

5th Semester
Study and Evaluation Scheme – 5th Semester

S. No.	Sub. Cat.	Subject Code	Course Title	Hours per Week				Marks Distribution in Evaluation Scheme							Total Marks	Credits	
								Internal Assessment			External Assessment						
				L	P	DCS	Total	Th	Pr	Total	Th	Hrs	Pr	Hrs	Total		
1	PC	CEPC301	Design of RCC Structure	2	0	2	4	40		40	60	3			60	100	2
2	PC	CEPC303	Estimating and Costing	2	0	2	4	40		40	60	3			60	100	2
3	PC	CEPC305	Water Resource Engineering	2	0	2	4	40		40	60	3			60	100	2
4	PE	CEPE301	Elective – III (Choose any one)	2	0	1	3	40		40	60	3			60	100	2
			CEPE301 (I) - Earthquake resistant Building Design														
			CEPE301 (II) - Pavement Design maintenance														
5	PE	CEPE303	Elective -IV (Choose any one)	2	0	1	3	40		40	60	3			60	100	2
			CEPE303(I) Precast & Pre-stressed Concrete														
			CEPE303 (II) Green Building and Energy Conservation														
6	OE (choose any one)	--OE--	OPEN ELECTIVE- I/ MOOCS *	3	0	1	4	40		40	60	3			60	100	3
7	PC	CEPC307	Design of RCC Structure Lab***	0	2	2	4		40	40	60	3			60	100	1
8	PC	CEPC309	Computer Application in Civil Engg.	0	4	0	4		40	40			60	3	60	100	2
9	SI	SI-II	Summer Internship-II **	0	0	0	0	--	40	40	-	--	60	--	60	100	3
10	PR	PR301	Major Project	0	2	2	4	--	40	40	-	--	60	3	60	100	1
11			SCA		2	0	2		25	25						25	
Total				13	10	13	36	240	185	425	420		180		600	1025	20

L – Lectures, P – Practical, DCS – Doubt Clearing Sessions

- * Guidelines for MOOCs/Open Electives attached as Annexure-A, the list of Open Electives Course along with the Curriculum is attached as Annexure-B.
- **At the end of 4th semester students will undergo six weeks of internship and its credits will be awarded in 5th semester.
- ***The External examination of the subject Design of RCC structure Lab (Drawing) will consist of 60 marks of 3-hour duration.

Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138

Civil Engineering Department

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : **Civil Engineering**

Subject: **Design of RCC Structures**

Semester: **5th Sem**


Name of the teacher : **Er Lokesh Sharma**

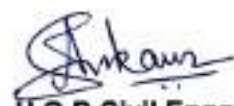
Session : **Aug-Nov 2025**

Designation: **Sr. Lecturer Civil Engg.**

Sr No	Week / Month	Name of the chapter	Contents taught	Remarks
1	1st (04Aug- 08Aug)	UNIT-I Introduction to R.C.C Designing using Limit State Method	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	
2	2nd (11Aug- 14Aug)		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	
3	3rd (18Aug- 23Aug)	UNIT-II Shear, Bond, and Development Length (LSM)	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	
4	4th (25 Aug - 30Aug)		Bond and types of bonds, Bond Stress, check for bond stress, Development length in tension and compression, anchorage value for hooks 90° bend and 45° bend. Standard Lapping of bars, check for development length.	
5	5th (01Sep- 06Sep)		Determination of development length required for tension reinforcement of cantilevers beam and slab, check for development length.	
6	6th (08 Sep -12 Sep)	UNIT-III Analysis and Design of Singly Reinforced Sections	1st Class Test 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. Concept of under- reinforced, over-reinforced and balanced section, neutral axis, limiting value of moment of resistance and limiting percentage of steel required for balanced singly R.C. Section	
7	7th (15 Sep- 20 Sep)		Simple numerical problems on determining design constants, moment of resistance and area of steel. Design of Singly reinforced simply supported beam and cantilever beam	

