

LEARNING OUTCOMES FOR THE UNDERGRADUATE STUDY OF GEOLOGY

1. Basic knowledge and understanding of the natural sciences (Physics, Chemistry, Biology, Mathematics) underlying the study of Geology
2. Knowledge and understanding of the essential features, processes, materials, history and the development of the Earth and life
3. Basic knowledge and understanding of the key aspects and concepts of geology
4. Knowledge of the common terminology and nomenclature and the use of bibliography in Geosciences
5. An awareness of the wider spectrum of geological disciplines
6. Awareness and understanding of the temporal and spatial dimensions in Earth processes
7. Awareness of the applications and responsibilities of Geology and its role in society including its environmental aspects
8. Awareness of major geological paradigms, the extent of geological time and Plate Tectonics
9. Knowledge and understanding of the complex nature of interactions within the geosphere
10. Appropriate knowledge of other disciplines relevant to geology
11. Ability to create simple geological models
12. Some understanding of the complexity of geological problems and the feasibility of their solution
13. Understanding the need of a rational use of earth resources
14. Basic ability in the formalisation and specification of problems whose solution involves the use of geological methods
15. Knowledge of appropriate solution patterns for geological problems
16. Basic ability to describe a solution at an abstract level
17. Knowledge of the range of applications of Geology
18. Ability to integrate field and laboratory evidence with theory following the sequence from observation to recognition, synthesis and modelling
19. Appreciation of issues concerning sample selection, accuracy, precision and uncertainty during collection, recording and analysis of data in the field and laboratory
20. Ability to formulate and test hypotheses
21. Basic ability to become familiar with new geological methods and technologies
22. Basic ability to apply appropriate technology and use relevant methods
23. Ability to use simple quantitative methods and to apply them to geological problems
24. Basic ability to independently analyze earth materials in the field and laboratory and to describe, process, document and report the results
25. Ability to undertake field and lab inv in a responsible and safe manner, paying due attention to risk assessment, rights of access, relevant health and safety regulations, and sensitivity to the impact of inv on the environment and stakeholders

26. Basic ability to combine theory and practice to complete geological tasks
27. Ability to undertake literature searches, and to use data bases and other sources of information
28. Ability to receive and respond to a variety of information sources (e.g. textual, numerical, verbal, graphical)
29. Ability to conduct appropriate experiments, to analyze and interpret data and draw conclusions
30. Basic awareness of relevant state-of-the-art technologies and their application
31. Basic ability to solve numerical problems using computer and non-computer based techniques
32. Basic knowledge of the application of information technology to geological science
33. Ability to use spreadsheet and word-processing software
34. Ability to learn and study including effective time management and flexibility
35. Ability to work effectively as an individual and as a member of a team
36. Recognition of the need for, and engagement in self-managed and life-long learning
37. Ability to organise their own work independently
38. Basic ability to communicate effectively in written and verbal form with colleagues, other professionals, customers and the general public about substantive issues and problems related to their chosen specialisation
39. Basic ability to prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques and packages