

Dr. B.R. Ambedkar Govt. Polytechnic, Ambota Una (H.P.)

Department of Civil Engineering

LESSON PLAN

Program Name	Diploma in Civil Engineering
Course/Subject Name	Computer Applications in Civil Engineering
Course/Subject Code	N-2022 / CEPC309
Course/Subject Co-ordinator Name	Aman Deep Singh

Evaluation Scheme

Evaluation Scheme											
Sr. No.	Subject Name	Study Scheme			Evaluation Scheme						Total Marks (Int. & Ext.)
1	Computer Applications in Civil Engineering	P	DCS	Total	Internal Assessment			External Assessment			
		4	0	4 Hrs./week	Th.	Pr.	T	Th.	Hrs.	T	
					40	-	40	60	3	60	
Reference Books		Reference Manual of AutoCAD by Auto Desk									
		AutoCAD 2013byIPH publication.									
		MS Project – Microsoft USA or Primavera or Bentley Company									

Lab. Plan

Unit No.	Name of Topic	Proposed Week	Actual Date	Remarks
1	Starting up of Auto CAD, Auto CAD Window, Toolbar, drop down menu, Command window, saving the drawing.	1 st / 2 nd Week (06/08/2026-21/08/2026)	G1- G2-	
1	Introduction of Graphic screen.	3 rd Week (22/08/2026-28/08/2026)	G1- G2-	
2	Co-ordinates, drawing limits, grid, snap, orthographic features. Drawing commands, line, circle, poly-line, multiline, ellipse, polygon etc	4 th Week (29/08/2026-05/09/2026)	G1- G2-	
2	Editing commands – Copy, move, offset, fillet, chamfer, trim, lengthen, mirror, rotate, array etc. o Working with hatches, fills, dimensioning, text etc	5 th Week (07/09/2026-14/09/2026)	G1- G2-	
3	Drawing T, L, I, E, H with absolute, consecutive and polar coordinate system	6 th Week (15/09/2026-21/09/2026)	G1- G2-	
3	Drawing T, L, I, E, H with absolute, consecutive and polar coordinate system	7 th Week (22/09/2026-28/09/2026)	G1- G2-	
3	Preparation of line plan of a residential building	8 th Week (29/09/2026-06/10/2026)	G1- G2-	
3	Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan (using different type of layers)	9 th Week (07/10/2026-14/10/2026)	G1- G2-	

3	Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan (using different type of layers)	10 th Week (15/10/2026-22/10/2026)	G1- G2-	
3	Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan (using different type of layers)	11 th Week (23/10/2026-30/10/2026)	G1- G2-	
3	Introduction to STAAD Pro, (Expert may be invited to demonstrate)	12 th Week (31/10/2026-06/11/2026)	G1- G2-	
3	Introduction to MS Project/Primavera	13 th Week (07/11/2026-16/11/2026)	G1- G2-	
4	Use of artificial Intelligence in Building Design (Expert may be invited to demonstrate)	14 th Week (17/11/2026-23/11/2026)	G1- G2-	

Signature of HOD

Signature of Teacher

LESSON PLAN13

Program Name	DIPLOMA IN CIVIL ENGG.
Course/Subject Name	Life Skills for Professional and Personal life
Course/Subject Code	ASOE 301
Course/Subject Coordinator Name	Renu Patial
Course Category	Elective

Evaluation scheme

S.N o.	Subject Name	Study scheme (Hrs/Week)	Marks in evaluation scheme			
			Internal Assessment		External Assessment	
			Theory	Practical	Theory	Practical
1.	Communication Skills in English	3(Th)+1(DCS)	40	40	60	60
Reference books:			(1) Soft Skills & Employability Skills by Sabina Pillai Agnal Fernandez			
			(2) Soft Skills by K.Alex Chand			
			(3) Positivity- Away of life by Manika Ghosh			
			(4) The Power of positive thinking by Norman Vincent			
			(5) Atomic Habits by Clear J.			

