

S.No	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1.	Concrete Technology lab	4	1.Flexural testing machine	2 Times	Akula Harikrishan	Lab Technician	B.Tech
			2. Compaction factor Apparatus.				
			3. Workability apparatus..				
			4.Rebound hammer apparatus.				
2.	Strength of Materials lab	4	1.Universal testing machine	2 Times	Kainkariam Ramnarsaiah	Lab Technician	ITI fitter
			2.Torsion testing machine				
			3.Rockwell and Brinell hardness testing machine				
			4.Impact testing machine				
			5.Spring testing machine				
			6.Compression testing machine				
3.	Fluid Mechanics lab	4	1.Mouth piece and Orifice setup	2 Times	Kainkariam Ramnarsaiah	Lab Technician	ITI fitter
			2.Rectangular notch / Triangular notch/Trapezoidal notch setup				
			3.Friction factor of a pipe				
			4.Venturi meter				
			5.Orifice meter				
			6.Vena contracta				
			7.Bernoulli's setup				
			8.Water hammer				
4.	Hydraulics and Hydraulic Machine lab	4	1.Impact of jet setup	2 Times	Kainkariam Ramnarsaiah	Lab Technician	ITI fitter
			2.Hydraulic jump setup				
			3.Pelton wheel turbine				
			4.Francis turbine				
			5.Kaplan turbine				
			6.Single stage centrifugal pump				
			7.Multi-stage centrifugal pump				
			8.Reciprocating pump				
			9.Open channel setup				
5.	Soil Mechanics Lab	4	1.Atterberg's limit apparatus	2 Times	Telugu Naga Prasad	Lab Technician	B.tech
			2.Core cutter				
			3. Sand replacement				

			<ul style="list-style-type: none"> apparatus 4. Compaction test apparatus 5. California bearing ratio test apparatus 6. Direct shear test apparatus 7. Vane shear test apparatus 8. Consolidation test apparatus 9. Triaxial test apparatus 10. Permeability test apparatus 11. Un-confined compression test apparatus 				
6.	Surveying I&II Lab	4	<ul style="list-style-type: none"> 1. Total station 2. Theodolite 3. Auto level 4. Dumpy level 5. Prismatic compass 6. Survey chain 7. Cross staff 8. Leveling staff 9. Plane table set 10. Planimeter 11. Box sextant 12. Optical square 13. GPS 	2 Times	Telugu Naga Prasad	Lab Technician	B.tech
7.	Computer Aided Drafting I&II Lab	4	<ul style="list-style-type: none"> 1. Auto Cadd-2017 2. 30 Computers 	2 Times	Thallapally Sandeep	Lab Technician	Diploma
8.	Geographical Information System Lab	4	<ul style="list-style-type: none"> 1. Q-GIS 2. 30 Computers 3. Toposheets 4. Cadastral Maps 	2 Times	Thallapally Sandeep	Lab Technician	Diploma
9.	Engineering Geology Lab	4	<ul style="list-style-type: none"> 1. Structural models 2. Rock specimens 3. Mineral specimens 4. Geological maps 	2 Times	Thallapally Sandeep	Lab Technician	Diploma
10.	Transportation Engineering Lab	4	<ul style="list-style-type: none"> 1. Vicat's apparatus 2. Le-chatelier apparatus 3. Ring and ball apparatus 4. Los angles abrasion testing 5. Length gauge 6. Thickness gauge 7. Ductility testing machine 8. Aggregate impact testing machine 	2 Times	Akula Harikrishan	Lab Technician	B.Tech
11.	Environmental	4	<ul style="list-style-type: none"> 1. PH Meter 	2 Times	Telugu Naga	Lab	B.tech

Engineering Lab	2. Spectrophoto meter	Prasad	Technician	ch
	3. Jar test apparatus			
	4. BOD incubator			
	5. COD digester			
	6. Titration setup & chemicals			
	7. Hot air oven			
	8. Turbidity meter			
	9. Conductivity meter			
	10. Muffle furnace			
	11. DO meter			
	12. Autoclave			
	13. Refrigerator			

