G P Kangra

GPK-F-18

Practical Planning & Coverage Status

Department: Applied Science & Humanities Laboratory: —

Course: Diploma Subject: Sports & Yoga

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	INTRODUCTION TO PHYSICAL EDUCATION.		Modern Trends and Physical Education by Prof. Ajmer Singh.	8 Aug 2025				
2.	OLYMPIC MOVEMENT.			22 Aug 2025				
3.	PHYSICAL FITNESS, WELLNESS & LIFESTYLE			29 Aug 2025				
4.	FUNDAMENTAL OF ANATOMY & PHYSIOLOGY IN PHYSICAL EDUCATION, SPORTS & YOGA.		Light of Yoga by B.K.S Iyengar	5 Sept. 2025				
5.	KINESIOLOGY, BIOMECHANICS & SPORTS.			12 Sept. 2025				
6.	POSTURES.		Health & Physical Education NCERT.	19 Sept. 2025				
7.	YOGA.			26 Sept. 2025				
8.	YOGA & LIFESTYLE.			3 Oct. 2025				

Approved/ Not approved

01/08/25

HOD Sign with date

Principal Signature with date

G P Kangra

GPK-F-18

Practical Planning & Coverage Status

Department: Applied Science & Humanities Laboratory:

Course: Diploma. Subject: Sports & Yoga.

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
9.	TRAING & PLANNING IN SPORTS.			24 Oct. 2025				
10.	PSYCHOLOGY & SPORTS.			31 Oct. 2025				
11.	DOPING.			7 Nov. 2025				
12.	SPORTS MEDICINE.			14 Nov 2025				
13.	SPORTS / GAMES.			21 Nov 2025.				

Approved/ Not approved

01/08/25

HOD Sign with date

Principal Signature with date

ELECTRONICS & COMM ENGG

GPK-F-18

G P Kangra

Practical Planning & Coverage Status

Department: Mechanical Engineering Laboratory: Sheet metal work shop.

Course: Diploma Subject: Engineering Workshop Practice

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
01	Demonstration of different sheet metal tools and machines.	Available	Workshop Practice and Self Instructions	D $\frac{5}{8}, \frac{6}{8}, \frac{8}{8}$ E $\frac{13}{8}, \frac{14}{8}, \frac{20}{8}$ A $\frac{21}{8}, \frac{23}{8}, \frac{28}{8}$ B $\frac{30}{8}, \frac{3}{9}, \frac{4}{9}$ C $\frac{6}{9}, \frac{10}{9}, \frac{11}{9}$				
02.	Demonstration of different s/m operations, Cutting, Bending edging, and Curling, Loncing Soldering, Brazing and Riveting etc.	Available	-do-	D $\frac{17}{9}, \frac{18}{9}, \frac{20}{9}$ E $\frac{24}{9}, \frac{25}{9}, \frac{27}{9}$ A $\frac{1}{10}, \frac{4}{10}, \frac{8}{10}$ B $\frac{9}{10}, \frac{15}{10}, \frac{22}{10}$ C $\frac{23}{10}, \frac{25}{10}, \frac{29}{10}$				
03.	one Simple Job involving Sheet metal operations soldering and Riveting	Available	-do-	D $\frac{30}{10}, \frac{1}{11}, \frac{6}{11}$ E $\frac{19}{11}, \frac{20}{11}, \frac{22}{11}$ A $\frac{28}{10}, \frac{26}{11},$ B $\frac{15}{10}, \frac{22}{10}, \frac{9}{10}$ C $\frac{25}{10}, \frac{29}{10}, \frac{23}{10}$				

Approved/ Not approved

HOD Sign with date

Principal Signature with date

Electronics Engg. 1st sem

GPK-F-18

G P Kangra

Practical Planning & Coverage Status

Department: Mechanical Engg. Laboratory: Welding Shop

Course: Diploma Subject: Engineering Workshop Practice

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	Demonstration of Different welding tools/machines	Available	Workshop Practice and Self instruction	A 25/8 26/8 28/8 B 1/9 2/9 3/9 C 4/8 5/8 8/8 D 11/8 12/8 13/8 E 18/8 19/8 20/8				
2.	Demonstration on ARC welding, Gas welding, MIG MAG welding Gas cutting and Rebuilding of Broken parts with welding	—Do—	—Do—	A 29/9 30/9 1/10 B 6/10 9/10 13/10 C 8/9 9/9 10/9 D 15/9 16/9 17/9 E 22/9 23/9 24/9				
3.	One Simple job involving Butt & Lap joint	—Do—	—Do—	A 10/11 11/11 17/11 B 18/11 19/11 24/11 C 14/10 15/10 31/10 D 24/10 27/10 28/10 E 29/10 31/11 4/11				

