GOVT. POLYTECHNIC LAHAUL & SPITI AT UDAIPUR CAMP AT SUNDERNAGAR

LESSON PLAN **Session - 27th Jan.2026 to 27th May 2026**

Name of the Teacher : Suniti Rani **Subject: Mathematics-II**

Branch: Civil Engg. (2nd Sem.)

S. No.	Month	Date	Week	Unit	Name of Chapter	Content to be taught	Remarks
1	January	27,28,29,30,	1st	1	**Determinants & Matrices**	Def.of Det., Minors, Co-factors & Laplace's Expansion (Ex-1.1) Properties of Det. (Ex.-1.2)	
2	February	2,3,4,5,6,	2nd	1	**DO**	Solution of the system of equations by Cramer's Rule (Ex-1.3) Matrix , Algebra of Matrix , (Ex- 2.1), Multiplication of Matrices	
3	February	9,10,11,12,13	3rd	1	**DO**	Transpose of Matrix ,Symmetric & Skew Symm. Matrices (Ex-2.2), Adjoint of Matrix, Inverse of Matrix	
4	February	16,17,18,19,20	4th	1	**DO**	Solution of System of Linear Equations in three variables (Ex-2.3)	
5	February	23,24,25,26,27	5th	2	**Integral Calculus**	Fundamental Integrals(Ex 1.1), Int.by Substitution (Ex-2.1)	
6	March	2,3,5,6	6th	2	**Integral Calculus**	(Ex-2.2), Integration by Parts Ex-3.1	
7	March	9,10,11,12,13	7th	2	**Definite Integral**	Some Special Methods (Ex 2.3) ,Revision of Some Imortant Questions **(CLASS TEST -1)**	
8	March	16,17,18,19,20	8th	2	**Definite Integral**	Int. By Partial Fractions (Ex-4.1) Standard Formulae (Ex-4.2), Area of the Curve,	
9	March	23,24,25,27	9th	3	**Co-ordinate Geometery**	Volume Under the Curve(Ex-4.3) Equation of a St. Line in Different Forms (Ex-1.1)	
10	March & April	30,31,1,2	10th	3	**Straight Line**	Angle B/N Two Line , Any line parallel /perpendicular to the St. Line(Ex-1.2)	
11	April	6,7,8,9,10	11th	3	**The Circle**	The Equation of a Circle in Standard Form , Central Form & General Form (Ex-2.1) Revision **(CLASS TEST-2)**	
12	April	13,16,17	12th	3	**The Circle**	The Equation of a Circle in Diameter Form (Ex-2.1)	
13	April	20,21,22,23,24	13th	3	**Conics (Parabola & Ellipse)**	Equation of Parabola (Ex-3.1),Equation of Ellipse (Ex-3.2)	
14	April	27,28,29,30,	14th	3	**Conics (Hyperbola)**	Equation of Hyperbola (Ex-3.3)	
15	May	4,5,6,7,8	15th	3	**Revision**	Revision of Some Imortant Questions **(HOUSE TEST)**	
16	May	11,12,13,14,15	16th	4	**Differential Equations**	Order & Degree of Diffrential Equation Ex(1.1)	
17	May	18,19,20,21,22,	17th	4	**Revision**	Revision of previous question papers	
18	May	25,26	18th	4	**Revision**	Revision of previous question papers	

Teacher's Signature 27/01/26

HOD (A S & H)

GOVT. POLYTECHNIC L & S AT UDAIPUR CAMP AT SUNDERNAGAR

LESSON PLAN (Applied Physics -II BS104)

Name of the Teacher - Manisha Pathania (Sr.Lecturer AS&H)

Class: 2nd Sem. Civil. Engg. (27th Jan. -27 TH May 2026)