Course Outcomes: At the end of the course students will be able to:

CO1	To build and reflect self-confidence and high self -esteem in their behaviour and conduct
CO2	Demonstrate life skills in their professional and personal lives
CO3	Communicate assertively and make effective presentation

CO4	Display Positive attitude and resilience in their behaviour conduct
CO5	Demonstrate Positive interpersonal skills and work effectively in a Team, as a leader and a member
CO6	Listen Actively and empathetically
CO7	Manage adverse Circumstances with resilience
CO8	Display emotionally intelligent behavior and create stress free environment
CO9	Demonstrate harmony in their Physical , cognitive, personal, social behaviour and conduct
CO10	Exhibit and apply social and emotional abilities to climb the ladder of success in personal and professional lives

Teaching Plan:

Sl. No.	Name of topic	Proposed Date	Actual date	Remarks
1	Unit-1 Communication Skills: Meaning, Significance and characteristics of assertive Communication	01/08/26		
2	Techniques of Assertive Communication	03/08/26		
3	Tips to develop the assertive communication.	06/08/26		
4	Unit-2 Life Skills, Soft Skills & Interpersonal skills Definition of Life Skills and soft Skills	07/08/26		
5	Significance of Life Skills and Soft Skills in Personal life	10/08/26		
6	Types of life skills and soft skills, ways to develop soft skills and life skills	13/08/26		
7	Concept of interpersonal skills and tips to improve interpersonal skills	14/08/26		

	wasters			
49	Unit-5 Human Values and Ethics: Meaning of Human Values, Morals and Ethics	10/11/26		
50	What is value and types of value	22/11/26		
51	Human Dignity and Humanity	12/11/26		
52	Meaning of Human Dignity and fundamental rights of a person	13/11/26		
53	Meaning and significance of Humanity	17/11/26 19/11/26		
54	Developing and Cultivating humanity	20/11/26		
55	Developing and Cultivating humanity	21/11/26		
56	Revision of miscellaneous	23/11/26 to 28/11/2026		

Assignments:

Assignment serial	Contents of syllabus covered	Actual date	Remarks
A-1	Unit-1 & 2(topics)		
A-2	Unit-3 & 4(topics)		

House Test/Class Test:

House/Class Test	Contents of syllabus covered	Proposed Date	Actual date
CT-I	30% of the syllabus	10.09.2026	
CT-II	Next 30% of the syllabus	05.10.2026	
House Test	80% of the syllabus	04.11.2026	

Sign. Of Teacher

(RENU PATIAL)

HOD

Lesson Plan

Course Code: CEPC305

Course Title: Water Resource Engineering

Credits: 2 (L:2, P:0)

SEM 5TH

Week	Date	Unit	Topics to be Covered	Teaching Method	Learning Outcome
1	01 Aug 2026	Unit I	Course Introduction, Hydrology: Definition, Scope and Hydrological Cycle	Lecture, PPT	Understand the importance of hydrology and the hydrological cycle.
2	08 Aug 2026	Unit I	Rain Gauges: Symons Rain Gauge, Automatic Rain Gauge	Lecture, Demonstration	Explain the working and applications of different rain gauges.
3	15 Aug 2026	Unit I	Methods of Average Rainfall: Arithmetic Mean, Thiessen Polygon and Isohyetal Methods	Lecture, Numerical Problems	Calculate average rainfall using standard methods.
4	22 Aug 2026	Unit I	Runoff, Factors Affecting Runoff and Runoff Computation	Lecture, Problem Solving	Estimate runoff for hydrological analysis.
5	29 Aug 2026	Unit II	Irrigation: Definition, Necessity, Classification and Crop Water Requirement	Lecture	Understand irrigation practices and crop water needs.
6	05 Sept 2026	Unit II	Cropping Seasons, Crop Period, Base Period, Duty, Delta, CCA, GCA, Intensity of Irrigation	Lecture, Numerical	Compute crop water requirements using irrigation parameters.
7	12 Sept 2026	Unit II	Methods of Irrigation, Assessment of Irrigation Water, Reservoir Silting and Control Measures	Lecture, Case Study	CT-1 .FIST TERM Explain irrigation methods and reservoir sedimentation control.
8	19 Sept 2026	Unit III	Dams: Classification, Earthen Dams, Components and Cross Section	Lecture, PPT	Identify different types of dams and their components.

