

**SAMANTA CHANDRASEKHAR INSTITUTE
OF TECHNOLOGY & MANAGEMENT**
SEMILIGUDA-764 036, KORAPUT

DEPT. OF.....CIVIL ENGINEERING.....

LESSON PLAN AND PROGRESS REGISTER

(To be maintained by all members of the teaching staff)

SESSION.....2023-2024 (EVEN SEM)
4TH SEMESTER

NAME Manisha Mishra
DESIGNATION HOD, Civil Dept.
DEPT. Dept. of Civil Engineering

Manisha
SIGNATURE

This Lesson Plan and Progress Register is to be submitted to the Director for verification and counter signature twice in every semester. The H.O.D. must verify and sign this Register before submission.

COURSES ALLOTTED

FOR DIFFERENT BRANCHES & SEMESTER (Degree/Diploma/+2 Science)

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N.B. : Submission of Annual Lesson Plan-cum-Progress Register and performance Report for Assessment are responsibility of each faculty member.

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester 4th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
		<u>PART-A (HYDRAULICS)</u>	
January	Th2. Hydraulics	<u>HYDROSTATICS</u> n	
→ 17/01/24 & 18/01/24	Irrigation & Engrg.	1.1 <u>Properties of fluid</u> n Density, Specific Gravity, Surface Tension, Capillarity, Viscosity & its uses.	02
		1.2 <u>Pressure and its measurements</u> n	
→ 20/01/24 & 23/01/24		Intensity of Pressure, atmospheric pressure, gauge pressure, absolute pressure & vacuum pressure.	02
→ 24/01/24 & 25/01/24		Relationship between atmospheric pressure, absolute & gauge Pressure, Pressure Head.	02
→ 28/01/24 to 31/01/24	-do-	Different types of Pressure Gauges.	03
		1.3 <u>Pressure Exerted on an immersed surface</u> n	
→ Feb. 01/02/24		Total pressure, resultant pressure.	01
→ 03/02/24 & 05/02/24		Expression for total pressure exerted on horizontal and Vertical surfaces.	02
		<u>KINEMATICS OF FLUID FLOW</u> n	
		<u>Basic eqⁿ of fluid flow & their application</u>	

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Semester 4th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
Feb. → 06/02/24	Th2. Hydraulics & Irrigation	Contd Rate of discharge, Equation of continuity of Liquid Flow.	01
→ 07/02/24	Engg. ↑	Total energy of a liquid in motion - potential, Kinematic and pressure.	01
→ 08/02/24		Bernoulli's Theorem and its application.	01
→ 10/02/24		Practical application of Bernoulli's application. (Venturimeter, Orifice meter, pitot tube)	01
		2.2 <u>Flow over Notches and Weirs</u>	
→ 12/02/24		Notches, Weirs, Types of Notches and Weirs.	01
→ 15/02/24 & 16/02/24	-do-	Discharge through different types of notches and weirs - their application (No derivation)	02
		2.3 <u>Types of Flow through Pipes</u>	
→ 17/02/24		uniform and non-uniform; laminar and turbulent; steady and unsteady.	01
→ 19/02/24 21/02/24	↓	Reynold's number and its application.	02

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Semester 4th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
→ Feb. 22/02/24	Th 2. Hydraulics	2.4 <u>Losses of head of a liquid flowing through pipes.</u>	01
→ 24/02/24	cs & Irrigation	Different types of major and minor losses.	02
26/02/24	Engg.	Simple numeric problems on losses due to friction using Darcy's equation.	
	↑		
→ 28/02/24		Total Energy line and Hydraulic Gradient line (concept only)	01
		2.5 <u>Flow through the open channels</u>	
→ 29/02/24		Types of Channels Section's rectangular, trapezoidal and circular Section.	02
March 01/03/24			
→ 02/03/24		Discharge formulae - Chezy's and Manning's equation	02
04/03/24	-do-	Best Economical Section.	
		<u>PUMPS</u>	
		3.1 <u>Types of Pumps</u>	
→ 06/03/24		3.2 <u>Centrifugal Pumps</u>	02
07/03/24		Basic principles, operations, discharge, horse power & efficiency.	
	↓		

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Semester 4th Semester Branch Civil Engineering.