Month	Week	Date	Name of the Unit	Contents to be taught	Remarks
Jan-Feb	1st	27th Jan	1) Wave motion and its applications	Wave motion ,transverse and longitudinal waves with examples,Definition of wave velocity,frequency and wave length of a wave.Relations between wave velocity,frequency and wavelength.	
		28th Jan		Sound and light waves and their properties,Wave equation (y=r sin wt),amplitude,phase,phase difference	
		29th Jan		Principle of superposition of waves and beat formation	
	2nd	2nd Feb		Simple harmonic motion:definition,expression for displacement,velocity.	
		3rdFeb		expression for acceleration,time period,frequency in S.H.M.	
		4th Feb		Free,forced and resonant vibrations with examples.	
		5th Feb		Acoustics of buildings-reveration,reverberation time,echo,noise,coefficient of absorption of sound.	
	3rd	9th Feb		Methods to control reverberation time and their applications.Ultrasonic waves-Introduction and properties	
		10th Feb		Ultrasonic waves-Introduction and properties,Engineering and medical applications.	
		11th Feb	2) Optics	Basic optical laws-reflection and refraction	
		12th Feb		refractive index,images and image formation by mirrors	
	4th	16th Feb		lens and thin lenses,lens formula	
		17th Feb		Power of lens ,Magnification of a lens	
		18th Feb		Total internal reflection ,critical angle and conditions for total internal reflection and and its application in optical fibre	
		19th Feb		Optical Instruments-Simple and compound microscope and their magnifying powers.	
	5th	23rd Feb		astronomical telescope in normal adjustment with its magnifying power	
		24th Feb	3) Electrostatics	Coulombs law,unit charge	
		25th Feb		Electric field ,Electric lines of force and their properties.	
		26th Feb		Electric flux,Electric Potential and potential difference	
March	6th	2nd Mar		Gauss's law.Capacitance and its working	
		3rd Mar		Capacitance and its units,capacitance of parallel plate capacitor	
		5th Mar		Series and parallel combination of capacitors.	
	7th	09th Mar		Numerical based on combination of capacitor	
		10th Mar		**Class Test-1**	
		11th Mar		Dielectric and its effect on capacitance,dielectric break down	
		12th Mar	4) Current Electricity	Electric Current and its units,Direct and alternating current	
	8th	16th Mar		resistance and its units,specific resistance ,Conductance,specific conductance	
		17thMar		Series and parallel combination of resistors,Factors affecting resistance of a wire	
		18th Mar		carbon resistances and colour coding.Ohm's law and its verification	
		19th Mar		Ohm's law and its verification	

	9th	23rdMar		Kirchhoff's Laws	
		24th Mar		Concept of terminal potential difference and EMF	
		25th Mar		Heating effects of Current,Electric power,electrical energy and their units.	
	10th	30th Mar		Related numerical problems,Advantages of electric energy over other forms of energy.	
		31st Mar	5) Electromagnetism	Classification of material -dia,para and ferromagnetic materials with their properties.	
April		1st April		Magnetic field and its units.magnetic intensity,magnetic lines of force	
		2nd April		magnetic flux and units,magnetization,Lorentz force	
	11th	6th April		Force on a current carrying conductor ,Moving coil galvanometer-principle,construction and working	
		7th April		conversion of galvanometer into ammeter and voltmeter	
		8thApril	**6)** Semi conductor Physics	Energy bands in solids,Types of materials(insulators,semi-conductors,conductors)	
		9thApril		Intrinsic and extrinsic semiconductors	
	12th	13thApril		**CT-2**	
		16thApril		P-n junction ,junction diode and V-I characteristics .	
	13th	20thApril		Diode as rectifier-half wave and full wave rectifier(centre taped).	
		21st April		Photo cells,solar cells-working principle and engineering applications.	
		22nd April	**7)** Modern Physics	Lasers: Energy levels,ionization and excitation potentials	
		23rd April		Spontaneous and stimulated emission,population inversion	
	14th	27th April		Pumping methods,optical feedback,Types of lasers : Ruby laser	
		28th April		He-Ne and semiconductor laser	
		29th April		laser characteristics,engineering and medical applications of lasers	
		30th May		Revision	
May	15th	4th May		Revision	
		5th May		Fiber optics: Introduction to optical fibres,light propagation,	
		6th May		Revision	
		7th May		Revision	
	16th	11th May		**House Test**	
		12th May			
		13th May			
		14th May			
	17th	18th May		Revision	
		19th May		Acceptance angle and numerical aperture	
		20th May		Revision	
		21st May		Fibre types,applications in telecommunication ,medical and sensors.	
	18th	25th May		Revision	
		26th May		Revision	

Subject Teacher:-
Manisha Pathania

HOD
(Applied Sc. & Hum.)