8	8th (22Sep- 27 Sep)	UNIT-IV Analysis and Design of Doubly Reinforced Sections (LSM)	General features, necessity of providing doubly reinforced reinforcement, limitations. Analysis of doubly reinforced section, strain diagram, stress diagram, depth of neutral axis, moment of resistance of the section
9	9th (29 Sep -04 Oct)		Numerical problems on finding moment of resistance.
10	10th (06 Oct- 10 Oct)	UNIT-V Design of One-Way Slab (LSM)	Analysis & Design of simply supported one-way slab.
11	11th (13 Oct-18 Oct)	UNIT-VI Two Way Slab (LSM)	2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025)
12	12th (21 Oct-25 Oct)		Design of two-way simply supported slab with corners free & no provision for torsion reinforcement.
13	13th (27 Oct-01 Nov)		Design of two-way simply supported slab with corners free & no provision for torsion reinforcement.
14	14th (03 Nov -07 Nov)	UNIT-VII Design of Axially Loaded Column (LSM)	Assumptions in limit state of collapse—compression Definition and classification of columns, effective length of column. Specification for minimum reinforcement; cover, maximum reinforcement, number of bars in rectangular, square, and circular sections, diameter and spacing of lateral ties.
15	15th (10 Nov-15 Nov)		House Test (Centralized)
16	16th (17Nov-26Nov)		Analysis and Design of axially loaded: Uniaxial & Biaxial Bending along with axial loading: short, square, rectangular, and circular columns with lateral ties only; check for short column and check for minimum eccentricity may be applied.


 Teacher signature
 Er Lokesh Sharma


 H.O.D Civil Engg
 Er Adit Rana

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Civil Engineering Department

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : Civil Engineering

Subject: Estimating and Costing (CEPC303)

Semester: 5th Sem

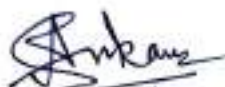
Name of the teacher : Er Adit Rana

Session: Aug- Nov 2025

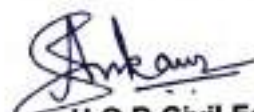
Designation : HOD Civil Engg

Sr No	Week / Month	Name of the chapter	Topics to be covered	Remarks
1	1st (04Aug- 08Aug)	Unit I: Introduction	Meaning of the terms estimating & costing. Purpose of estimating and costing	
2	2nd (11Aug- 14Aug)		Types of Estimates, Approximate and Detailed, Approximate estimate Types, Plinth area rate method, Cubic Content method, Approximate Quantity method	
3	3rd (18Aug- 23Aug)		Types of detailed estimate, Detailed estimate for new work, Revised estimate, Supplementary estimate, Repair & Maintenance estimate	
4	4th (25 Aug - 30Aug)	Unit II: Measurement	Units of measurement for various items of work as per BIS: 1200, Rules for measurements. Different methods of taking out quantities—centre line method and long wall and short wall method.	
5	5th (01Sep- 06Sep)	Unit III: Preparation of Detailed Estimates and Abstract of Cost for	One & two room residential building with flat roof	
6	6th (08Sep -12Sep)		1st Class Test & Septic tank for 10 users	
7	7th (15Sep- 20Sep)	Unit IV: Road Estimation	Preparation of Detailed Estimates and Abstract of Cost for, Plain road with-mid section area method, mean sectional area method	
8	8th (22Sep- 27Sep)		Plain road withprismoidal formula.Earth work in hill road.	
9	9th (29Sep -04Oct)	Unit V: Analysis of Rates	Calculation of Quantities of Materials, Cement mortars of different proportion, Cement concrete of different proportion, RCC work in different proportions	
10	10th (06Oct- 10Oct)		Brick/stone masonry in cement mortar, Plastering and pointing, Whitewashing, painting	
11	11th (13Oct-18Oct)		2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025)	
12	12th (21Oct-25Oct)		Preparation of Detailed Analysis of Rates for finished items with given labour and rate of material, Earthwork, Cement concrete of different proportion	
13	13th (27Oct-01Nov)		RCC work in different proportions, Brick/stone masonry in cement mortar, Plastering and pointing, Whitewashing, painting	

14	14th (03Nov -07Nov)	Unit VI: Contracts And Tendering	Meaning of contract, Qualities of a good contractor and their qualifications. Essentials of a contract, Types of contracts, their advantages, dis-advantages and suitability, system of payment., Single and two cover-bids, Tender, tender forms and documents, tender notice, submission of tender and deposit of earnest money, security deposit, retention money, maintenance period	
15	15th (10Nov-15Nov)		House Test (Centralized)	
16	16th (17Nov-26Nov)		Administrative approval, Technical sanction, Budget provision, Expenditure sanction., Methods for carrying out works- contract method., Preparation of Tender Document based on Common Schedule Rates (CSR), Introduction to CSR and calculation of cost based on premium on CSR.	