Week	Date	Unit	Topics to be Covered	Teaching Method	Learning Outcome
9	26 Sept 2026	Unit III	Seepage Control, Construction Methods, Failures of Earthen Dams	Lecture, Discussion	Understand dam safety and preventive measures.
10	03 Oct 2026	Unit III	Gravity Dams: Forces Acting, Profiles and Spillways	Lecture	Explain gravity dam concepts and spillway functions.
11	10 Oct 2026	Unit IV	Lift Irrigation Scheme: Components, Functions and Layout	Lecture	CLASS TEST 2 Understand lift irrigation systems and layouts.
12	17 Oct 2026	Unit IV	Drip Irrigation, Sprinkler Irrigation, Well Irrigation	Lecture, Video Demonstration	Compare modern irrigation systems and well irrigation methods.
13	24 Oct 2026	Unit V	Weirs, Barrages, Components and Comparison	Lecture	Differentiate between weirs and barrages.
14	31 Oct 2026	Unit V	Canals: Classification, Canal Sections, Canal Lining	Lecture, Diagrams	HOUSE TEST Explain canal systems and lining materials.
15	07 Nov 2026	Unit V	Cross Drainage Works, Canal Regulators, Falls and Outlets	Lecture, Illustrations	Identify canal structures and their functions.
16	14 Nov 2026	Unit VI	Water Logging: Causes, Effects, Preventive and Remedial Measures	Lecture	Understand water logging and reclamation techniques.
17	21 Nov 2026	Revision	Complete Revision, Numerical Practice and Previous Question Discussion	Interactive Session	Strengthen conceptual understanding and problem-solving skills.
18	28 Nov 2026	Assessment	Internal Assessment, Quiz, Doubt Solving and Course Review	Quiz, Discussion	Evaluate learning outcomes and prepare for semester examination.



Signature of teacher

LESSON PLAN

Program Name	DIPLOMA IN CIVIL ENGINEERING
Course/Subject Name	ESTIMATING & COSTING
Course/Subject Code	CEPC303
Course/Subject Coordinator Name	Manoj Kumar

Evaluation scheme

S.No.	Subject Name	Study scheme (Hrs/Week)	Marks in evaluation scheme			
			Internal Assessment		External Assessment	
			Theory	Practical	Theory	Practical
1.	Estimating & Costing	2(Th.)+ 2(DCS)	40	-	60	-
Reference books:			1. Dutta, B.N., Estimating and Costing in Civil engineering, UBS Publishers Distributors Pvt. Ltd. New Delhi.			
			2. Rangwala, S.C., Estimating and Costing, Charotar Publishing House PVT. LTD., Anand.			
			3. Birdie, G.S., Estimating and Costing, Dhanpat Rai Publishing Company (P) Ltd. New Delhi.			

Course Outcomes: After the completion of the course the students will:

CO1	Select modes of measurements for different items of works.
CO2	Prepare approximate estimate of a civil engineering works.
CO3	Prepare detailed estimate of a civil engineering works.
CO4	Use relevant software for estimating the quantities and cost of items of works.
CO5	Justify rate for given items of work using rate analysis techniques.