Additional facilities created for improving the quality of learning experience in laboratories

S.No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1.	Concrete technology Laboratory.	Having the facilities of 1. Rebound hammer.	To conduct research activities in Concrete technology field In addition to the JNTUH curriculum the listed arrangements are available so that students can make use of them in projects.	Students/Faculty can utilize this lab for projects/Research works.	Rebound Hammer test is a Non-destructive testing method of concrete which provide a convenient and rapid indication of the strength of the concrete	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO10, PO12, PSO1
		2. Ultrasonic pulse velocity.			Ultrasonic testing is used to assess the quality of concrete regarding the homogeneity and integrity. It is also used to conclude the cracks in the concrete.	
2	Transportation engineering Laboratory.	Having the facilities of 1. Bitumen Extraction Test.	To conduct research activities in Transportation engineering field In addition to the JNTUH curriculum the listed arrangements are available so that students can make use of them in projects	Students/Faculty can utilize this lab for projects/Research works.	To determine the binder content in the asphalt mix by cold solvent extraction	PO1, PO2, PO3, PO4, PO5, PO6, PO10, PO12, PSO1, PSO2
		2. Speed Gun.			Used to calculate the speed of moving. Which is used to study spot speed study.	
		3. Temperature gun.			IR thermometers are used to measure the temperatures of very hot objects like bitumen, aggregate, room temperature, etc.,	

		4. Attraction Test.			Test performed on aggregates to evaluate strength properties.	
		5. Engineer steel straight edge			To find the uneven surface of the road.	
		6. Digital Camera			To conduct traffic volume study at junctions and mid blocks.	
3.	Geotechnical Engineering Lab	Having the facilities of	To conduct research activities in Geotechnical engineering field In addition to the JNTUH curriculum the listed arrangements are available so that students can make use of them in projects	Students/Faculty can utilize this lab for projects/Research works.	Dynamic cone penetration test is used to measure the strength of in-situ soil and thickness and the location of subsurface soil layers and it is also widely used for field quality assessments of soils.	PO1, PO2, PO3, PO4, PO5, PO6, PO10, PO12, PSO1, PSO2
		1. Dynamic cone Penetration Test.			Rapid Moisture Meter is used for quickly determine the water content of the soil.	
		2. Rapid Moisture Meter.			The California Bearing Ratio test is a penetration test used to evaluate the subgrade strength of roads and pavements. The results of these tests are used with the empirical curves to determine the thickness of pavement and its component layers. This is the most widely used method for the design of flexible pavement	
		3. California Bearing ratio test apparatus			Computation for computing the area of a field.	
		4. Consolidation test apparatus 3 Gang and single gang.			The main purpose of Consolidation test which is used to obtain Soil data These parameters are also used in design of "Ground Improvement measures", provided for construction of embankment on soft soils	
4	Software	STAAD PRO V8i and ETABS	To Enchorage students in terms of modern tool. In addition to the JNTUH curriculum the listed arrangements are available so that students can make use of them in projects	Students/Faculty can utilize this lab for projects/Research works.	This software is an structural analysis and design Software which will help students to perform Projects and scope of immediate employment.	PO1, PO2, PO3, PO4, PO5, PO6, PO10, PO12, PSO1, PSO2

Department: Civil Engineering
Surveying Laboratory

S.No.	Name of the Equipment	Quantity Available
1.	Chain 30 m	15
2.	Tape 30 m	9
3.	Cross staffs	20
4.	Theodolites	8
5.	Hand held GPS	1
6.	Total station	2
7.	Ranging rods	30
8.	Prismatic Compass	15
9.	Plane table	10
10.	Dumpy Level	5
11.	Leveling staffs	11
12.	Box Sextant	2
13.	Planimeter	2

FM & HM Laboratory

S.No.	Name of the Equipment	Quantity Available
1.	Orifice	1
2.	Notches	1
3.	Venturimeter	1
4.	Orifice meter	1
5.	Pipes – friction losses	1
6.	Pipes – Minor losses	1
7.	Pelton wheel turbine	1
8.	Francis turbine	1
9.	Kaplan turbine	1
10.	Centrifugal pumps (Single stage)	1
11.	Reciprocating pump	1
12.	Water hammer	1
13.	Open channel flow	1
14.	Centrifugal pumps (Multi stage)	1
15.	Impact of jet	1
16.	Hydraulic Jump	1
17.	Bernoulli's Apparatus	1

Transportation Engineering Laboratory

S.No.	Name of the Equipment	Quantity available
1.	Aggregate Impact Testing Machine	1
2.	Loss Angles Abrasion Testing Machine	1
3.	Aggregate Crushing Value Apparatus	1
4.	Shape Test Apparatus	1
5.	Penetration Test For Bitumen	1
6.	Softening Point For Bitumen	1
7.	Ductility Test For Bitumen	1
8.	Flash And Fire Point Test	1
9.	Deval Attraction Testing Machine	1
10.	Mashall stability Testing Machine	1
11.	Bitumen Extractor	1

Concrete Technology Laboratory

S.No.	Name of the Equipment	Quantity available
1.	Concrete cube moulds	9
2.	Concrete cylinder moulds	9
3.	Concrete mixer	1
4.	Slump cone	2
5.	Flow table	1
6.	Trowels and planers	5
7.	Vee Bee Consistometer	1
8.	Mixing pan(or) tray	6
9.	Tamping rod	2
10.	Compaction factor apparatus	1
11.	Compression testing machine	1
12.	Longitudinal compressometer	1
13.	Digital ultrasonic tester with accessories	1

14.	Rebound hammer	1
15	90 Micron Sieve	1
16.	Le-Chatelier Apparatus	10
17.	Vicat Apparatus	2
18.	Pyconometer	1
19.	Measuring Jar	4
20.	Sieve Set For Aggregates	1
21.	Weighing Balance	2
22.	Vee Bee Consistometer	1
23.	Compaction factor apparatus	1
24.	Flexural Testing Machine	1
25.	L-Box	1
26.	V-Funnel	1

Geotechnical Engineering Laboratory

S.No.	Name of the Equipment	Quantity available
1.	Sieves	2
2.	Liquid and plastic limit apparatus	1
3.	Proctor compaction apparatus	1
4.	Shrinkage limit apparatus	1
5.	Direct shear apparatus	1
6.	Sand replacement apparatus	2
7.	Triaxial shear apparatus	1
8.	One gang consolidation test device	1
9.	Three gang consolidation test device	1
10.	Unconfined compression test	1
11.	Permeability apparatus	1
12.	Dynamic cone penetration test apparatus	1
13.	Vane shear test apparatus	1
14.	Rapid moisture meter	1

Environmental Engineering Laboratory

S.No.	Name of the Equipment	Quantity available
1.	pH meter	1
2.	Turbidity meter	1
3.	Conductivity meter	1
4.	Refrigerator	1
5.	BOD incubator	1
6.	Muffle furnace	1
7.	Hot air oven	1
8.	Jar test apparatus	1
9.	COD apparatus	1
10.	Electronic balance	1
11.	Auto clave	1
12.	DO meter	1
13.	Spectro photo meter digital	1

Computer Aided Drawing & GIS Laboratory

S.No.	Name of the Equipment	Quantity available
1	Computer node. HP I5 processor/ 8GB RAM	30 Nos.

Strength of Materials Laboratory

S. No.	Name of the Equipment	Quantity Available
1	Universal Testing Machine (400 KN Capacity) with double Sheer attachments	1
2	Torsion Testing Machine (50 Kgm Capacity)	1
3	Impact Testing Machine (164 J Capacity)	1

4	Brinell Hardness Testing Machine	1
5	Rockwell Hardness Testing Machine	1
6	Spring Testing Machine for tensile and Compressive loads (200 N)	1
7	Deflection of beam apparatus	1
8	Compression testing machine (200 KN)	1
9	Electronic resistance gauge.	1

Engineering Geology Laboratory

S. No.	Name of the Equipment	Quantity Available
1	Rock specimens	62
2	Mineral Specimens	67
3	Structural geology Model	45
4	Hardness Collection set	1
5	Geological Map of India	1