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Civil Engineering Department

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : **Civil Engineering**

Subject: **Water Resource Engineering**

Semester: **5th Sem**

Name of the teacher : **Er Lokesh Sharma**

Session : **Aug-Nov 2025**

Designation: **Sr. Lecturer Civil Engg.**

Sr No	Week / Month	Name of the chapter	Contents taught	Remarks
1	1st (04Aug- 08Aug)	Unit-I Introduction to Hydrology	Hydrology: Definition and Hydrological cycle Rain Gauge: Symons rain gauge, automatic rain gauge	
2	2nd (11Aug- 14Aug)		Methods of calculating average rainfall: Arithmetic mean, Iso-hyetal, and Thiessen polygon method. Runoff, Factors affecting Runoff, Computation of run-off.	
3	3rd (18Aug- 23Aug)	Unit-II Crop water requirement and Reservoir Planning	Irrigation and its classification. Crop Water requirement: Cropping seasons, Crop period, base period, Duty, Delta, CCA, GCA, intensity of irrigation, factors affecting duty, Problems on water requirement	
4	4th (25 Aug - 30Aug)		Methods of application of irrigation water and its assessment. Silting of reservoir, Rate of silting, factors affecting silting and control measures.	
5	5th (01Sep- 06Sep)	Unit-III Dams and Spillways	Dams and its classification: Earthen dams and Gravity dams (masonry and concrete). Earthen Dams- Components with function, typical cross-section, seepage through embankment and foundation and its control.	
6	6th (08 Sep -12 Sep)		1st Class Test Methods of construction of earthen dam, types of failure of earthen dam and preventive measures.	
7	7th (15 Sep- 20 Sep)		Gravity Dams- Forces acting on dam, Theoretical and practical profile, typical cross-section. (only theoretical concept) Spillways- Definition, function & location	
8	8th (22Sep- 27 Sep)	Unit-IV Minor and Micro Irrigation	Lift irrigation Scheme- Components and their functions, Layout. Drip and Sprinkler Irrigation- Need, components, and Layout.	
9	9th (29 Sep -04 Oct)		Well irrigation: types and yield of wells, advantages and disadvantages of well irrigation.	
10	10th (06 Oct- 10 Oct)		Weirs- components, parts, types of weirs Barrages- components and their functions. Difference between weir and Barrage	
11	11th (13 Oct-18 Oct)		2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025)	

12	12th (21 Oct-25 Oct)		Canals- Classification according to alignment and position in the canal network, Cross section of canal in embankment and cutting, partial embankment and cutting. Canal lining- Purpose, material used and its properties, advantages.	
13	13th (27 Oct-01 Nov)	Unit-V Diversion Head Works & Canals	Cross Drainage Works- Aqueduct, siphon aqueduct, super passage, level crossing. Canal Regulators- Head regulator, Cross regulator, Escape, Falls and Outlets	
14	14th (03 Nov -07 Nov)	Unit-VI Water logging	Definition, Causes, Preventive & remedial measures, Reclamation of waterlogged areas	
15	15th (10 Nov-15 Nov)		House Test (Centralized)	
16	16th (17 Nov-26 Nov)		Revision	

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Civil Engineering Department

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : Civil Engineering

Subject: Earthquake Resistant Building Design

Semester: 5th Sem


Name of the teacher : Er Neha Thakur

Session : Aug-Nov 2025

Designation: Lecturer Civil Engg.