Teaching Plan:

Lecture No.	Name of topic	Proposed Date	Actual Date	Remarks
1	Introduction to subject	07.08.2026		
2	Unit I: Introduction • Meaning of the terms estimating & costing. Purpose of estimating and costing	10.08.2026		
3	Types of Estimates : Approximate and Detailed	11.08.2026		
4	Approximate estimate Types	12.08.2026		
5	Plinth area rate method	14.08.2026		
6	Cubic Content method	17.08.2026		
7	Approximate Quantity method	18.08.2026		
8	Types of detailed estimate: Detailed estimate for new work	19.08.2026		

	Revised estimate	24.08.2026		
10	Supplementary estimate	25.08.2026		
11	Repair & Maintenance estimate	26.08.2026		
12	Unit II: Measurement • Units of measurement for various items of work as per BIS: 1200	28.08.2026		
13	Units of measurement for various items of work as per BIS: 1200	31.08.2026		
14	Rules for measurements	01.09.2026		
15	Different methods of taking out quantities—centre line method	02.09.2026		
16	centre line method	07.09.2026		
17	long wall and short wall method.	08.09.2026		
18	long wall and short wall method.	09.09.2026		
19	Unit III: Preparation of Detailed Estimates and Abstract of Cost for • One room residential building with flat roof	11.09.2026		
20	CLASS TEST - I	14.09.2026		
21	One room residential building with flat roof	15.09.2026		
22	Preparation of Detailed Estimates and Abstract of Cost for • two room residential building with flat roof	16.09.2026		
23	Preparation of Detailed Estimates and Abstract of Cost for • two-room residential building with flat roof	18.09.2026		
24	Septic tank for 10 users	21.09.2026		
25	Septic tank for 10 users	22.09.2026		
26	Unit IV: Road Estimation: Preparation of Detailed Estimates and Abstract of Cost for • Plain road with-mid section area method	23.09.2026		
27	mid section area method	25.09.2026		
28	mean sectional area method	28.09.2026		
29	mean sectional area method	29.09.2026		
30	Prismoidal formula.	30.09.2026		
31	Earth work in hill road.	05.10.2026		
32	Earth work in hill road.	06.10.2026		
33	Unit V: Analysis of Rates Calculation of Quantities of Materials • Cement mortars of different proportion	07.10.2026		
34	Cement concrete of different proportion	09.10.2026		
35	CLASS TEST - II	12.10.2026		
36	RCC work in different proportions	13.10.2026		
37	Brick/stone masonry in cement mortar.	14.10.2026		
38	Plastering and pointing	16.10.2026		
39	Whitewashing, painting	19.10.2026		
40	Preparation of Detailed Analysis of Rates for finished items with given labour and rate of material • Earthwork	21.10.2026		
41	Cement concrete of different proportion	23.10.2026		
42	RCC work in different proportions	27.10.2026		
43	Brick/stone masonry in cement mortar	28.10.2026		
44	Plastering and pointing			

	HOUSE TEST	30.10.2026		
46	Unit VI: Contracts And Tendering • Meaning of contract • Qualities of a good contractor and their qualifications.	1st week of November 09.11.2026		
47	Essentials of a contract • Types of contracts, their advantages, dis -advantages and suitability, system of payment.	10.11.2026		
48	Single and two cover-bids	11.11.2026		
49	Tender, tender forms and documents, tender notice, submission of tender and deposit of earnest money, security deposit, retention money, maintenance period	13.11.2026		
50	Administrative approval, Technical sanction, Budget provision, Expenditure sanction.	16.11.2026		
51	Methods for carrying out works- contract method.	17.11.2026		
52	Preparation of Tender Document based on Common Schedule Rates (CSR)	18.11.2026		
53	Preparation of Tender Document based on Common Schedule Rates (CSR)	20.11.2026		
54	Introduction to CSR and calculation of cost based on premium on CSR.	23.11.2026		
55	Revision	25.11.2026		
56	Revision	27.11.2026		

Assignments:

Assignment serial	Contents of syllabus covered	Proposed Date	Actual date	Remarks
A-1	UNIT – I, II & III (topics)	21.09.2026		
A-2	UNIT – IV & V (topics)	13.11.2026		

House Test/Class Test:

House/Class Test	Contents of syllabus covered	Proposed Date	Actual date	Remarks
CT-I	30% of the syllabus	11.09.2026		
CT-II	Next 30% of the syllabus	9.10.2026		
House Test	80% of the syllabus	1 st week of November		


