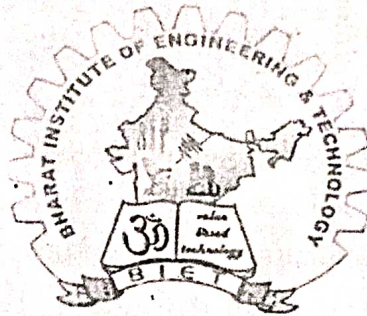


# BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

**SIVARAM VIHAR, GHATAKESWAR HILLS  
MOHADA, BERHAMPUR (GM.)**



## STUDENT'S ATTENDANCE REGISTER

Time	9:05	10:45	11:35		
Day	9:55	11:35	12:25		
Mon	✓				
Tue					
Wed			✓		
Thu					
Fri		✓	✓		
Sat					

Year/ Session : 2023 (winter)

Semester from Date: 01/08/2023 To Date : 30/11/2023

Semester & Branch

*3rd Sem, Civil*

Subject with Code

*116-02. Geotechnical Engineering*

Name of the Faculty Member

*Saumyaranjan Patterayak*


No of Weeks:

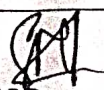
No of Class Allotted/Week :



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
AUGUST	1 <sup>ST</sup>		<u>CHAPTER-1</u>	
			<u>INTRODUCTION</u>	
		02.08.2023	1.1 Soil & Soil Engineering	
			04.08.2023	1.2 Scope of soil mechanics
				1.3 Origin & Foremation of soil
	2 <sup>ND</sup>			<u>CHAPTER-2</u>
				<u>PRELIMINARY DEFINITIONS &amp; RELATIONSHIP</u>
			4.08.2023	2.1. Soil as Three Phase system
			7.08.2023	2.2. Water Content, Density, Specific Gravity
			9.08.2023	Voids ratio, porosity, Percentage of air voids, air content
		10.08.2023	Degree of saturation, density Index Bulk/Saturated/dry/Submerged density	
		11.08.2023 (2)	Interrelationship of various soil parameters.	

Signature of the Faculty: 

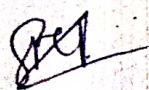
Signature of the Principal/Course Co-ordinator/HOD: 



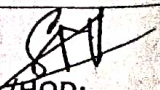
# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
AUGUST	3 <sup>rd</sup>	14.08.2023	<u>CHAPTER-3</u> <u>PROPERTIES OF SOIL</u> Water content, Specific Gravity Particle size distribution: sieve analysis, wet mechanical analysis Particle size distribution curve & its uses	
		16.08.2023		
		18.08.2023 (2)		
	4 <sup>TH</sup>	21.08.2023	<u>CHAPTER-4</u> 4.1 General 4.2 I.S. Classification Plasticity chart	
		23.08.2023		
		25.08.2023 (2)		
		28.08.2023		
	SEPTEMBER	1 <sup>ST</sup>	1.09.2023	

Signature of the Faculty:



Signature of the Principal/Course Co-ordinator/HOD:

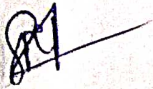




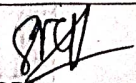
# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
SEPTEMBER	1 <sup>st</sup>	1.09.2023	<u>CHAPTER-5</u> <u>PERMEABILITY &amp; SEEPAGE</u>	
		4.09.2023	5.1 Concept of Permeability Darcy's law	
	2 <sup>nd</sup>	8.09.2023	5.2 Co-efficient of Permeability	
		(2)	5.3 Factors Affecting Permeability	
		11.09.2023	5.3 Constant Head Permeability	
	3 <sup>rd</sup>	13.09.2023	Falling Head Permeability	
		14.09.2023	5.4 Seepage Pressure	
			Effective stress	
				Phenomenon of quick sand

Signature of the Faculty:



Signature of the Principal/Course Co-ordinator/HOD:





# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
SEPTEMBER	4 <sup>TH</sup>	15.09.2023 (2)	<u>CHAPTER-6</u> <u>COMPACTION &amp; CONSOLIDATION</u>
		18.09.2023	6.1 <u>COMPACTION:</u> Compaction, Light & Heavy compaction Test, Optimum moisture content of soil, Maximum dry density, zero air void line Factors affecting compaction
		22.09.2023	Field Compaction methods & their suitability
		22.09.2023	6.2 <u>CONSOLIDATION:-</u> Consolidation, distinction between compaction & Consolidation.
		25.09.2023	Terzaghi's model analogy of Compressible Springs showing the process of consolidation.
		27.09.2023	


Signature of the Faculty:

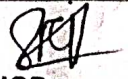
Signature of the Principal/Course Co-ordinator/HOD:



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
		28.09.2023	Field Implications
			<u>CHAPTER-7</u> <u>SHEAR STRENGTH</u>
OCTOBER	1 <sup>ST</sup>	4.10.2023	71 Concept of shear strength,
		5.10.2023	Mohre - Coulomb Failure Theory Cohesion, Angle of internal friction
	6.10.2023 (2)	Strength envelope for different type of soil	
	2 <sup>nd</sup>	9.10.2023	Measurement of shear strength:- Direct shear test
		11.10.2023	Triaxial Shear test Unconfined Compression test Vane shear test.


Signature of the Faculty: 


Signature of the Principal/Course Co-ordinator/HOD: 



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			<u>CHAPTER-8</u>
			<u>EARTH PRESSURE ON RETAINING STRUCTURE</u>
		13.10.2023 (2)	8.1 Active earth pressure
	3 <sup>rd</sup>	16.10.2023	Passive earth pressure
		18.10.2023	Earth pressure at rest
			8.2
			Use of Rankine's formula for the following cases (Cohesion-less soil only)
		1.11.2023	
	1 <sup>ST</sup>	3.11.2023 (2)	(I) Back fill with no surcharge
			(II) Backfill with uniform sur
NOVEMBER			

Signature of the Faculty: 

Signature of the Principal/Course Co-ordinator/HOD: 



# B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
NOVEMBER			<u>CHAPTER-9</u> <u>FOUNDATION ENGINEERING</u>
	2 <sup>nd</sup>	6.11.2023	9.1 foundation Functions, Shallow & deep foundation different type of shallow & deep foundations with sketches
		8.11.2023	
		9.11.2023	
		10.11.2023	
		(2)	
	3 <sup>rd</sup>	13.11.2023	9.2 Bearing capacity of soil Bearing capacity of soil using Terzaghi's formulae & IS
		15.11.2023	
		20.11.2023	
	4 <sup>TH</sup>	22.11.2023	IS code formulae for Strip, Circular & square footings Effect water table on bearing capacity of soil
		24.11.2023	
		(2)	
	5 <sup>TH</sup>	29.11.2023	9.3 Plate load test & Standard penetration test.
		30.11.2023	
			(2)

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