

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

Department of Civil Engineering

Lesson Plan w.e.f 27/01/2024 to 25/05/2024

Name of Subject:- **Public Health Engineering**

Session:- **Jan-May 2025**

Name of **Er Lokesh Sharma**

Semester:- **6th Semester**

Designation:- **Sr. Lecturer (Civil Engg)**

Scheme:- **N-2022**

Sr No	Month	Week	Contents	Remarks
1	January	Week 5	Unit I Sources, Demand and Quality of water Water supply schemes - Objectives, components, Sources of water: Surface and Subsurface sources of water, Intake Structures, Definition and types, Factors governing the location of an intake structure, Types of Intakes.	
2	February	Week 1	Demand of water: Factors affecting rate of demand, Variations of water demands, forecasting of population, Methods of forecasting of population, (Simple problems on forecasting of population),	
		Week 2	Design period, estimating of quantity of water supply required for city of town.	
		Week 3	Quality of water: Need for analysis of water, Characteristics of water- Physical, Chemical and Biological tests UNIT II Purification of water Purification of Water: Objectives of water treatment, Aeration- objects and methods aeration, Plain sedimentation,	
		Week 4	Sedimentation with coagulation, principles of coagulation, types of coagulants, Jar Test Filtration - mechanization of filtration, classification of filters: slow sand filter, rapid sand filter, pressure filter. Construction and working of slow sand filter and rapid sand filter, operational problems in filtration. Disinfection: Objects, methods of disinfection,	
3	March	Week 1	Chlorination Application of chlorine, forms of chlorination, types of chlorination practices, residual chlorine and its importance, Flow diagram of water treatment plant	
		Week 2	UNIT III Conveyance and Distribution of water Conveyance: Types of Pipes used for conveyance of water, choice of pipe material,	
		Week 3	Class Test -I Types of joints & Types of valves- their use, location and function on a pipeline.	
		Week 4	Distribution of water: Methods of distribution of water- Gravity, pumping, and combined system, Service reservoirs - functions and types, Layouts of distribution of Water-Dead end system, grid iron system, circular system, radial system; their suitability, advantages, and disadvantages.	
4	April	Week 1	UNIT IV Domestic sewage and System of Sewerages Building Sanitation: Necessity of sanitation, Necessity to treat domestic sewage, Definitions - Sewage, Sullage, types of sewage.	
		Week 2	Definition of the terms related to Building Sanitation- Water pipe, Rainwater pipe, Soil pipe, Sullage pipe, Vent pipe.	



4		Week 3	Class Test -II Systems of Sewerage and Sewer Appurtenances: Types of Sewers, Systems of sewerage	
		Week 4	self- cleansing velocity and non-scouring velocity	
		Week 5	, Laying, Testing and maintenance of sewers,	
5	May	Week 1	Manholes and Drop Manhole-component parts, location, spacing, construction details, Sewer Inlets, Street Inlets.	
		Week 2	House Test	
		Week 3	UNIT V Characteristics and treatment of Sewage Analysis of sewage: Characteristics of sewage, B.O.D., C.O.D. and its significance, Central Pollution Control Board Norms for discharge of treated sewage, Objects of sewage treatment and flow diagram of conventional sewage treatment plant.	
		Week 4	Treatment of Sewage: Screening, Types of screens, Grit removal, Skimming, Sedimentation of sewage, Aerobic and anaerobic process, Sludge digestion, trickling filters,	
		Week 5	Activated sludge process, Disposal of sewage, Oxidation Pond, Oxidation ditch. Septic tank.	

Signature of Teacher
(Er Lokesh Sharma)

Signature of H.O.D
(Er Adit Rana)

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Department of Civil Engineering

Lesson Plan w.e.f 27/01/2024 to 25/05/2024

Name of Subject:- **Design of Steel Structure** Session:- **Jan-May 2025**
 Name of Teacher:- **Er Lokesh Sharma** Semester:- **6th Semester**
 Designation:- **Sr. Lecturer (Civil Engg)** Scheme:- **N-2022**