Approved/ Not approved

HOD Sign with date

Principal Signature with date

GPK-F-18

G P Kangra

Practical Planning & Coverage Status

Department: Mechanical Engg. Laboratory: Electrical workshop

Course: Diploma Subject: EWP

Sr. No.	Details of Practical	Availability of Equipment Set up	Availability of STD Ref. Write up	Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
1.	One lamp controlled by one switch by surface conduit wiring.	-Available-	Self Instt. and Engg. Wshop Practice	A 13/08 B 21/08 C 30/08 D 06/09 E 05/08	A B C D E			
2.	Lamp- circuits connection of lamp and Socket by separate switches.	-Do-	-Do-	A 14/08 B 23/08 C 05/09 D 10/09 E 06/08	A B C D E			
3.	connection of fluorescent Lamp / Tube light	-Do-	-Do-	A 20/08 B 28/08 C 04/09 D 11/09 E 08/08	A B C D E			
4.	Simple - lamp circuits install bedroom lighting.	-Do-	-Do-	A 24/09 B 01/10 C 09/10 D 23/10 E 17/09	A B C D E			

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HOD Sign with date

Principal Signature with date

S.No.	Details of Practicals	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign	Remarks
		Equipment Set up	Std Ref. Write up					
5.	Simple lamp circuits install stair-case wiring.	-Available-	Self Instructions and Engg. wshop Practice	A 28/09 B 04/09 C 15/10 D 25/10 E 18/09	A B C D E			
6.	Demonstration of measurement of current, voltage, power and Energy.	-DO-	-Do-	A 27/09 B 04/09 C 15/10 D 25/10 E 20/09	A B C D E			
7.	Demonstration of advance power tools, pneumatic tools, electric wiring tools and accessories.	-DO-	-Do-	A 19/11, 22/11 B 08/09 C 22/10 D 29/10 E 30/10	A B C D E			
8.	Tools for cutting and Drilling.	-DO-	-DO-	A ~~20/11~~ 26/11 B 08/09 C 22/10 D 29/10 E 01,06/11	A B C D E			

Govt. Polytechnic Kangra , Distt. Kangra (H.P)

Department of Applied Science & Humanities

Course: Diploma **Branch.**

Session: 01 Aug25 to 26 Nov 25 **Subject: Applied Physics-I**

Teacher: **Laboratory: Physics Lab**

Lesson plan for syllabus coverage: Theory-56 Hours, Practical-28 Hours

S No	Lecture No.	Topic	Syllabus Detail
1	1-8	Physical world, Units and Measurements	Physical quantities: fundamental and derived, Units and systems of units (FPS, CGS and SI units), Dimensions and dimensional formulae of physical quantities, Principle of homogeneity of dimensions, Dimensional equations and their applications(conversion from one system of units to other, checking of dimensional equations and derivation of simple equations), Limitations of dimensional analysis. Errors in measurements (systematic and random), absolute error, relative error, error estimation and significant figures.
2	9-19	Force and Motion	Force and Motion Scalar and Vector quantities – examples, representation of vector, types of vectors. Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement 13 only), Scalar and Vector Product, Resolution of a Vector and its application to inclined plane (Rectangular components) and lawn roller. Force, Momentum, Statement and derivation of conservation of linear momentum, its applications such as recoil of gun &rockets, Impulse and its applications. Circular motion, definition of angular displacement, angular velocity, angular acceleration, frequency, time period. Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical), Centripetal and Centrifugal forces with live examples, Expression and applications
3	20-28	Work,Power and Energy	Work: Concept and units, examples of zero work, positive work and negative work Friction: concept, types, laws of limiting friction, coefficient of friction, methods for reducing friction and its engineering applications, Work done in moving an object on horizontal and inclined plane for rough and plane surfaces and related applications. Energy and its units, kinetic energy, gravitational potential energy with examples and derivations, Mechanical energy, conservation of mechanical energy for

