection, implementation, program design, debugging. Concepts of Data Base Management Systems.

Demonstration of software package with processing of geological data, such as

- (i) Statistical analysis of orientation data
- (ii) Numerical solution of non-linear equations
- (iii) Data base management of geological data using ASE package.

**COURSE II: COURSE RELATED TO TOPIC OF DISSERTATION**

(Students will be expected to submit written assignments as per the guidance of the concerned supervisor(s). This course will aim to give the students comprehensive knowledge of the literature in the subject.

  
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