Sr No	Week / Month	Name of the chapter	Contents taught	Remarks
1	1st (04Aug- 08Aug)	Unit-I Elements of Engineering Seismology	General features of tectonic of seismic regions Causes of earthquakes Seismic waves	
2	2nd (11Aug- 14Aug)		Earth quake size (magnitude and intensity) Epicenter Seismograph Classification of earthquakes Seismic zoning map of India	
3	3rd (18Aug- 23Aug)	Unit-II Seismic Behaviour of Traditionally-Built Constructions of India	Earth quake effects Traditionally built construction in India Performance of building during earthquakes.	
4	4th (25 Aug - 30Aug)		Mode of failure (Out of plane failure, in plane failure, Diaphragm failure, Connection failure, Non-structural components failure)	
5	5th (01Sep- 06Sep)	Unit-III Introduction to IS1893 (Part-I)-2016	Introduction Assumptions Design lateral forces and their calculation methods	
6	6th (08 Sep -12 Sep)	Unit-IV Ductile Detailing of Reinforced Concrete Buildings (IS 13920-2016) & IS 4326-2013)	1st Class Test & Common modes of failure in reinforced concrete buildings General Principal for earthquake resistant buildings & Special construction features	
7	7th (15 Sep- 20 Sep)		Types of irregularities Vertical irregularities Plan irregularities Ductile detailing as per code Seismic strengthening arrangements Horizontal reinforcement Vertical reinforcement	
8	8th (22Sep- 27 Sep)	Unit-V Introduction to IS 13828-1993&IS13827-1993	Advantages and disadvantages of masonry construction Behaviour of masonry construction during earthquakes	
9	9th (29 Sep -04 Oct)		Earthquake resistance features for burnt clay brick in weak mortar Codal Provisions for earthquake resistant earthen construction	
10	10th (06 Oct- 10 Oct)		Seismic strengthening features of earthen buildings Retrofitting Measure for Traditionally Built Construction	
11	11th (13 Oct-18 Oct)	Unit-VI Retrofitting Measure for Traditionally	2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025)	
12	12th (21 Oct-25 Oct)		Introduction, need of retrofitting Retrofitting materials Retrofitting measure of traditionally built construction	

13	13th (27 Oct-01 Nov)	Built Construction	Retrofitting measure of traditionally built constructionRetrofitting of masonry buildings Retrofitting of concrete structure Retrofitting of low- cost buildings	
14	14th (03 Nov -07 Nov)	Unit-VII Disaster Management	Disaster rescue Psychology of rescue, rescue workers, rescue plan, rescue by steps, rescue equipment	
15	15th (10 Nov-15 Nov)		House Test (Centralized)	
16	16th (17Nov-26Nov)		Safeties in rescue operations Debris clearance Causality management	


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 Er Neha Thakur


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Branch : Civil Engineering

Subject: Precast and Pre-stressed Concrete (CEPE303 (I))

Semester: 5th Sem

Name of the teacher : Er. Parveen Kumar

Session: Aug- Nov 2025

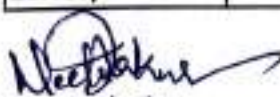
Designation : Lecturer Civil Engg

Sr No	Week / Month	Name of the chapter	Topics to be covered	Remarks
1	1st (04Aug- 08Aug)	Unit-I Precast concrete Elements	Unit-I Precast concrete Elements □ Advantages and disadvantages of precast concrete members. □ Non-structural Precast elements-Paver blocks, Fencing Poles, Transmission Poles, Manhole Covers, Hollow and Solid Blocks, kerb stones as per relevant BIS specifications.	
2	2nd (11Aug- 14Aug)		□ Structural Precast elements –tunnel linings, Canal lining, Box culvert, bridge panels, foundation, sheet piles	
3	3rd (18Aug- 23Aug)	Unit-II Prefabricated building	Unit-II Prefabricated building □ Precast Structural Building components such as slab panels, beams, columns, footings, walls, lintels and chajjas, staircase elements.	
4	4th (25 Aug - 30Aug)		□ Prefabricated building using precast load bearing and non-load bearing wall panels, floor systems-Material characteristics, Plans & Standard specifications. □ Prefab systems and structural schemes and their classification.	
5	5th (01Sep- 06Sep)		□ Joints-requirements of structural joints. □ Manufacturing, storage, curing, transportation and erection of above elements, equipment needed.	
6	6th (08Sep -12Sep)	Unit-III Introduction to Pre-Stressed Concrete	Class Test - I Unit-III Introduction to Pre-Stressed Concrete □ Principles of pre-stressed concrete and basic terminology. □ Applications, advantages and disadvantages of pre stressed concrete.	
7	7th (15Sep- 20Sep)		□ Materials used and their properties, Necessity of high-grade materials. □ Types of Pre-stressing steel-Wire, Cable, tendon, Merits-demerits and applications.	
8	8th (22Sep- 27Sep)	Unit-IV Methods and systems of pre-stressing	Unit-IV Methods and systems of pre-stressing □ Methods of pre-stressing-Internal and External pre-stressing, Pre and Post tensioning applications.	
9	9th (29Sep -04Oct)		□ Systems for pre tensioning- process, applications, merits and demerits-Hoyer system.	
10	10th (06Oct- 10Oct)		□ Systems for post-tensioning – process, applications, merits and demerits – Freyssinet system, Magnel Blaton system, Gifford Udall system.	
11	11th (13Oct-18Oct)		2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025)	
12	12th (21Oct-25Oct)	Unit-V Analysis and design of pre-stressed rectangular beam section	□ Loss of pre-stress occurring subsequently: losses due to shrinkage of concrete, creep of concrete, elastic shortening, and creep in steel, (Simple Numerical problems to determine loss of pre-stress). □ BIS recommendations for percentage loss in case of Pre and Post tensioning.	
13	13th (27Oct-01Nov)		Unit-V Analysis and design of pre-stressed rectangular beam section □ Basic assumptions in analysis of pre-stressed concrete beams. □ Cable Profile in simply supported rectangular beam section-concentric, eccentric straight and parabolic. □ Effect of cable profile on maximum stresses at mid span and at support.	
14	14th (03Nov -07Nov)		□ Numerical problems on determination of maximum stresses at mid spans with linear (con-centric and eccentric) cable profiles only.	
15	15th (10Nov-15Nov)		House Test (Centralized)	
16	16th (17Nov-26Nov)		□ Simple steps involved in Design of simply supported rectangular beam section (No numerical problems).	

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Er. Parveen Kumar

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Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138		
Department of Applied Sciences & Humanities		
Lesson Plan w.e.f 01/08/2025 to 26/11/2025		
Subject: OE-I Life Skills for professional & personal life		Semester: 5th
Branches : Auto Engg, Civil Engg., Elect. Engg.		Name of the teacher :Neetu Thakur
MONTH/ WEEK	Chapter	Contents taught
1st (04Aug-08Aug)	Unit 1: Life Skills, Soft Skills & Interpersonal Skills	1. Definition of Life Skills and Soft Skills, 2. Significance of Life Skills and Soft Skills in personal & Professional life
2nd (11Aug-14Aug)		3. types of life skills,& ways to develop life skills& Soft Skills. 4. Concept of Interpersonal Skills & tips to improve interpersonal skills. 5. Team dynamics & tips for improving Team dynamics.
3rd (18Aug-23Aug)		1. Meaning of Communication Skills, 2. significance & characteristics of Assertive Communication
4th(25Aug-30Aug)	Unit 2: Communication Skills	3. Techniques of Assertive Communication. 4. Tips to develop Assertive Communication
5th (01Sep-06Sep)		A. Self Awareness: 1. Self Introspection : Meaning of self awareness: Introspection, self reflection & insight., Strategies to improve self awareness, Importance of counselling & coaching.
6th (08Sep-12Sep)	Unit 3 : Life Skills	2. Stress Management: Maeaning of stress, factors causing positive stress & negative stress, effects of stress on mind & body, stress management techniques.
08 Sep -12 Sep		Class Test I
7th (15th Sep-20Sep)	Unit 3 : Life Skills	3. Emotional Intelligence: Meaning & significance of EI, strategies to develop & enhance EI. 4. Self Esteem: Concept& meaning , Types of self esteem, Characteristics of people with high & low esteem. tips to improve self esteem.
8th (22Sep-27Sep)		B: Social Awareness:1. Meaning of social awareness & social skills, 2. Empathy: meaning & types of empathy, benefits & steps for developing empathy, 3. Compassion: meaning & benefits, steps to practice compassion.
9th (29Sep-04Oct)		C: Thinking Skills :1. Positive thinking: Meaning, benefits & tips to improve positive thinking.2. Listening Skills : Concept & types, Tips for improving Listening skills, 3. Resilience: meaning, types & case study of resilience.
10th (06 Oct-10Oct)		
(13Oct-18Oct)		Class Test II
10th (13Oct-18Oct)	Unit 4: Time Management Skills	1. Concept & significance of time management,2. benefits of Time Management,
11th(21Oct-25Oct)		3. techniques of time management,4. how to overcome procrastination and avoid time wasters.
12th (27Oct-14th (03Nov-07Nov)	Unit 5: Human Values & Ethics	1. Meaning of human values,morals & ethics,2. What is values & types of values.
13th (10Nov -15		3. Human dignity & Humility: meaning of human dignity & humility, significance & developing humility.
15th (17Nov-22		House Test
16th (24Nov-26Nov)		Revision