Government Polytechnic Udaipur Camp at Sundernagar Distt Mandi (H.P) -175018

Department of Applied Science and Humanities

Lesson Plan for the Session Jan,2026-June,2026

Subject Name : FUNDAMENTALS OF ELECTRICAL & ELECTRONICS ENGINEERING				**Semester:2nd Branch: Civil Engg**	Subject Teacher: **Himani Vaidya,Lect Computer Applications**
Sr no	**Month**	**Week**	**Date**	**Name of Chapter**	**Contents to be taught**
1	Jan	Week 5	28,29,30,31	**UNIT I Overview of Electronic Components & Signals: Passive Active Components**	Resistances, Capacitors, Inductors, Diodes, Transistors, FET, MOS and CMOS and their Applications. Signals: DC/AC, voltage/current, periodic/non- periodic signals, average, rms, peak values, different types of signal waveforms,Ideal/non-ideal voltage/current sources, independent/dependent voltage current sources.
2	Feburary	Week 1	4,5,6,7		
3		Week 2	11,12,13		
4		Week 3	18,19,20,21	**UNIT II Overview of Analog Circuits**	Operational Amplifiers-Ideal Op-Amp, Practical op amp, Open loop and closed loop configurations, Application of Op-Amp as amplifier, adder, differentiator and integrator.
5		Week 4	25,26,27,28		
6	March	Week 1	5,6,7	**UNIT III Overview of Digital Electronics:**	Introduction to Boolean Algebra, Electronic Implementation of Boolean Operations, Gates-Functional Block Approach, Storage elements-Flip Flops-A Functional block approach, Counters: Ripple, Up/down and decade, Introduction to digital IC Gates (of TTL Type).
7		Week 2	11,12,13		
8		Week 3	18,19,20		**1st Class Test2**
9		Week 4	25.27,28	**Unit IV Electric and Magnetic Circuits**	EMF, Current, Potential Difference, Power and Energy; M.M.F, magnetic force, permeability, hysteresis loop, reluctance, leakage factor and BH curve; Electromagnetic induction, Faraday's laws ofelectromagnetic induction, Lenz's law; Dynamically induced emf; Statically induced emf; Equations of self and mutual inductance; Analogy between electric and magneticcircuits.
10	APRIL	Week 1	1,2,4		
11		Week 2	8,9,10		
12		Week 3	16,17,18		**2nd Class Test2**

13	April	Week 4	22,23,24,25	**Unit V: A.C. Circuits:**	Cycle, Frequency, Periodic time, Amplitude, Angular velocity, RMS value, Average value, Form Factor Peak Factor, impedance, phase angle, and power factor; Mathematical and phasor representation of alternating emf 48 and current; Voltage and Current relationship in Star and Delta connections; A.C in resistors, inductors and capacitors; A.C in R-L series, R-C series, R-L-C series and parallel circuits; Power in A. C. Circuits, Power in A. C. Circuits, power triangle.
14		Week 5	29,30		
15	May	Week 1	2		
16		Week 2	6,7,8		
17		Week 3	13,14,15,16	**Unit VI Transformer and Machines:**	General construction and principle of core and shell type of transformers; Emf equation and transformation ratio of transformers; Auto transformers; Basic principle of Electromechanical energy conversion.
18		Week 4	20,21,22,23		**House Test 2nd Week of May**

Signature of Teacher
Himani Vaidya

Signature of H.O.D

Government Polytechnic Lahaul Spiti at Udaipur Camp at Sundernagar Distt Mandi (H.P)-175018

Department of Applied Sciences and Humanities

Lesson Plan for Engineering Mechanics (Semester-2nd) Session: (January-June 2026)

