

Techno India NJR Institute of Technology



Course File

Engineering Geology Lab (3CE4-25)

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For Techno India NJR Institute of Technology
पंकज पोरवाल
Dr. Pankaj Kumar Porwal
(Principal)



RAJASTHAN TECHNICAL UNIVERSITY, KOTA

SYLLABUS

II Year - III Semester: B.Tech. (Civil Engineering)

3CE4-25: GEOLOGY LAB

Credit: 01
OL+OT+2P

Max. Marks: 50 (IA:30, ETE:20)

List of Experiments

1. Physical Properties of Minerals
2. Physical Properties of Rocks
3. Identification of Minerals in Hand Specimen
4. Identification of Rocks in Hand Specimen
5. Identification of Geological features through wooden Models
 - a. Structural Geological Diagrams
 - b. Petrological Diagrams
 - c. Engineering Geological Diagrams
6. Interpretation of Geological Map (10 Nos.)
7. Dip & Strike Problems (8 Nos.)

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Course Overview:

Engineering geology is the application of the geological sciences to engineering projects. ... Engineering geologists provide geological and geotechnical recommendations, analysis, and design associated with human development and various types of Structure .Geological engineering studies are conducted by a geologist or engineering geologist who is educated, trained and has experience in recognizing and interpreting natural processes ; Understanding how these processes affect human – made structures (and vice versa) and knowledge of ways to mitigate hazards caused by adverse natural or human – made conditions. The engineering geologist’s main objective is to protect life and property from damage caused by different geological

Course Outcomes:

CO.NO.	Cognitive Level	Course Outcome
1	Comprehension	Explain different types of rocks & minerals found on earth
2	Application	Explain faults and folds in earth crust
3	Analysis	Explain the difference between several minerals by examining their physical & chemical properties
4	Synthesis	The students will interpret subsurface information such as thickness of soil, weathered zone, depth of hard rock and saturated zone by using geophysical methods
5	Evaluation	The students will learn the techniques in the interpretation of LANDSAT Imageries to find out the lineaments and other structural features for the given area..

Prerequisites:

1. Fundamental’s knowledge of Engineering Geology Practically.

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Course Outcome Mapping with Program Outcome:

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
3	1	2	2	1	1	1	1	1	1	1	1	1	1	2
3	1	2	2	1	1	1	1	1	1	1	1	1	1	2
3	1	2	2	1	1	1	1	1	1	1	1	1	1	2
2	1	1	1	2	1	2	1	2	1	1	2	1	1	1
2	1	2	1	1	2	1	1	1	1	1	1	1	1	1
2.6	1	1.8	1.6	1.2	1.2	1.2	1	1.2	1	1	1.2	1	1	1.6

Course Coverage Module Wise:

Lab No.	Experiments List According to RTU Syllabus
1	Physical Properties of Minerals
2	Physical Properties of Rocks
3	Identification of Minerals in Hand Specimen
4	Identification of Rocks in Hand Specimen
5	Identification of Geological features through wooden Models a. Structural Geological Diagrams b. Petrological Diagrams c. Engineering Geological Diagrams
6	Interpretation of Geological Map (10 Nos.)
7	Dip & Strike Problems (8 Nos.)

Faculty Lab Manual Link

1. https://r.search.yahoo.com/_ylt=AwrX1MnBp6xhOnYABwa7HAX.;_ylu=Y29sbwNzZzMtEcG9zAzEEdnRpZAMEc2VjA3Ny/RV=2/RE=1638733890/RO=10/RU=https%3a%2f%2fwww.iare.ac.in%2fsites%2fdefault%2ffiles%2flab1%2fEngineering%2520Geology%2520Lab%2520Manual.pdf/RK=2/RS=685jWJGW9bT6aFKc73sqZj.Urzc-

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Assessment Methodology:

1. Practical exam based on Geology Syllabus.
2. Internal exams and Viva Conduct.
3. Final Exam (practical paper) at the end of the semester.

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