Sr No	Month	Week	Contents	Remarks
1	January	Week 5	Unit I Structural Steel and Sections Terminology, Properties of structural steel as per IS Code, grades of steel, Designation of structural steel sections as per IS handbook and IS: 800.	
2	February	Week 1	Classification of sections in Limit State Method.	
		Week 2	Unit II Bolted Connections (LSM) Types of Bolts (Theory only), Forces in Bolts, Types of Bolted joints with Sketches (Butt Joint and Lap Joint), Terminology & IS 800 Provisions for Gauge, Pitch, End & Edge Distance, Patterns of Bolting (Chain, Diamond, Staggered).	
		Week 3	Gross and net cross-sectional area of bolted members. Design of bolted connections & Efficiency of a joint. (Numerical problems on Ordinary Bolts only).	
		Week 4	Unit III Welded Connections (LSM) Introduction, advantages, and disadvantages of welded joint, defects in welds, Types of welds and their symbols.	
3	March	Week 1	Terminology & IS 800 provisions for Size, Throat Thickness, End Returns etc. Longitudinal, Transverse & Intermittent welds.	
		Week 2	Design of fillet weld (Plate section, Single & Double Angle Section) and butt weld subjected to axial load.	
		Week 3	Class Test -I Introduction to tension members,	
		Week 4	Unit IV Tension Members (LSM) Types of section used in axial tension., Gross and net cross-sectional area of tension members	
4	April	Week 1	Analysis & Design of tension member with welded and bolted connections	
		Week 2		
		Week 3	Class Test-II Introduction to Lug Angle and Tension splice.	
		Week 4	Unit V Compression Members (LSM) Types of sections used, Effective length, Radius of gyration, slenderness ratio and its limit	
		Week 5	Buckling Class, Effective length.	
5	May	Week 1	Analysis and Design of axially loaded welded and bolted connections using tables and Equations of IS 800 (I-Section, Double Angle Section and Single angle section).	
		Week 2	House Test	
		Week 3	Unit VI Beams (LSM) Introduction, Different steel sections used, Simple and built-up sections, Plastic Hinge,	
		Week 4	Plastic section Modulus, Class of Section.	
		Week 5	Design of simple I section -Check for shear only (Low Shear & High Shear).	

Signature of Teacher
(Er Lokesh Sharma)

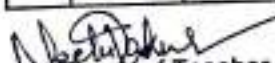
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(Er Adit Rana)

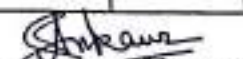
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Department of Civil Engineering

Lesson Plan w.e.f 27/01/2025 to 29/05/2025

Name of Subject:-			Entrepreneurship and Start-ups	Session:-	Jan-May 2025
Name of Teacher:-			Neetu Thakur	Semester:-	6th Semester
Designation:-			Lecturer (English)	Scheme:-	N-2022
Sr No	Month	Week	Contents	Remarks	
1	January	Week 5	UNIT 1 – Introduction to Entrepreneurship and Start-Ups		
2	February	Week 1	Definitions, Traits of an entrepreneur, Intrapreneurship, Motivation. Types of Business Structures, Similarities/differences between entrepreneurs and managers.		
		Week 2	Similarities/differences between entrepreneurs and managers. UNIT 2 – Business Ideas and their implementation Discovering ideas and visualizing the business		
		Week 3	Discovering ideas and visualizing the business, Activity map Business Plan		
		Week 4	UNIT 3 –Idea to Start-up Market Analysis–Identifying the target market.		
3	March	Week 1	Competition evaluation and Strategy Development, Marketing and accounting, Risk analysis		
		Week 2	Risk analysis UNIT 4 –Management Company's Organization Structure,		
		Week 3	Class Test -I		
		Week 4	Recruitment and management of talent. Financial organization and management		
4	April	Week 1	Recruitment and management of talent. Financial organization and management		
		Week 2	UNIT 5-Financing and Protection of Ideas		
		Week 3	Class Test -II		
		Week 4	Financing methods available for start-ups in India Communication of Ideas to potential investors–Investor Pitch		
		Week 5	Financing methods available for start-ups in India Communication of Ideas to potential investors–Investor Pitch		
5	May	Week 1	UNIT 6 –Exit strategies for entrepreneurs, bankruptcy, and succession and harvesting strategy.		
		Week 2	House Test		
		Week 3	bankruptcy, and succession and harvesting strategy.		
		Week 4	Revision		
		Week 5	Revision		


Signature of Teacher
(Neetu Thakur)


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(Er Adit Rana)

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Department of Civil Engineering