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
→ March. 09/03/24 to 13/03/24	Tho. Hydraulic & Irrigation Engg.	8.3 <u>Reciprocating Pumps</u> Types, operation, discharge, horse power and efficiency.	03
		<u>PART-B (IRRIGATION ENG'G.)</u>	
		<u>1. HYDROLOGY</u>	
→ 14/03/24 to 15/03/24		1.1 Hydrology Cycle.	02
		1.2 Rainfall: Types, Intensity, Hyetograph.	
→ 16/03/24		1.3 Estimation of Rainfall, rain gauge, its types.	02
→ 18/03/24		1.4 Concept of catchment area, types, run-off, estimation of flood discharge by Dickens and Ryve's formulae.	
	-do-		
		<u>2. WATER REQUIREMENTS OF CROPS</u>	
→ 19/03/24		2.1 Definition of Irrigation, necessity, benefits of irrigation types of irrigation.	02
→ 20/03/24		2.2 Crop Season.	
→ 21/03/24		2.3 Duty, Delta, Base Period & its relationship, overlap-	01

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Semester 4th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
March	Thy. Hydraulics	allowance, Rabi and Kharif crops.	
→ 23/03/24	Irrigation & Engg.	2.4 Gross Command area, Culturable command area, intensity of irrigation and time factor & crop ratio.	01
	↑		
		3. <u>FLOW IRRIGATION</u>	
→ 27/03/24		3.1 Canal Irrigation, types of canals, loss of water in canals	02
28/03/24			
→ 30/03/24		3.2 Perennial Irrigation.	01
→ April		3.3 Different components of Irrigation Canals & their functions.	02
03/04/24			
04/04/24	- do -		
→ 06/04/24		3.4 sketches of different canals cross-section.	01
→ 08/04/24		3.5 Classification of canals, Various types of canal lining, Advantages & Disadvantages.	01
		4. <u>WATER LOGGING & DRAINAGE</u>	
	↓		

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Semester 4th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Contd. Brief note of the topics to be covered	No. of Classes Required
→ April 10/04/24	Th2. Hydraulics & Irrigation Engg.	Causes & Effect of water logging, detection, prevention & Remedies.	02
		5. <u>DIVERSION HEADWORKS & REGULATORY STRUCTURES:-</u>	
→ 12/04/24		5.1 Necessity of diversion head works, weirs and barrages with objectives.	02
→ 13/04/24		5.2 General layout, function of different parts of Barrages.	02
→ 15/04/24		5.3 Silting and Scouring.	02
→ 18/04/24		5.4 functions of regulatory structures.	02
	-do-	6. <u>CROSS - DRAINAGE WORKS</u>	
→ 19/04/24		6.1 Functions, Necessity of aqueduct, syphon, super-passage, Level Crossing.	02
→ 20/04/24		6.2 Concept of each with the help of diagram/sketch.	05
22/04/24		7. <u>DAMS</u>	
→ 24/04/24		7.1 Necessity of storage reservoir, Types of dams.	02

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Semester 4th Semester Branch Civil Engineering

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(Date: 07/07/23) (Page: 01/01)

SESSION...2023-2024 (EVEN SEM)
6TH SEMESTER

NAME Manisha Mishra
DESIGNATION H.O.D
DEPT. Dept. of Civil Engg.

Manisha
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COURSES ALLOTTED

FOR DIFFERENT BRANCHES & SEMESTER (Degree/Diploma/+2 Science)

Semester	Course No.	Course Title
6th Semester	Th3.	Advanced Construction Techniques & Equipments

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Degree/Diploma/+2 Science
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Semester 6th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
January	Th3. Advanced	1. <u>Advanced Construction materials</u>	
→ 24/01/24 to 28/01/24	Construction Techniques & Equipments	1.1 Fibers and Plastics: Types of fibres - steel, carbon, glass fibre, Use of fibres as construction materials.	04
		Properties of fibres (Brief)	
		Types of Plastics - PVC, RPVC, HDPE, FRP, GFRP etc Coloured Plastic Sheets.	
		Use of plastic as construction materials.	
→ 30/01/24 to Feb. 01/02/24		1.2 Artificial Timbers & properties, and uses of artificial timbers, Types of artificial timbers available in market,	03
	- do -	Strength of artificial timber	
→ 02/02/24 to 06/02/24		1.3 Miscellaneous Materials & Properties and uses of acoustic materials, Wall cladding, plaster boards, micro-silica, artificial sand, bonding agents, adhesive etc.	03
		2. <u>Prefabrication</u>	
→ 07/02/24 to 09/02/24		2.1 Introduction, necessity & Scope of Prefabrication of	03