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 Neetu Thakur


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Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138

Civil Engineering Department

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : Civil Engg.

Subject: Design of RCC Structures Lab (CEPC307)

Semester: 5th Sem

Name of the teacher : Er. Lokesh Sharma (G1) & Er. Parveen Kumar (G2)

Session: Aug- Nov 2025

Designation : Lecturer Civil Engg

Sr No	Week / Month	Course Contents	Remarks
1	1st (04Aug- 08Aug)	• Rectangular beams – Singly reinforced	
2	2nd (11Aug- 14Aug)	• Rectangular beams- Doubly reinforced	
3	3rd (18Aug- 23Aug)	• One-way slabs	
4	4th (25 Aug - 30Aug)	• Two-way slabs (Corner not held down)	
5	5th (01Sep- 06Sep)	• Square columns with isolated footing of uniform depth and varying depth (sloped footings)	
6	6th (08Sep -12Sep)	Class Test - I	
7	7th (15Sep- 20Sep)	• Circular column with isolated footing of uniform depth and varying depth (sloped footings).	
8	8th (22Sep- 27Sep)	• Circular column with isolated footing of uniform depth and varying depth (sloped footings).	
9	9th (29Sep -04Oct)	• Interpret the actual RCC Structural Drawings used on site with reference to reinforcement details of various structural elements.	
10	10th (06Oct- 10Oct)	• Interpret the actual RCC Structural Drawings used on site with reference to reinforcement details of various structural elements.	
11	11th (13Oct-18Oct)	Class Test - II	
12	12th (21Oct-25Oct)	• Prepare a detailed report of site visit for reinforcement detailing of structural elements like beams, columns, staircase & footing.	
13	13th (27Oct-01Nov)	• Prepare a detailed report of site visit for reinforcement detailing of structural elements like beams, columns, staircase & footing.	
14	14th (03Nov -07Nov)	• Prepare a checklist for reinforcement provided from actual drawings used on site for various structural elements.	
15	15th (10Nov-15Nov)	House Test (Centralized)	
16	16th (17Nov-26Nov)	• Prepare a checklist for reinforcement provided from actual drawings used on site for various structural elements.	

Teacher signature

(Er. Lokesh Sharma) G1

(Er. Parveen Kumar) G2




H.O.D Civil Engg

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Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138