Lesson Plan w.e.f 27/01/2025 to 29/05/2025

Name of Subject:-		Engineering Geology		Session:-	Jan-May 2025
Name of Teacher:-		Er PARVEEN KUMAR		Semester:-	6 th Semester
Designation:-		Lecturer (Civil Engg)		Scheme:-	N-2022
Sr No	Month	Week	Contents	Remarks	
1	January	Week 5	Unit I: Introduction. Introduction and branches of Geology, Importance of Engineering Geology.		
2	February	Week 1	Scope of engineering geology: Geology in construction jobs, Geology in water resource development, Geology in town and regional planning.		
		Week 2	Unit II: The Earth A brief account of theory of origin of Earth. Size, Shape, mass, density.		
		Week 3	Atmosphere of Earth. Internal structure and chemical composition of Earth.		
		Week 4	Unit II: General Geology Geological work of atmosphere (rock Weathering) types and effect.		
3	March	Week 1	Geological works of rivers, wind, glaciers as agents of erosion, transportation and deposition		
		Week 2	Resulting Features and Importance in Engineering.		
		Week 3	Class Test -I		
		Week 4	Unit III: Study of rocks Types of rocks (Igneous, Sedimentary & Metamorphic rocks): Their composition and engineering importance..		
4	April	Week 1	Engineering properties of rocks as material for construction: building stones,properties and important building stones.		
		Week 2	Building stone as road material, quality of aggregate, common road aggregate		
		Week 3	Class Test -II		
		Week 4	Unit IV: Structural Geology Dip and strike, apparent dip and true dip.		
		Week 5	Folds, elements of fold, types of fold, causes of folding.Fault terminology, classification of faults. Significance of faults.		
5	May	Week 1	Unit V: Geological investigations Introduction and objective of geological investigations		
		Week 2	House Test		
		Week 3	Methods of geological investigations, Geophysical investigations		
		Week 4	Seismic method of investigation, Gravitational method		
		Week 5	Revision		

Signature of Teacher
(Er Parveen Kumar)

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(Er Adit Rana)

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

Department of Civil Engineering

Lesson Plan w.e.f 27/01/2025 to 29/05/2025

Name of Subject:-		Disaster Mangement		Session:-	Jan-May 2025
Name of Teacher:-		Er Sumedha Sharma		Semester:-	6th Semester
Designation:-		Lecturer (Civil Engg)		Scheme:-	N-2022
Sr No	Month	Week	Contents	Remarks	
1	January	Week 5	Unit – I: Understanding Disaster Understanding the Concepts and definitions of Disaster, Hazard, Vulnerability, Risk, Capacity		
2	February	Week 1	Disaster and Development, and disaster management.		
		Week 2	Unit – II: Types, Trends, Causes, Consequences and Control of Disasters Geological Disasters (earthquakes, landslides, tsunami, mining);		
		Week 3	Hydro-Meteorological Disasters (Floods, cyclones, lightning, thunderstorms, hailstorms, avalanches, droughts, cold and heat waves) Biological Disasters (epidemics, pest attacks, forest fire);		
		Week 4	Technological Disasters (chemical, industrial, radiological, nuclear) and Manmade Disasters (building collapse, rural and urban fire, road and rail accidents, nuclear, radiological, chemicals and biological disasters)		
3	March	Week 1	Global Disaster Trends – Emerging Risks of Disasters – Climate Change and Urban Disasters.		
		Week 2	Unit- III: Disaster Management Cycle and Framework • Disaster Management Cycle – Paradigm Shift in Disaster Management. • Pre-Disaster – Risk Assessment and Analysis, Risk Mapping, zonation, and Micro		
		Week 3	Class Test -I		
		Week 4	Prevention and Mitigation of Disasters, Early Warning System; Preparedness, Capacity Development. • Awareness During Disaster – Evacuation – Disaster Communication – Search		
4	April	Week 1	Operation Centre – Incident Command System – Relief and Rehabilitation • Post-disaster – Damage and Needs Assessment, Restoration of Critical Infrastructure – Early		
		Week 2	Unit- IV: Disaster Management in India • Disaster Profile of India – Mega Disasters of India and Lessons Learnt. • Disaster Management Act 2005 – Institutional and Financial Mechanism		
		Week 3	Class Test -II		
		Week 4	National Policy on Disaster Management, National Guidelines and Plans on Disaster Management.		

Government Polytechnic Kalla, Dist. Kalla H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Lekh Raj Sharma
Discipline	Civil, Electrical & Automobile Engg 6 th Semester
Semester	6 th
Subject	Indian Constitution
Lesson Plan Duration	Jan. - May 2025