			freely falling bodies, transformation of energy (examples). Power and its units, power and work relaticnship, calculation of power (numerical problems).
4	29-36	Rotational Motion	Translational and rotational motions with examples. Definition of torque and angular momentum and their examples. Conservation of angular momentum (quantitative) and its applications. Moment of inertia and its physical significance, radius of gyration for rigid body, Theorems of parallel and perpendicular axes (statements only), Moment of inertia of rod, disc, ring and sphere (hollow and solid)
5	37-47	Properties of matter	Matter Elasticity: Definition of stress and strain, different types of modulii of elasticity, Hooke's law, significance of stress-strain curve. Pressure: definition, units, atmospheric pressure, gauge pressure, absolute pressure, Fortin's Barometer and its applications. 14 Surface tension: concept, units, cohesive and adhesive forces, angle of contact, Ascent Formula (No derivation), applications of surface tension, effect of temperature and impurity on surface tension.
6	48-56	Heat and Thermometry	Thermometry Concept of heat and temperature and their relationship, Types of Thermometer (Mercury thermometer, bimetallic thermometer, Platinum resistance thermometer, Pyrometer) and their uses. Expansion of solids, liquids and gases, coefficient of linear, surface and cubical expansions and relation amongst them, Co-efficient of thermal conductivity

( )
Lecturer Physics

(Sh. Kamlash Chand)
HOD
AS&H

PLANNED SYLLABUS COVERAGE(Theory)

E P
angra
LLABUS
OVERAGE

Department: ASH Subject Comm. Skills in English

Course Diploma in EE, CE & ECE Duration 3 years

Total Periods 42 Theory

Period Nos	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1-10	Comm. Theory and Practice	Basics of Comm. - Intro, meaning definition, process etc. Types of comm., formal and informal, Verbal and non-verbal and barriers to effective comm. 7Cs of effective comm., art of effective comm. Choosing words, voice modulation Clarity, Time simplification of words, Technical Comm.			
1-16	Soft Skills for Professional Excellence	Introduction to Soft Skills and Hard skills, importance of soft skills, Life skills: self awareness, and self analysis, adaptability, resilience, emotional intelligence and empathy etc. Applying soft skills across the culture.			
17-27	Reading Compre	Comprehension - Vocabulary enhancement 1. The Gift of Magi 2. Uncle Podgetlangs a Picture 3. Night of the Scorpion 4. Stopping by Woods on a Snowy Evening 5. Where the Mind is Without Fear.			

approved from concerned HOD within seven days from beginning of semester & will be kept with the concerned teacher file

		Details	Instruction Reference	Additional Study Recommended	Remarks
4. 28-34	Professional Writing	The art of precis writing. Business and personal Letters. Drafting emails, notices minutes of a meeting.			
5. 35-42	Vocabulary and Grammar	Glossary of administrative terms, one word substitution, idioms and phrases. Parts of speech, active and passive voice, tenses, punctuation.			

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr No.	Period No	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

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Date	HOD Sign
01/08/25	

G P Kangra

Practical Planning & Coverage Status

GPK-P-18

Department:
Course:

Laboratory:
Subject:

S. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.)	Preperation of standard sol. of oxalic acid	250ml Beaker Flask, Watch glass, Electronic Balence	App. Chem. By A.D. Sharma					
2.)	To determine strength of given sod-ium hydroxide sol. by titrating against standard oxalic acid Sol. using Phenolphthalein indicator	Burrete, Pipette, Titration Flask, Beaker	NCERT Delhi 2019-18 App Chem. By A.D Sharma					
3.)	Experimental verification of Faraday's law of Electrolysis using $CuSO_4$ Solution & Cu-Electrolyte	Cu-Voltmeter Four cu Plate Battery, key Rheostate	Dr. G.H. Hagar App. Chem. Lab Practice					
4.)	Jodometric Estimation of Cu in the given Copper ore using std. hypo Solution	Burrete, ppt Burrete stand Titration Flask	App Chem. By A.D. Sharma					
5.)	To estimate total Alkanity of given water sample by titrating against std. H_2SO_4 Solution.	Burrete, ppt Burrete Stand Titration Flask Beaker	Jain & Jain Egg. Chemistry					
6.)	To estimate the moisture in given coal sample gravimetrically	Oven, Balence Tong, Crucible	App. Chem. By A.D					
7.)	To estimate the ash in given Coal sample gravimetrically	Muffle Furnace Tong, crucible Desiccator	App. Chem By A.D.					
8.)	To determine Viscosity of given lubricating oil by Red wood Viscometer	Red wood Viscometer	Dr. G.H. Hugar & A.N Palnak App. Chem. Laboratory Practices.					

