

# Govt. Polytechnic Hamirpur (H.P.)

## Lesson Planning (Theory)

Branch : Civil Engineering

Semester: 6<sup>th</sup>

Subject : Public Health Engg.

Session: Jan - June 2026

Teacher: Er. Sujaya Sharma

Class Room: L-7

Sr. No.	No. of Lectures	Chapter/ Unit Description	Detail of Contents	Reference Resources	Remarks
1		Unit I Sources, Demand and Quality of water Water supply schemes	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. 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), Design period, estimating of quantity of water supply required for city or town. Quality of water: Need for analysis of water, Characteristics of water- Physical, • Chemical and Biological tests.	R1& R2	
2		UNIT II Purification of water Purification of Water:	Objectives of water treatment, Aeration- objects and methods of • aeration, Plain sedimentation, Sedimentation with coagulation, principles of coagulation, types of coagulants, Jar Test, process of coagulation. 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, Chlorination Application of chlorine, forms of chlorination, types of chlorination practices, residual chlorine and its importance, Flow diagram of water treatment plants.	R1& R2	
3		UNIT III Conveyance and Distribution of water Conveyance:	Types of Pipes used for conveyance of water, choice of pipe material, • Types of joints & Types of valves- their use, location and function on a pipeline. 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.	R1& R2	
4		UNIT IV Domestic sewage and System of Sewerages Building Sanitation:	Necessity of sanitation, Necessity to treat domestic sewage, • Definitions - Sewage, Sullage, types of sewage. Definition of the terms related to Building Sanitation- Water pipe, Rainwater pipe, Soil pipe, Sullage pipe, Vent pipe. Systems of Sewerage and Sewer Appurtenances: Types of Sewers, Systems of • sewerage, self- cleansing velocity and non-scouring velocity, Laying, Testing and maintenance of sewers, Manholes and Drop Manhole-component parts, location, spacing, construction details, Sewer Inlets, Street Inlets.	R1& R2	

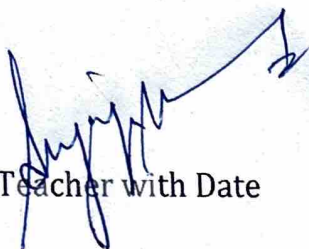
	<ul style="list-style-type: none"> <li>• UNIT V</li> </ul> <p>Characteristics and treatment of Sewage Analysis of sewage:</p>	<p>Characteristics of sewage, B.O.D., C.O.D. and its significance. • Central Pollution Control Board Norms for discharge of treated sewage, Objects of sewage treatment and flow diagram of conventional sewage treatment plant. Treatment of Sewage: Screening, Types of screens, Grit removal, Skimming, • Sedimentation of sewage, Aerobic and anaerobic process, Sludge digestion, trickling filters, Activated sludge process, Disposal of sewage, Oxidation Pond, Oxidation ditch. Septic tank.</p>	<p><b>R1&amp; R2</b></p>	
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#### REFERENCE RESOURCES

R1 • Garg, S.K., Environmental Engineering Vol. I and Vol. II, Khanna Publishers

R2 • Punmia, B C, Environmental Engineering, vol. I and II, Laxmi Publishers

Signature of Teacher with Date



**Govt. Polytechnic Hamirpur (H.P.)**  
**Practical Planning & Coverage**

Branch : Civil Engineering

Semester: 6<sup>th</sup>

Subject : ~~PHE~~ LAB

Session : Jan, 2020 - June, 2020

Teacher: Er. Sujaya Sharma

Laboratory: Field Work

Pract. No.	Description of Practical	Reference for Procedure/ Writeup	Likely Dates G-1/G-2	Actual Dates	Signatures
1	Determine pH value of given sample of water.		31/01/26	2/2/26	
2	Determine the turbidity of the given sample of water.		7/2/26	9/2/26	
3	Determine residual chlorine in a given sample of water		21/2/26	16/2/26	
4	Determine suspended, dissolved solids and total solids of given sample of water.		28/2/26	23/2/26	
5	Determine the dissolved oxygen in a sample of water		7/3/26	2/3/26	
6	Undertake a field visit to water treatment plant and prepare a report.		28/3/26	16/3/26	
7	Determine the optimum dose of coagulant in a given raw water sample by jar test.		28/3/26	23/3/26	
8	8. Draw sketches of various valves used in water supply pipeline		4/4/26	30/3/26	
9	9. Draw a sketch of one pipe and two pipe system of plumbing		18/4/26	6/4/26	
10	10. Prepare a report of a field visit to sewage treatment plant		18/4/26	13/4/26	

Signature of Subject Teacher

Govt. Polytechnic Hamirpur  
Lesson Plan (Theory)  
Sem 6th

Branch: Civil Engg.  
Subject: Entrepreneurship & Start-ups  
Teacher: Anjna Kumari