Week	Chapter	Topic to be covered
1 st (27Jan. - 01Feb.)	Unit 1 Introduction to Constitution:	History of making of the Indian Constitution.
2 nd (02Feb. - 08Feb.)	Unit 1 Introduction to Constitution:	Meaning and importance of the Constitution. Salient features and Preamble of Indian Constitution.
3 rd (09Feb. - 15Feb.)	Unit 1 Introduction to Constitution:	Fundamental rights- meaning and limitations. Directive principles of state policy and Fundamental duties -their enforcement and their relevance.
4 th (16Feb. - 22Feb.)	Unit 1: Indian Knowledge System (IKS):	4. Itihasa (इतिहास) (Ramayana and Mahabharata महाभारत) and Purana (Vishnupurana तद्विष्णुपुराण, Bhagavata Purana (भागवत) etc.)
5 th (23Feb. - 01Mar.)	Unit 2 Union Government:	Structure of Union Government
6 th (02 Mar. - 08Mar.)	Unit 2 Union Government:	Union Executive- President, Vice-president, Prime Minister, Council of Ministers.
7 th (09Mar. - 15Mar.)	Unit 2 Union Government:	Union Legislature- Parliament and Parliamentary proceedings. Union Judiciary-Supreme Court of India - composition and powers and function.
Class Test - 1		In Third Week of March 2025.
8 th (23Mar. - 29Mar.)	Unit 3 State and Local Governments:	Structure of State Government. State Executive- Governor, Chief Minister, Council of Ministers.
9 th (01Apr. - 05Apr.)	Unit 3 State and Local Governments:	State Legislature-State Legislative Assembly and State Legislative Council. State Judiciary-High court.
10 th (06Apr. - 12Apr.)	Unit 3 State and Local Governments:	Local Government-Panchayat raj system with special reference to 73rd and Urban Local Self Govt. with special reference to 74th Amendment
11 th (03Apr. - 19Apr.)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitution	Election Commission of India-composition, powers and functions and electoral process.
Class Test - 2		In Third Week of April 2025.



12 th (12 Apr. - 13 May)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitution	Types of emergency-grounds, procedure, duration and effects.
13 th (29 Apr. - 05 May)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitution	Traditional sports & Regional Games for promoting wellness. Leadership through Physical Activity and Sports; Introduction to First Aid.
House Test		In Second Week of May 2025.
14 th (11 May - 17 May)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitution	Amendment of the constitution- meaning, procedure and limitations.
15 th (18 May - 29 May)		Revision

- **NOTE:** Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Prepared by
(L.R. Sharma)

Signature of HOD AS&H
(Mr. L.R. Sharma)

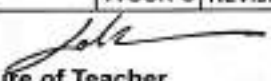
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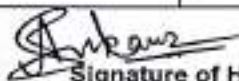
Department of Civil Engineering

Lesson Plan w.o.f. 27/01/2024 to 25/05/2024

Name of Subject:- **Public Health Engineering Lab** Session:- **Jan-May 2025**
Name of Teacher:- **Er Lokesh Sharma** Semester:- **6th Semester**
Designation:- **Sr. Lecturer (Civil Engg)** Scheme:- **N-2022**

Sr No	Month	Week	Contents	Remarks
1	January	Week 5	Determine pH value of given sample of water.	
2	February	Week 1	Revision	
		Week 2	Determine the turbidity of the given sample of water.	
		Week 3	Revision	
		Week 4	Determine residual chlorine in a given sample of water	
3	March	Week 1	Determine suspended, dissolved solids and total solids of given sample of water.	
		Week 2	Revision	
		Week 3	Class Test -I	
		Week 4	Determine the dissolved oxygen in a sample of water	
4	April	Week 1	Undertake a field visit to water treatment plant and prepare a report.	
		Week 2	Determine the optimum dose of coagulant in a given raw water sample by jar test.	
		Week 3	Class Test -II	
		Week 4	Draw sketches of various valves used in water supply pipeline	
		Week 5	Draw a sketch of one pipe and two pipe system of plumbing	
5	May	Week 1	Revision	
		Week 2	House Test	
		Week 3	Prepare a report of a field visit to sewage treatment plant	
		Week 4	Revision	
		Week 5	Revision	


Signature of Teacher
(Er Lokesh Sharma)


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(Er Adit Rana)

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Department of Civil Engineering

Lesson Plan w.o.f 27/01/2024 to 25/05/2024

Name of Subject:- **Design of Steel Structure Lab**

Session:- **Jan-May 2025**

Name of Teacher:- **Er Lokesh Sharma**

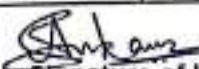
Semester:- **6th Semester**

Designation:- **Sr. Lecturer (Civl Engg)**

Schomo:- **N-2022**

Sr No	Month	Week	Contents	Remarks
1	January	Week 5	Draw any five commonly used rolled steel sections and five built up sections.	
2	February	Week 1		
		Week 2	Details of splicing for steel columns of Same width	
		Week 3	Different widths	
		Week 4	Beam to beam connections Seated Connections	
3	March	Week 1	Framed Connections	
		Week 2	Beam to column Seated Connections	
		Week 3	Class Test I	
		Week 4	Framed Connections	
4	April	Week 1	Column bases Slab base	
		Week 2		
		Week 3	Class Test II	
		Week 4	Gusseted base	
		Week 5	Steel roof truss with details of joints Heel Joint	
5	May	Week 1		
		Week 2	House Test	
		Week 3	Ridge Joint	
		Week 4	Revision	
		Week 5	Revision	

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