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Semester 6th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
Feb.	Th3. Advanced Construction Techniques & Equipment	buildings, history & current uses of prefabrication, types of prefabricated systems.	
		Classification of Prefabrication, Advantages & Disadvantages of Prefabrication.	
→ 12/02/24 & 13/02/24		2.2 The theory and process of prefabrication, design process of prefabricated systems, types of prefabricated elements	03
		Modular Coordination (concept)	
→ 15/02/24 & 16/02/24		2.3 Indian Standard recommendation for modular planning	02
	-do-	3. <u>Earthquake Resistant Construction</u>	
→ 19/02/24 & 20/02/24		3.1 Building Configuration	02
		3.2 Lateral load resisting structures	
→ 21/02/24 & 22/02/24		3.3 Building Characteristics	
		3.4 Effects of Structural irregularities - vertical irregularities, Plan Configuration Problems.	02

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Semester 6th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
Feb.	Th3. Advanced Construction	buildings, history & current uses of prefabrication, types of prefabricated systems.	
	Techniques & Equipments	Classification of Prefabrication, Advantages & Disadvantages of Prefabrication.	
→ 12/02/24 & 13/02/24		2.2 The theory and process of prefabrication, design process of prefabricated systems, types of prefabricated elements	03
		Modular Coordination (concept)	
→ 15/02/24 & 16/02/24		2.3 Indian Standard recommendation for modular planning	02
	-do-	3. <u>Earthquake Resistant Construction</u>	
→ 19/02/24 & 20/02/24		3.1 Building Configuration	02
		3.2 Lateral load resisting structures	
→ 21/02/24 & 22/02/24		3.3 Building Characteristics	02
		3.4 Effects of Structural irregularities - vertical irregularities, Plan Configuration Problems.	
			01/02/24 1/2

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Degree/Diploma/+2 Science
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Semester 6th Semester Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
Feb. 23/02/24 8	Th3. Advanced	3.5 Safety Consideration during additional construction and alteration of existing buildings.	02
26/02/24	Construction		
27/02/24 8	Techniques	3.6 Additional Strengthening measures in masonry buildings	02
28/02/24	Equipments	- corner reinforcement, lintel, sill, plinth, roof, gable band etc.	
		4. <u>Retrofitting of Structures</u>	
29/02/24		4.1 Seismic retrofitting of reinforced concrete buildings.	02
March. 01/03/24 04/03/24		4.2 Sources of weakness in R.C frame buildings.	03
06/03/24 07/03/24		4.3 Classification of retrofitting techniques and uses.	03
		5. <u>Building Service</u>	
11/03/24 8	-do-	5.1 Cold water distribution in high-rise buildings, layout of installation.	02
12/03/24			
		5.2 Hot water supply - principle, & central plan layout.	
13/03/24 8		5.3 Sanitation in high rise buildings.	
14/03/24		5.4 Electrical Services and its uses.	02
15/03/24		5.5 lighting - Requirements & Measurement of light intensity.	01

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Semester 6th Semester

Branch Civil Engineering

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
→ March 18/03/24	Th3. Advanced	5.6 Ventilation - Methods & problems of Ventilation.	01
→ 19/03/24 & 20/03/24	Construction Techniques &	5.7 Mechanical Services - lifts, Escalators, Elevators - types & uses.	02
→ 21/03/24 & 22/03/24	Equipments	6. Construction and Earth moving equipments	03
→ 27/03/24 & 28/03/24		6.1 Planning and Selection of earth moving equipment	
→ 27/03/24 & 28/03/24		6.2 Study on earth moving equipment like dragline, tractor, bull dozers, Power shovels.	02
→ April. 02/04/24 to 04/04/24		6.3 Study and uses of compacting elements like tamping rollers, smooth wheeled rollers, Pneumatic tired rollers &	03
	-do-	Vibrating compactors.	
→ 05/04/24 & 08/04/24		6.4 Owning and operations cost	02
→ 09/04/24 & 10/04/24		7. Soil reinforcing Techniques	
→ 12/04/24 & 15/04/24		7.1 Necessity of soil reinforcing	02
→ 16/04/24 to 22/04/24		7.2 Use of wire mesh & geosynthetics.	02
→ 16/04/24 to 22/04/24		7.3 Strengthening of embankments, slope stabilization in cutting.	04

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Semester 6th Semester Branch Civil Engineering

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