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remark
			boundary lubrication, Physical Properties – viscosity and index Oiliness, flash & Fire Point, Cloud and Pour Pt., Chemical Properties Coke number, TAN, Saponification Value of lubricants.	Eagle Publication	Text Book of Chemistry Class +1, +2 N.C.E.R.T Pradeep Publication Dinesh Publication	
8)	53-56	Polymers	Monomers, Homo & Copolymers degree of Polymerisation, Simple reaction involved in preparation and their application of Thermoplastics & Thermosetting Plastics (using Polythene, PVC, PS, PTFE, Nylon-66 and Bakelite only) Vulcanization of rubber and properties of Vulcanized rubber.	Hiteshi Publication Eagle Publication		

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date 01/08/25	HOD Sign
Date	Principal Sign

Use additional sheets (if required)

Period No	Topic	Details	Instruction Reference	Addl. Study	Remarks
		Faraday's laws of electrolysis and Numericals. Industrial applications of Electrolysis, Electrometallurgy, Electroplating Electro-Refining. App. of redox rxn in electrochemical cells - Primary cell : dry cell, Sec. cell - lead acid storage battery. Introduction to corrosion of Metals definition, types of corrosion, H_2 liberation O_2 absorption, corrosion, Internal Corrosion, Preventive measure, Purification Alloying and heat treatment and External Corrosion Preventive measure, metal coating (Anodic & Cathodic).	Eagle Publication [illegible] Hiteshi Publication	Text Book Chemistry For Class +1, +2) N.C.E.R.T. Pradeep Publication Dinesh Publication	
4)	24-30	Engineering Materials	Natural occurance of metals, minerals ores of iron Al, Cu, gangue (Matrix), flux slag, Metallurgy - brief account of general Principle of metallurgy: Crushing, grinding Concentration, Froth flotation, Magnetic Seperation, Roasting and calcination & smelting, Refining, Zone Refining, Extraction of iron from haematite ore using a blast furnace along with rxns. Alloys definition, Purpose of making Alloys, Ferous and Non Ferrous Alloys, Brass, Bronze, Nichrome, Duralumin, Magnalium with e.g.	Eagle Publication	Text Book Chemistry Class +1, +2 NCERT	
5)	31-38	Water.	Classification of water - Soft water and hard water, Causing water hardness, units and Numericals, Problems Caused by the use of hard water in boilers. water softening techniques - Zeolite Process, Muncipale water treatment, sedimentation, Coagulation filtration, Sterilization, Properties of water used for human for drinking and cooking Purposes from any water sources and Indian standard specification of drinking water	Engg. Chemistry By Sashi Chawla		
6)	39-45	Fuel	Definition of Fuel and Combustion of Fuel, Classification, Calorific value (HCV and LCV) calculation of HCV & LCV using Dulong's Formula, Characteristics of good fuel, Petrol and diesel-fuel rating Detail (Octane & Cetane Number) Chemical composition, Calorific values Applications of, LPG, CNG, water gas and biogas / Producer gas.	Eagle Publication	Text Book of Chem. For Class +1, +2 (Part - I, II) N.C.E.R.T	
7)	46-53	Lubrication	Function and characteristic Properties of good lubricant, Classification with Examples, Lubrication Mechanism - hydrodynamic and			

PLANNED SYLLABUS COVERAGE(Theory)

GP Kangra

Department AS & H Subject App. Chemistry

Course Diploma Duration 3 years

SYLLABUS COVERAGE Total Period 56 Theory 56.

Sr No	Period No	Topic	Details	Instruction References	Additional Study Recommended	Remarks
1)	1-7	Atomic Str.	Fundamental particles of atoms :- Electron, proton, neutron (Definitions) Atomic Str. Bohr's Theory, Successes and limitation (Expression for Energy & Radius to be omitted) & Hydrogen spectrum explanation based on Bohr's model of atom Heisenberg uncertainity Prin. Quantum No. - Orbital Concept Shapes of s, p - orbitals, differen b/w orbit and orbital, Pauli's exclusion Principle, Hund's Rule of maximum multiplicity Aufbau Rule, electronic Config. (1 to 30)	Eagle Publication Hiteshi Publication	Text Book Chemistry For +1, +2 (Part - I, II) N.C.E.R.T Pradeep Publication Dinesh Publication	
2.)	8-14.	Chemical Bonding & Solution	Concept of Chemical Bonding Cause of Chemical Bonding types of Bond - Ionic Bond (NaCl eg.) Lewis concept of Covalent Bond (CH_4, F_2 HF) Electronegativity, Difference b/w Sigma & π - bond, Electron Sea Model of metallic Bond Idea of Solute, Solvent and Solution, Methods to express the Conc. of Solution - Molarity (M), Molality (m) mass % age	Engg. Chemistry By Sashi Chawla	Text Book Chemistry Class +1, +2 (Part - I, II) N.C.E.R.T	
3.)	15-23	Electrochemistry and Corrosion	Electronic concept of Oxidation and Reduction and Redox Rxns, Definition of term - