

Semester Lecture Plan							
Name of the College: Government College of Arts Science & Commerce, Sanquelim Goa							
Name of Faculty: Mr. Brahmanand Sawant				Subject: Geology			
Paper code: GED 101 Engineering Geology			Program/Course: T.Y. B.Sc.		Division:		
Academic year: 2024 - 2025			Semester: V		Total Lectures: 45		
Course Objectives: <ol style="list-style-type: none"> 1) To describe the engineering properties of rocks 2) To get acquainted with various tests carried out on rock samples 3) To carry out geological investigations for selection of sites for engineering projects 4) To suggest remedial measures for the improvement of sites 							
Expected Course Outcome: This Course will help the students: <ol style="list-style-type: none"> 1. To identify and select the appropriate sites for engineering projects 2. Will be able to suggest remedial measures for the improvement of site 							
Student Learning Outcome <ol style="list-style-type: none"> 1) Students will be able to suggest the suitability of sites for various engineering projects 2) They can determine the engineering properties of rocks performing various tests 3) They can prepare a report giving suggestions for the improvement of site if not suitable for construction 							
Month	Lectures From: To:		No. of lectures	Topic, Subtopic to be covered	Exercise /Assignment	ICT Tools	Reference books

June			03	Introduction to Engineering Geology Role of Geologist	Reading material shared	Power point presentation	1.Engineering & General Geology by Parbin Singh 2. Textbook of Engineering Geology by N Chenna Kesavulu
	28-06-2024	6-07-2024	3	Engineering properties of Rocks		Power point presentation	
				Rocks as material for construction	Reading material shared	Power point presentation	
				Density and resistance to abrasion, Deval Test		Power point presentation	
July	8-07-2024	13-07-2024	3	Rock porosity and permeability	Reading material shared	Power point presentation	
				Road materials and Tests		Power point presentation	
				Rocks as site for construction		Power point presentation	

	15-07-2024	20-07-2024	3	Geological investigation for projects	Reading material shared	Power point presentation		
				Role of Geologist in Geotechnical projects		Power point presentation		
			Rocks as site for construction- Various tests	Reading material shared	Power point presentation			
	22-07-2024	27-07-2024	3	Geophysical Investigations		Power point presentation		
				Electrical resistivity methods		Power point presentation		
	29-07-2024	3-08-2024	03	Magnetic method of investigation	Reading material shared	Power point presentation		
				Seismic Method of investigation		Power point presentation		
				Map No 3				
				Shooting and profiling methods		Power point presentation		
	August			03				

	5-08-2024	10-08-2024					1 Engineering & General Geology by Parbin Singh
				Dams		Power Point Presentation	
				Classification of Dams		Power Point Presentation	
	12-08-2024	17-08-2024		Types of Dams	Reading material shared	Power Point Presentation	2. Textbook of Engineering Geology by N Chenna Kesavulu
				Gravity Dam			
				Parts of Dams		Power Point Presentation	
August	19-08-2024	24-08-2024	03	Force acting on a Dam			1 Engineering & General Geology by Parbin Singh
				Induced seismicity			
				Suitability of Rocks	Literature review	Power Point Presentation	
				Independence Day		Power Point Presentation	
	26-08-2024	31-08-2024	03	Tunnel		Power Point Presentation	
Types of Tunnels							
Geological considerations for Tunnels				Literature review	Power Point Presentation		
			Power Point Presentation				
	2-09-2024	5-09-2024	03	Effect of structures on Tunnel Alignment		Power Point Presentation	

				Roads and Highways		Power Point Presentation	
	15-09-2024	20-09-2024	03	Soft ground tunneling		Power Point Presentation	.Engineering & General Geology by Parbin Singh 2. Textbook of Engineering Geology by N Chenna Kesavulu
Revision of Maps							
Hard ground Tunneling				Literature review	Power Point Presentation		
Suitability of Rocks in Tunneling					Power Point Presentation		
				ISA-II			
	22-09-2024	27-09-2024	03	Canals and Types		Power Point Presentation	
				Classification of Canals		Power Point Presentation	
	30-09-2024	05-10-2024	03	Soil stability		Power Point Presentation	.Engineering & General Geology by Parbin Singh 2. Textbook of Engineering Geology by N Chenna Kesavulu
Slope stability studies				Literature review	Power Point Presentation		
				Remedial measures for slope stability in various projects		Power Point Presentation	
	7-10-2024	12-10-2024	03	Bridges		Power Point Presentation	
Types of Bridges					Power Point Presentation		
				RQD		Power Point Presentation	
October							

October	14-10-2024	19-10-2024	03	Improvement in sites: Grouting, Backfilling	Literature review	Power Point Presentation	
				Revision		Power Point Presentation	
				Revision		Power Point Presentation	
	19-10-2024	26-10-2024	03	Revision			
				Revision			
				Revision			

ASSESSMENT RUBRICS

COMPONENT	MAXIMUM MARKS
ISA I	07
ISA II	08
PRACTICAL SEE	25
THEORY SEMESTER END EXAM	60
TOTAL	100