S.No.	MONTH	WEEK	Date	CONTENTS	REMARKS
1	Jan	Week 5	28,30,31	Introduction, Overview of syllabus, Evaluation scheme, **Basics of mechanics and force system :** Significance and relevance of Mechanics, Applied mechanics, Statics, Dynamics. Space, time, mass, particle	
2	Feb	Week 1	2,4,6,7	Flexible body and rigid body,Scalar and vector quantity, Units of measurement (SI units) - Fundamental units and derived units, Force – unit, representation as a vector and by Bow's notation, characteristics and effects of a force, Principle of transmissibility of force, Force system and its classification.Resolution of a force - Orthogonal components of a force, moment of a force, Varignon's Theorem.	
		Week 2	9,11,13	Composition of forces – Resultant, analytical method for determination of resultant for concur- rent, non-concurrent and parallel co-planar force systems – Law of triangle, parallelogram and polygon of forces.	
		Week 3	16,18,20,21	Numerical Practice	
		Week 4	23,25,27,28	**Equilibrium :** Equilibrium and Equilibrant, Free body and Free body diagram, Analytical and graphical methods of analyzing equilibrium. Lami's Theorem – statement and explanation, Application for various engineering problems. Numerical Practice	
3	Mar	Week 1	2,6,7	Types of beam, supports (simple, hinged, roller and fixed) and loads acting on	
		Week 2	9,11,13	Beam reaction graphically for simply supported beam subjected to vertical point loads only. Numerical Practice	Class Test-I
		Week 3	16,18,20	**Friction :** Friction and its relevance in engineering, types and laws of friction, limiting equilibrium, limiting friction, co-efficient of friction, angle of friction, angle of repose, relation between co-efficient of friction and angle of friction. Equilibrium of bodies on level surface subjected to force parallel and inclined to plane.	
		Week 4	23,25,27,28	Numerical Practice, Equilibrium of bodies on inclined plane subjected to force parallel to the plane only.	
		Week 5	30	Numerical Practice	
		Week 1	1,4	**Centroid and centre of gravity :** Centroid of geometrical plane figures (square, rectangle, triangle, circle, semi-circle, quarter circle).	
		Week 2	6,8,10	Numerical Practice on Centroid of composite figures composed of not more than two geometrical figures	Class Test-II

S.No.	MONTH	WEEK	Date	CONTENTS	REMARKS
4	April	Week 3	13,17,18	Numerical Practice on Centroid of composite figures composed of not more than two geometrical figures	
		Week 4	20,22,24,25	Centre of Gravity of simple solids (Cube, cuboid, cone, cylinder, sphere, hemisphere) Centre of Gravity of composite solids composed of not more than two simple solids. Numerical Practice	
		Week 5	27,29	**Simple lifting machine :** Simple lifting machine, load, effort, mechanical advantage, applications and advantages.	
5	May	Week 1	2	Velocity ratio, efficiency of machines, law of machine.	
		Week 2	4,6,8	**HOUSE TEST**	
		Week 3	11,13,15,16	Ideal machine, friction in machine, maximum Mechanical advantage and efficiency, reversible and non-reversible machines, conditions for reversibility, Numerical Practice	
		Week 4	18,20,22,23	Velocity ratios of Simple axle and wheel, Differential axle and wheel, Worm and worm wheel, Simple screw jack, Numerical Practice	
		Week 5	25	Revision	

Signature of Teacher
(Sameer Sharma)

Signature of H.O.D
(Sh. Raman Jamwal)

GOVT POLYTECHNIC UDAIPUR CAMP AT SUNDERNAGAR

LESSON PLAN (Applied Physics- II Practicals)

Name of the Teacher -Manisha Pathania (Sr.Lecturer AS&H)

Class: 2nd Sem. Civil. Engg. (27th Jan-27th May 2026)

r.No.	Description of Practicals	Date		Remarks
		Group-I	Group-II	
1	To determine and verify the time period of a cantilever.	Week - 1	Week - 1	
		30th Jan	31st Jan	
2	To verify laws of reflection from a plane mirror/interface.	Week - 2	Week - 2	
		6th Feb	7th Feb	
3	Viva	Week - 3	Week - 3	
		13th Feb	21st Feb	
4	To verify laws of refraction (Snell's law) using a glass slab.	Week - 4	Week - 4	
		20th Feb	28th Feb	
5	Todetermine focal length and magnifying power of a convex lens.	Week - 5	Week - 5	
		27th Feb	7th Mar	
6	Viva	Week - 6	Week - 6	
		6th Mar	____	
7	To verify Ohm's Law by plotting graph between current and potential difference .	Week - 7	Week - 7	
		13th Mar	28th Mar	
8	To verify Laws of resistance in series and parallel combination.	Week - 8	Week - 8	
		20th Mar	4th April	
9	Viva	Week - 8	Week - 9	
		27th Mar	____	
10	To draw V-I characteristics of a semiconductor diode and determine its knee voltage.	Week - 9	Week - 9	
		10th April	18th April	
11	To convert a galvanometer into a voltmeter.	Week - 10	Week - 10	
		17th April	25th April	
12	Viva	Week - 11	Week - 11	
		24th April	2nd May	
13	Revision of practicals	Week - 12	Week - 12	
		8th April		
14	Revision	Week - 13	Week - 13	
		15th May	16th May	
15	Revision	Week - 14	Week - 14	
		22nd May	23rd May	