Signature of Teacher


Signature of HOD

LESSON PLAN

Program Name	DIPLOMA IN CIVIL ENGINEERING
Course/Subject Name	Earthquake Resistant Building Design
Course/Subject Code	CEPE301
Course/Subject Coordinator Name	Manoj Kumar

Evaluation scheme

S.No.	Subject Name	Study scheme (Hrs/Week)	Marks in evaluation scheme			
			Internal Assessment		External Assessment	
			Theory	Practical	Theory	Practical
1.	Earthquake Resistant Building Design	2(Th.)+1(DCS)	40	-	60	-
Reference books:			1. Earthquake resistant building construction by Neelam Sharma, Katson 2. Earthquake resistant building construction by Jagroop Singh, Rajiv Bhatia, Eagle Publication 3. Elements of Earthquake Engineering by Jai Krishana and AR Chander sekaran; Sarita Parkashan, Meerut			

Course Outcomes: After the completion of the course the students will:

CO1	Understand causes of Earthquakes, magnitude and Intensity etc.
CO2	Know about seismic behavior and Precautions taken while Designing structures.
CO3	Know uses of various IS Codes and Their uses in Seismic Design.
CO4	Do Ductile Detailing of buildings.
CO5	Use various Retrofitting solutions for different types of buildings.

Teaching Plan:

Lecture No.	Name of topic	Proposed Date	Actual Date	Remarks
1	Introduction to subject	06.08.2026		
2	Unit I; Elements of Engineering Seismology • General features of tectonic of seismic regions	10.08.2026		
3	Causes of earthquakes	12.08.2026		
4	Seismic waves	17.08.2026		
5	Earth quake size (magnitude and intensity) • Epicenter	19.08.2026		
6	Seismograph	20.08.2026		
7	Classification of earthquakes	24.08.2026		

8	Seismic zoning map of India	20.08.2026		
9	Unit II: Seismic Behavior of Traditionally-Built Constructions of India • Earth quake effects	27.08.2026		
10	Traditionally built construction in India	31.08.2026		
11	Performance of building during earthquakes and Mode of failure (Out of plane failure, in plane failure	02.09.2026		
12	Diaphragm failure, Connection failure	03.09.2026		
13	Non-structural components failure	07.09.2026		
14	Unit 'III: Introduction to IS1893 (Part-I)-2016 • Introduction	09.09.2026		
15	CLASS TEST – I	10.09.2026		
16	Assumptions	14.09.2026		
17	Design lateral forces and their calculation methods	16.09.2026		
18	Unit IV: Ductile Detailing of Reinforced Concrete Buildings (IS 13920-2016) & IS 4326-2013) • Common modes of failure in reinforced concrete buildings	17.09.2026		
19	General Principal for earthquake resistant buildings & Special construction features	21.09.2026		
20	Types of irregularities • Vertical irregularities	23.09.2026		
21	Plan irregularities	24.09.2026		
22	Ductile detailing as per code	28.09.2026		
23	Seismic strengthening arrangements • Horizontal reinforcement	30.09.2026		
24	Vertical reinforcement	01.10.2026		
25	Unit V: Introduction to IS13828-1993 & IS13827-1993 • Advantages and disadvantages of masonry construction	05.10.2026		
26	Behaviour of masonry construction during earthquakes	07.10.2026		
27	CLASS TEST – II	08.10.2026		
28	Earthquake resistance features for burnt clay brick in weak mortar	12.10.2026		
29	Codal Provisions for earthquake resistant earthen construction	14.10.2026		
30	Seismic strengthening features of earthen buildings	15.10.2026		
31	Unit VI: Retrofitting Measure for Traditionally Built Construction • Introduction, need of retrofitting	19.10.2026		
32	Retrofitting materials	21.10.2026		
33	Retrofitting measure of traditionally built construction	22.10.2026		
34	Retrofitting of masonry buildings	28.10.2026		
35	Retrofitting of concrete structure	09.11.2026		
36	Retrofitting of low-cost buildings	11.11.2026		
37	Unit VII: Disaster Management • Disaster rescue	12.11.2026		
38	Psychology of rescue, rescue workers, rescue plan, rescue by steps, rescue equipment	16.11.2026		
39	Safeties in rescue operations	18.11.2026		
40	Debris clearance	19.11.2026		
41	Causality management	23.11.2026		
42		25.11.2026		