Civil Engineering Department

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : Civil Engineering

Subject: **Computer Applications in Civil Engg. (CEPC309)**

Semester: **5th Sem (Group 1 & 2)**

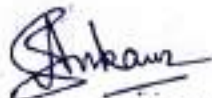
Name of the teacher : **Er Adit Rana**

Session: **Aug- Nov 2025**

Designation : **HOD Civil Engg**

Session: Aug- Nov 2025

Sr No	Week / Month	Name of the chapter	Topics to be covered	Remarks
1	1st (04Aug- 08Aug)	Unit I: Introduction	Starting up of Auto CAD, Auto CAD Window, Toolbar, drop down menu, Command window, saving the drawing. Introduction of Graphic screen	
2	2nd (11Aug- 14Aug)			
3	3rd (18Aug- 23Aug)			
4	4th (25 Aug - 30Aug)	Unit II: Drawing, Editing, Dimensioning Commands	Co-ordinates, drawing limits, grid, snap, orthographic features. Drawing commands, line, circle, poly-line, multiline, ellipse, polygon etc.	
5	5th (01Sep- 06Sep)		Editing commands – Copy, move, offset, fillet, chamfer, trim, lengthen, mirror, rotate, array etc. Working with hatches, fills, dimensioning, text etc	
6	6th (08Sep -12Sep)		1st Class Test & Revision	
7	7th (15Sep- 20Sep)	Unit III: Submission/ Working Drawing	Drawing T, L, I, E, H with absolute, consecutive and polar coordinate system	
8	8th (22Sep- 27Sep)		Preparation of line plan of a residential building, Preparation of detailed plan of a two-room residential building, Elevation, Section, Site Plan (using different type of layers)	
9	9th (29Sep -04Oct)			
10	10th (06Oct- 10Oct)		2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025)	
11	11th (13Oct-18Oct)			
12	12th (21Oct-25Oct)			
13	13th (27Oct-01Nov)		Introduction to STAAD Pro, (Expert may be invited to demonstrate)	
		Introduction to MS Project/Primavera		
14	14th (03Nov -07Nov)	Unit IV: Use of artificial Intelligence in Building Design	Use of artificial Intelligence in Building Design	
15	15th (10Nov-15Nov)		House Test (Centralized)	
16	16th (17Nov-26Nov)		Use of artificial Intelligence in Building Design	


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Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138

Department of Civil Engineering

Lesson Plan w.e.f 04/08/2025 to 26/11/2025

Branch : Auto./Elect. Engg.

Subject: Project Management (CEO301)

Semester: 5th Sem

Name of the teacher : Er Naveen Bharti

Session: Aug- Nov 2025

Designation : Lecturer Civil Engg

Sr No	Week/Month	Name of the chapter	Topics to be covered	Remarks
1	1st (04Aug-08Aug)	UNIT I : Concept of a project	Classification of projects- importance of project management. The project life cycle- establishing project priorities (scope-cost-time)	
2	2nd (11Aug-14Aug)		Project priority matrix- work break down structure.	
3	3rd (18Aug-23Aug)	UNIT-II: Capital budgeting process	Planning Analysis- Selection-Financing-Implementation-Review	
4	4th (25 Aug - 30Aug)		Generation and screening of project ideas- market and demand analysis- Demand forecasting techniques.	
5	5th (01Sep-06Sep)		Market planning and marketing research process- Technical analysis	
6	6th (08Sep - 12Sep)	UNIT-III: Financial estimates and projections	1st Class Test Cost of projects-means of financing-	
7	7th (15Sep-20Sep)		estimates of sales and production Cost of production- working capital requirement and its financing-profitability	
8	8th (22Sep-27Sep)		Projected cash flow statement and balance sheet. Break even analysis.	
9	9th (29Sep -04Oct)	UNIT-IV: Basic techniques in capital budgeting	Non discounting and discounting methods- payback period- Accounting rate of return-net present value	
10	10th (06Oct- 10Oct)		Benefit cost ratio-internal rate of return: Project risk. Social cost benefit analysis and economic rate of return.	
11	11th (13Oct-18Oct)		2nd Class Test & Diwali Vacation (16/10/2025 to 18/10/2025) Non-financial justification of projects. expenditure planning	
12	12th (21Oct-25Oct)	UNIT-V: Project administration	Progress payments,project scheduling and network planning Use of Critical Path Method (CPM), schedule of payments and physical progress	
13	13th (27Oct-01Nov)		Time-cost trade off. Concepts and uses of PERT cost as a function of time	

14	14th (03Nov - 07Nov)	UNIT-V: Project administrati on	Project Evaluation and Review Techniques/cost mechanisms	
15	15th (10Nov-15Nov)		House Test (Centralized)	
16	16th (17Nov-26Nov)		Determination of least cost duration. Post project evaluation	



Signature of Teacher

Er. Naveen Bharti



Signature of H.O.D

Er. Adit Rana