Subject Teacher : Manisha Pathania

Head of Department (AS&H)

Government Polytechnic Lahaul & Spiti at Udaipur, camp at Sundernagar
Rotation Plan of Groups in General Workshop

Session : January to June, 2026
Branch : Civil Engineering
Semester : 2nd **Subject: Engineering Workshop Practice**

Sr. No.	Workshop name	Code
1	Carpentry	CR
2	Fitting	FT
3	Welding	WL
4	Sheet Metal Working	SH
5	Smithy	SM
6	Electrical House Wiring	EW

Group	Class Sr. No.
G1	1 to 7
G2	8 to 14
G3	15 to 20
G4	21 to 26
G5	27 to 32
G6	33 to 37

Sr.No.	Date	Carpentry	Fitting	Welding	Sheet Metal	Smithy	Electrical
1	27,28/01/2026	G1	G2	G3	G4	G5	G6
2	2,3,4/02/2026	G6	G1	G2	G3	G4	G5
3	9,10,11/02/2026	G5	G6	G1	G2	G3	G4
4	16,17,18/02/2026	G4	G5	G6	G1	G2	G3
5	23,24,25/02/2026	G3	G4	G5	G6	G1	G2
6	2,3/03/2026	G2	G3	G4	G5	G6	G1
7	9,10,11/03/2026	G1	G2	G3	G4	G5	G6
8	16,17,18/03/2026	G6	G1	G2	G3	G4	G5
9	23,24,25/03/2026	G5	G6	G1	G2	G3	G4
10	30,31/03/2026, 01/04/2026	G4	G5	G6	G1	G2	G3
11	6,7,8/04/2026	G3	G4	G5	G6	G1	G2
12	13/04/2026, 20,21,22/04/2026	G2	G3	G4	G5	G6	G1
13	27,28/04/2026	G1	G2	G3	G4	G5	G6
14	29/04/2026, 04/05/2026	G6	G1	G2	G3	G4	G5
15	5,6/05/2026	G5	G6	G1	G2	G3	G4
16	11,12/05/2026	G4	G5	G6	G1	G2	G3
17	13,18/05/2026	G3	G4	G5	G6	G1	G2
18	19,20/05/2026	G2	G3	G4	G5	G6	G1
19	25,26/05/2026	G1	G2	G3	G4	G5	G6
20							
21							
22							
23							

27/01/2026
Foreman Instructor

27/01/2026
W/S Supdt.

Department of Applied Science and Humanities

Government Polytechnic Sundernagar Distt Mandi (H.P) -175018

Lesson Plan for FUNDAMENTALS OF ELECTRICAL & ELECTRONICS ENGINEERING(Practical). G-1 (Semester: 2nd)
Session: (Jan-May, 2026)

S.No	MONTH	WEEK	Date	CONTENTS	REMARKS
1	Jan	Week 5	31	1.Determine the permeability of magnetic material by plotting its B-H curve.	
2	Feb	Week 1	7	2. Measure voltage, current and power in 1-phase circuit with resistive L:oad	
		Week 2	21	3. Measure voltage, current and power in R-L series circuit	
		Week 3	28	4. Determine the transformation ratio (K) of 1-phase transformer.	
		Week 4		5. Connect single phase transformer and measure input and output quantities.	
3	March	Week 1	7	6. Make Star and Delta connection in induction motor starters and measurethe line and phase values.	
		Week 2		7. Identify various passive electronic components in the given circuit.	
		Week 3	28	8. Connect resistors in series and parallel combination on bread board andmeasure its value using digital multimeter	
		Week 4		9. Connect capacitors in series and parallel combination on bread board andmeasure its value using multimeter.	
4	April	Week 2	4	10. Identify various active electronic components in the given circuit.	
		Week 4	18	11. Use multimeter to measure the value of given resistor.	
		Week 5	25	12. Use LCR-Q tester to measure the value of given capacitor and	
5	May	Week 2	2	13. Determine the value of given resistor using digital multimeter to confirm with colour code.	
		Week 3	16	14. Test the PN-junction diodes using digital multimeter.	
		Week 4	23	15. Test the performance of PN-junction diode.	