Assignments:

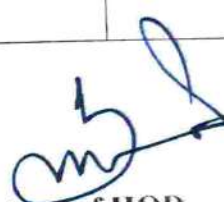
Assignment serial	Contents of syllabus covered	Proposed Date	Actual date	Remarks
A-1	UNIT – I, II & III (topics)	21.09.2026		
A-2	UNIT – IV, V & VI (topics)	12.11.2026		

House Test/Class Test:

House/Class Test	Contents of syllabus covered	Proposed Date	Actual date	Remarks
CT-I	30% of the syllabus	10.09.2026		
CT-II	Next 30% of the syllabus	8.10.2026		
House Test	80% of the syllabus	1 st week of November		



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LESSON PLAN

Program Name	DIPLOMA IN CIVIL ENGINEERING
Course/Subject Name	COMPUTER APPLICATION IN CIVIL ENGG. LAB
Course/Subject Code	CEPC309
Course/Subject Coordinator Name	Manoj Kumar

Evaluation scheme

S.No.	Subject Name	Study scheme (Hrs/Week)	Marks in evaluation scheme			
			Internal Assessment		External Assessment	
			Theory	Practical	Theory	Practical
1.	Computer Application in Civil Engg.	4(Pr.) Each group	40	-	60	-
Reference books:			1. Reference Manual of AutoCAD by Auto Desk 2. AutoCAD 2013 by IPH publication. 3. MS Project – Microsoft USA or Primavera or Bentley Company			

Course Outcomes: After the completion of the course the students will:

CO1	Apply the basic commands In Auto CAD.
CO2	Apply the Drawing Editing And Dimensioning Commands.
CO3	Prepare working Drawings with the help of Auto CAD
CO4	Use of Artificial Intelligence in the field of Building Design.

Teaching Plan:

Lecture No.	Name of Practical	Proposed Date (G-II)	Actual Date (G-II)	Remarks
1		06.08.26		
2	Unit I: Introduction o Starting up of Auto CAD, Auto CAD Window, Toolbar,	12.08.26		
3	drop down menu	13.08.26		
4	Command window	19.08.26		
5	Saving the drawing.	20.08.26		
6	Introduction of Graphic screen,	26.08.26		
7	Unit II: Drawing, Editing, Dimensioning Commands o Co-ordinates, drawing limits,	27.08.26		
8	grid, snap, orthographic features	02.09.26		
9	Drawing commands, line, circle, poly-line multiline,	03.09.26		

	ellipse, polygon etc.			
10	Editing commands – Copy, move, offset, fillet, chamfer	09.09.26		
11	trim, lengthen, mirror, rotate, array etc.	10.09.26		
12	Working with hatches, fills	16.09.26		
13	dimensioning, text etc	17.09.26		
14	Unit III: Submission/ Working Drawing o Drawing T, L, I, E, H with absolute system. File Checking & Viva	23.09.26		
15	Drawing T, L, I, E, H with absolute system	24.09.26		
16	Drawing T, L, I, E, H with consecutive system. File Checking & Viva	30.09.26		
17	Drawing T, L, I, E, H with consecutive system	01.10.26		
18	Drawing T, L, I, E, H with polar coordinate system. File Checking & Viva	07.10.26		
19	Drawing T, L, I, E, H with polar coordinate system	08.10.26		
20	Preparation of line plan of a residential building. File Checking & Viva	14.10.26		
21	Preparation of line plan of a residential building	15.10.26		
22	File Checking & Viva	21.10.26		
23	Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan	22.10.26		
24	Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan	28.10.26		
25	Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan	29.10.26		
26	File Checking & Viva	11.11.26		
27	Introduction to STAAD Pro	12.11.26		
28	Introduction to MS Project/Primavera	18.11.26		
29	Unit IV: Use of artificial Intelligence in Building Design	19.11.26		
30	File Checking & Viva	25.11.26		
31	File Checking & Viva	26.11.26		



Signature of Teacher



Signature of HOD

Dr. B.R. Ambedkar Govt. Polytechnic, Ambota Una (H.P.)