Session: Jan-June 2026  
Class Room

**Proposed Lesson Plan:**

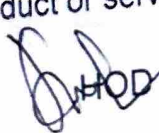
Period: 27/01/26 to 10/05/26		Total Lectures Planned: 64			
S.No.	No. of Lectures	Chapter/Unit Description	Detail of content	Reference Resource	Remarks
1	10	Unit-1 Introduction to Entrepreneurship and Start-ups	<input type="checkbox"/> Definitions, Traits of an entrepreneur, Intrapreneurship, Motivation. <input type="checkbox"/> Types of Business Structures, Similarities/differences between entrepreneurs and managers.	R1,R2	
2	8	Unit -2 Business Ideas and their Implementation	<input type="checkbox"/> Discovering ideas and visualizing the business <input type="checkbox"/> Activity map <input type="checkbox"/> Business Plan	R1,R2	
3	10	Unit- 3 Idea to Start-up	<input type="checkbox"/> Market Analysis-Identifying the target market, <input type="checkbox"/> Competition evaluation and Strategy Development, <input type="checkbox"/> Marketing and accounting, <input type="checkbox"/> Risk analysis	R1,R2	
4	12	Unit- 4 Management	<input type="checkbox"/> Company's Organization Structure, <input type="checkbox"/> Recruitment and management of talent. <input type="checkbox"/> Financial organization and management	R1,R2	
5	16	Unit-5 Financing and Protection of Ideas	<input type="checkbox"/> Financing methods available for start-ups in India <input type="checkbox"/> Communication of Ideas to potential investors-Investor Pitch <input type="checkbox"/> Patenting and Licenses	R1,R2	
6	8	Unit-6	Exit strategies for entrepreneurs, bankruptcy, and succession and harvesting strategy.	R1,R2	

Reference Books:

1. The Start-up Owner' Manual By Steve Blank and Bob Dorf
2. The Lean Start-up By Eric Ries
3. The Innovators Dilemma By Clayton M. Christensen

Course Outcome:

- CO1: Understanding the dynamic role of entrepreneurship and small businesses  
CO2: Organising and managing a small Business  
CO3: Financial Planning and Control  
CO4: Marketing Planning  
CO5: New Product or service Development

  
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Signature of Teacher

Branch: Civil Engg. Sem 6th

Subject : Technical Communication

Teacher: Anjna Kumari

Session: Jan-June 2026

Class Room

**Proposed Lesson Plan:**

Period: 27/01/26 to 10/05/26		Total Lectures Planned: 64			
S.No.	No. of Lectures	Chapter/Unit Description	Detail of content	Reference Resources	Remarks
1	1-12	Unit-1 Fundamentals of Technical Communication	1. Language as a tool of Communication 2. Features of Technical Communication 3. Distinction between General and Technical Communication 4. Channels of Communication at workplace: Downward, Upward, Lateral or Horizontal, Diagonal, Grapevine, Consensus 5. Barriers to Communication and overcoming barriers	R1,R2	
2	13-32	Unit -2 Technical Writing	1. Types of Technical writing 2. Drafting skills: Agenda and Minutes of Meetings, Official and Business Correspondence 3. Different formats of Report writing 4. Basics of Grammar: Spotting errors in sentences (Noun, Pronoun, Verb, Adverb, Adjective, Preposition, Conjunction, Article, Modals, Tenses, Punctuation) 5. Resume Writing and Covering letter	R1,R2	
3	33-45	Unit- 3 . Presentation Skills	1. Concept and Significance of Presentation skills 2. Steps of a Effective Presentation 3. Elements of Effective Presentation skills, including public speaking Clarity of substance; Emotion, Humour, Overcoming Fear, Confident speaking, Audience Analysis and Retention of audience interest 4. How to improve Presentation Skills Unit	R1,R2	
4	46-64	Unit- 4 Speaking skills	1. What are Speaking Skills and Characteristics of a Good Speech 2. What is Panel Discussion and its procedure 3. Job Interview Skills: What to do Before, After and During Interview 4. Body Language Examples and their Meanings- Positive and Negative. Body language for interviews 5. Difference between Etiquettes and Manners ,Table Etiquettes , Business Etiquettes, Telephone Etiquettes, Dressing Etiquettes and Workplace Etiquettes, How to get along with opposite Gender 6. What are the elements of Voice Modulation (Quality, Pitch, Rhythm, Volume, Pace; Intonation; Pronunciation; Articulation; stress & accent); Tips for better Voice modulation	R1,R2	

Reference Books: 1. Technical Communication – Principles and Practices by Meenakshi Raman & Sangeeta Sharma, Oxford Univ. Press, 2007, New Delhi. 2. <https://www.skillsyouneed.com/quiz/343479>  
3. <https://whatfix.com/blog/technical-writing-examples/>

Signature of Teacher

  
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