Signature of Teacher
(Er. Himani Vaidya)

Signature of H.O.D

Department of Applied Science and Humanities

Government Polytechnic Sundernagar Distt Mandi (H.P) -175018

Lesson Plan for FUNDAMENTALS OF ELECTRICAL & ELECTRONICS ENGINEERING(Practical). G-2 (Semester: 2nd)
Session: (Jan-May, 2026)

S.No	MONTH	WEEK	Date	CONTENTS	REMARKS
1	Jan	Week 5	30	1.Determine the permeability of magnetic material by plotting its B-H curve.	
2	Feb	Week 1	6	2. Measure voltage, current and power in 1-phase circuit with resistive L:oad	
		Week 2	13	3. Measure voltage, current and power in R-L series circuit	
		Week 3	20	4. Determine the transformation ratio (K) of 1-phase transformer.	
		Week 4	27	5. Connect single phase transformer and measure input and output quantities.	
3	March	Week 1	6	6. Make Star and Delta connection in induction motor starters and measurethe line and phase values.	
		Week 2	13	7. Identify various passive electronic components in the given circuit.	
		Week 3	20	8. Connect resistors in series and parallel combination on bread.board andmeasure its value using digital multimeter	
		Week 4	27	9. Connect capacitors in series and parallel combination on bread board andmeasure its value using multimeter.	
4	April	Week 2	10	10. Identify various active electronic components in the given circuit.	
		Week 4	17	11. Use multimeter to measure the value of given resistor.	
		Week 5	24	12. Use LCR-Q tester to measure the value of given capacitor and	
5	May	Week 2	8	13. Determine the value of given resistor using digital multimeter to confirm with colour code.	
		Week 3	15	14. Test the PN-junction diodes using digital multimeter.	
		Week 4	22	15. Test the performance of PN-junction diode.	

Signature of Teacher
(Er.Himani Vaidya)

Signature of H.O.D

Government Polytechnic Lahaul Spiti at Udaipur Camp at Sundernagar Distt Mandi (H.P) -175018

Department of Applied Sciences and Humanities

Lesson Plan for Engineering Mechanics Laboratory (Semester-2nd) Session: (January-June 2026)

S.No.	MONTH	WEEK	Group	Date	CONTENTS	REMARKS
1	January	Week 5	1	27	Introduction, Syllabus Overview, Evaluation scheme	
			2	28	Introduction, Syllabus Overview, Evaluation scheme	
2	February	Week 1	1	3	Determine resultant of concurrent force system graphically.	
			2	4	Determine resultant of concurrent force system graphically.	
		Week 2	1	10	Verify Lami's theorem.	
			2	11	Verify Lami's theorem.	
		Week 3	1	17	Determine resultant of concurrent force system applying Law of Polygon of forces using force table.	
			2	18	Determine resultant of concurrent force system applying Law of Polygon of forces using force table.	
		Week 4	1	24	Determine support reactions for simply supported beam.	
			2	25	Determine support reactions for simply supported beam.	
3	March	Week 1	1	3	Doubt Removal	
		Week 2	1	10	Obtain support reactions of beam using graphical method.	
			2	11	Obtain support reactions of beam using graphical method.	
		Week 3	1	17	Determine resultant of parallel force system graphically	
			2	18	Determine resultant of parallel force system graphically	
		Week 4	1	24	Study forces in various members of Jib crane.	
			2	25	Study forces in various members of Jib crane.	
		Week 5	1	31	Determine coefficient of friction for motion on horizontal and inclined plane.	
		Week 1	2	1	Determine coefficient of friction for motion on horizontal and inclined plane.	
		Week 2	1	7	Determine centroid of geometrical plane figure.	

S.No.	MONTH	WEEK	Group	Date	CONTENTS	REMARKS
4	April	Week 2	2	8	Determine centroid of geometrical plane figure.	
		Week 4	1	21	To find the M.A., V.R., Efficiency and law of machine for Differential Axle and Wheel.	
			2	22	To find the M.A., V.R., Efficiency and law of machine for Differential Axle and Wheel.	
		Week 5	1	28	Derive Law of machine using Worm and worm wheel.	
			2	29	Derive Law of machine using Worm and worm wheel.	
5	May	Week 2	1	5	**HOUSE TEST**	
			2	6	**HOUSE TEST**	
		Week 3	1	12	To find the M.A., V.R., Efficiency and law of machine for Simple Screw Jack.	
			2	13	To find the M.A., V.R., Efficiency and law of machine for Simple Screw Jack.	
		Week 4	1	19	To study various equipments related to Engineering Mechanics.	
			2	20	To study various equipments related to Engineering Mechanics.	
		Week 5	1	26	Revision/Doubt removal	