Department of Civil Engineering

LESSON PLAN

Program Name	Diploma in Civil Engineering
Course/Subject Name	Design of RCC Structures
Course/Subject Code	N-2022 / CEPC301
Course/Subject Co-ordinator Name	Aman Deep Singh

Evaluation Scheme

Evaluation Scheme											
Sr. No.	Subject Name	Study Scheme			Evaluation Scheme						Total Marks (Int. & Ext.)
1	Design of RCC Structures	L	DCS	Total	Internal Assessment			External Assessment			
		2	2	4 Hrs./week	Th.	Pr.	T	Th.	Hrs.	T	
					40	-	40	60	3	60	
Reference Books		Krishna Raju, and N. Pranesh, R.N., Reinforced Concrete Design Principles and Practice, New Delhi									
		Varghese, P. C., Limit State Design of Reinforced Concrete, Prentice Hall India Learning									
		Singh, Birender, Reinforced Cement Concrete Design, Kapson Publication									

Teaching Plan

Unit No.	Name of Topic	Proposed Week	Actual Date	Remarks
1	Design Philosophies: Working Stress Theory, Ultimate Design Theory, Limit State Theory Concept of Reinforced Cement Concrete (RCC) Reinforcement Materials: Suitability of Steel as reinforcing material Properties of mild steel and HYSD steel	1 st Week (06/08/2026-13/08/2026)		
1	Loading on structure as per I.S 875. Study of BIS:456-2000-clause5, clause6, clause9, Clause18, clause19, clause22, clause 23.0, 23.2, 23.3, Clause25, clause26, clause35, clause36, clause37, clause 38, clause 39, clause 40, clause 41, clause42, clause 43, Annexure-B, C, D, E, G	2 nd Week (14/08/2026-21/08/2026)		
2	Nominal Shear stress in R.C. Section, Design shear strength of concrete, maximum shear stress, Design of shear reinforcement, Minimum shear reinforcement, Forms of shear reinforcement with numerical problems. Bond and types of bonds, Bond Stress, check for bond stress, Development length in tension and compression,	3 rd Week (22/08/2026-28/08/2026)		
2	anchorage value for hooks 90° bend and 45° bend. Standard Lapping of bars, check for development length. Determination of development length required for tension reinforcement of cantilevers beam and slab, check for development length.	4 th Week (29/08/2026-05/09/2026)		
3	Limit State of collapse (Flexure), Assumption stress. Strain relationship for concrete and steel, neutral axis, Stress block diagram and Strain diagram for singly reinforced section.	5 th Week (07/09/2026-14/09/2026)		
3	Concept of under- reinforced, over-reinforced and balanced section, neutral axis, limiting value of moment of resistance	6 th Week (15/09/2026-		

Class Test 1	Unit 1- Introduction to R.C.C Designing using Limit State Method, Unit 2- Shear, Bond, and Development Length (LSM),	2 nd Week of September 2026		
Class Test 2	Unit 3 - Analysis and Design of Singly Reinforced Sections, Unit 4- Analysis and Design of Doubly Reinforced Sections (LSM),	2 nd Week of October 2026		
House Test	Unit 1- Introduction to R.C.C Designing using Limit State Method, Unit 2- Shear, Bond, and Development Length (LSM), Unit 3 - Analysis and Design of Singly Reinforced Sections, Unit 4- Analysis and Design of Doubly Reinforced Sections (LSM), Unit 5- Design of One-Way Slab (LSM), Unit 6- Two Way Slab (LSM),	1 st Week of November 2026		



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