

LESSON PLAN

Subject- Applied Chemistry Lab (PR-3)

Branch- Electrical Engineering (G-I)

Name of the Faculty- Prasant Behera

Session: 17-08-2026 to 17-04-2027

Class Days: Every Thursday (01/week)

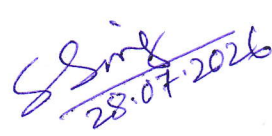
Total Working Days Available: 32

Total Periods Planned: 32

Lab No	Date	Day	Activity / Experiment	Type
1	20-08-2026	Thursday	Intro-1: Lab safety, Do's & Don'ts, First aid, Fire extinguisher, Lab discipline	Introduction
2	03-09-2026	Thursday	Intro-2: Apparatus familiarization - Burette, Pipette, Conical flask, Volumetric flask, Balance, Washing & calibration	Introduction
3	10-09-2026	Thursday	Intro-3: Chemicals familiarization - Acids, Bases, Indicators, MSDS, Safe handling of KMnO ₄ , oxalic acid, EDTA	Introduction
4	17-09-2026	Thursday	Visual-1 (Video): Volumetric titration techniques, end point detection, phenolphthalein use - NPTEL/YouTube demo	Visual Class
5	24-09-2026	Thursday	1. Preparation of standard solution of oxalic acid or KMnO ₄	Practical
6	01-10-2026	Thursday	2. Strength of NaOH by titrating against standard oxalic acid	Practical
7	08-10-2026	Thursday	3. Standardization of KMnO ₄ & % iron in Hematite ore	Practical
8	15-10-2026	Thursday	4. Iodometric estimation of copper in copper pyrite ore	Practical
9	22-10-2026	Thursday	5. Volumetric estimation of Total Acid Number (TAN) of oil	Practical
10	29-10-2026	Thursday	Visual-2: Proximate analysis of coal + Bomb calorimeter working - Video	Visual Class
11	05-11-2026	Thursday	6a. Total hardness of water by EDTA method	Practical
12	12-11-2026	Thursday	6b. Alkalinity of water by 0.01M H ₂ SO ₄	Practical
13	19-11-2026	Thursday	7a. Proximate analysis - Moisture in coal	Practical
14	26-11-2026	Thursday	7b. Proximate analysis - Ash in coal	Practical
15	03-12-2026	Thursday	8. Conductivity of water sample	Practical
16	10-12-2026	Thursday	Visual-3: Instrumental - Conductivity meter,	Visual

			Colorimeter, Redwood viscometer, Flash point - Virtual lab demo	Class
17	17-12-2026	Thursday	9. Iron content in cement by colorimeter	Practical
18	24-12-2026	Thursday	10. Calorific value by bomb calorimeter	Practical
19	31-12-2026	Thursday	11. Viscosity by Redwood viscometer	Practical
20	07-01-2027	Thursday	12. Flash & fire point by Abel's apparatus	Practical
21	21-01-2027	Thursday	13. Verify first law of electrolysis of CuSO ₄	Practical
22	28-01-2027	Thursday	Visual-4: Water quality parameters DO, BOD, COD, TDS, Turbidity, Chlorine - Environmental videos + Treatment plant video	Visual Class
23	04-02-2027	Thursday	14. Construction & emf of Daniel cell	Practical
24	11-02-2027	Thursday	15. Dissolved Oxygen (DO) in water	Practical
25	18-02-2027	Thursday	16. BOD in water sample	Practical
26	25-02-2027	Thursday	17. Dissolved chlorine in water	Practical
27	04-03-2027	Thursday	18. COD in water sample	Practical
28	11-03-2027	Thursday	19. Turbidity of water sample	Practical
29	18-03-2027	Thursday	20. TDS of water sample	Practical
30	25-03-2027	Thursday	Buffer Revision	Viva Questions
31	08-04-2027	Thursday	Buffer Revision	Viva Questions
32	15-04-2027	Thursday	Buffer Revision	Viva Questions

Prasant Behera
Lect.(II) In Chemistry


28.07.2026
HOD
Math & Sc. Dept.

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Lab No	Date	Day	Activity / Experiment	Type
1	17-08-2026	Monday	Intro-1: Lab safety, Do's & Don'ts, First aid, Fire extinguisher, Lab discipline	Introduction
2	24-08-2026	Monday	Intro-2: Apparatus familiarization - Burette, Pipette, Conical flask, Volumetric flask, Balance, Washing & calibration	Introduction
3	31-08-2026	Monday	Intro-3: Chemicals familiarization - Acids, Bases, Indicators, MSDS, Safe handling of KMnO_4 , oxalic acid, EDTA	Introduction
4	07-09-2026	Monday	Visual-1 (Video): Volumetric titration techniques, end point detection, phenolphthalein use - NPTEL/YouTube demo	Introduction
5	21-09-2026	Monday	1. Preparation of standard solution of oxalic acid or KMnO_4	Practical
6	28-09-2026	Monday	2. Strength of NaOH by titrating against standard oxalic acid	Practical
7	05-10-2026	Monday	3. Standardization of KMnO_4 & % iron in Hematite ore	Practical
8	12-10-2026	Monday	4. Iodometric estimation of copper in copper pyrite ore	Practical
9	26-10-2026	Monday	5. Volumetric estimation of Total Acid Number (TAN) of oil	Practical
10	02-11-2026	Monday	Visual-2: Proximate analysis of coal + Bomb calorimeter working - Video	Visual Class
11	09-11-2026	Monday	6a. Total hardness of water by EDTA method	Practical
12	16-11-2026	Monday	6b. Alkalinity of water by $0.01\text{M H}_2\text{SO}_4$	Practical
13	23-11-2026	Monday	7a. Proximate analysis - Moisture in coal	Practical
14	30-11-2026	Monday	7b. Proximate analysis - Ash in coal	Practical
15	07-12-2026	Monday	8. Conductivity of water sample	Practical
16	14-12-2026	Monday	Visual-3: Instrumental - Conductivity meter, Colorimeter, Redwood viscometer, Flash point - Virtual lab demo	Visual Class
17	21-12-2026	Monday	9. Iron content in cement by colorimeter	Practical

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