27/01/2025

Signature of Teacher
(Sameer Sharma)

Signature of H.O.D
(Sh. Raman Jamwal)

GOVT POLYTECHNIC LAHAUL & SPITI AT UDAIPUR
Camp at Sundernagar,Distt. Mandi(HP)

Lesson Plan : (Environmental Science)
Name of the Teacher : Alpana Chaudhary
Branch : Civil. Engg. **Semester: 2nd**
Session : (Jan 2026-May2026)

Month	Week	Date	Name of the Chapter	Contents to be taught	HOD Signature	Remarks
Jan	1st	30th Jan	Ecosystem	Structure of ecosystem, Biotic & Abiotic components, Aquatic (Lentic and Lotic) and terrestrial ecosystem		
		31st Jan		Food chain and food web,Carbon, Nitrogen		
Feb	2nd	6th Feb		Sulphur, Phosphorus cycle,Global warming - Causes, effects, process,		
		7th Feb		Green House Effect, Ozone depletion, Quick Revision of topics.		
	3rd	13th Feb	Air,Noise Pollution	Definition of pollution and pollutant, Natural and manmade sources of air pollution,Air Pollutants: Types, Particulate Pollutants: Effects and control		
	4th	20th Feb		Gaseous Pollution Control: Absorber, Catalytic Converter,		
		21stFeb		Effects of air pollution due to Refrigerants, I.C., Boiler.		
	5th	27th Feb		Noise pollution: sources of pollution, measurement of pollution level, Effects of Noise pollution, Noise pollution (Regulation and Control) Rules, 2000.		
		28th Feb	Water and soil Pollution	Sources of water pollution, Types of water pollutants, Characteristics of water pollutants, Turbidity, pH, total suspended solids, total solids.		
March	6th	6th Mar		BOD and COD: Definition, calculation. Waste Water Treatment: Primary methods: sedimentation, froth floatation,		
		7th Mar		Secondary methods: Activated sludge treatment, Trickling filter, Bioreactor, Tertiary Method: Membrane separation technology, RO (reverse osmosis).		
	7th	13th Mar		Class test-1		
	8th	20th Mar		Causes, Effects and Preventive measures of Soil Pollution: Causes-Excessive use of Fertilizers, Pesticides and Insecticides, Irrigation, E-Waste, Quick Revision of topics		
	9th	27th Mar	Renewable sources of energy	Solar Energy: Basics of Solar energy. Flat plate collector (Liquid & Air). Theory of flat plate col-lector,Importance of coating. Advanced collector		
		28th Mar		. Solar pond. Solar water heater, solar dryer. solar stills		

April	10th	4th April	**Renewable sources of energy**	Biomass: Overview of biomass as energy source. Thermal characteristics of biomass as fuel. Anaerobic digestion.Biogas production mechanism. Utilization and storage of biogas.		
	11th	10th April		Class Test – 2		
	12th	17th April		Wind energy: Current status and future prospects of wind energy.Wind energy in India. Environmental benefits and problem of wind energy		
		18th April		New Energy Sources: Need of new sources. Different types new energy sources.		
	13th	24th April		Applications of (Hydrogen energy, Ocean energy resources, Tidal energy conversion.) Concept, origin and power plants of geothermal energy. Quick Revision of topics		
		25th April	**Solid waste management,ISO 14000 & Envirnmental Management**	Solid waste generation- Sources and characteristics of Municipal solid waste, E- waste, bio-medical waste.		
May	14th	2nd May		Collection and disposal: MSW (3R, principles, energy recovery, sanitary landfill), Hazardous.Metallic wastes and Non-Metallic wastes (lubricants, plastics, rubber) from industries		
	15th	8th May		Waste Air quality act 2004, air pollution control act 1981,water pollution and control act 1996		
	16th	15th May		House Test		
		16th May		Structure and role of Central and state pollution control board		
	17th	22ndMay		Concept of Carbon Credit, Carbon Footprint.		
		23rd May		Environmental management in fabrication industry.ISO14000: Implementation in industries, Benefits.		

Alpana.

Subject Teacher:- Alpana Chaudhary

HOD

Applied Sciences & Humanities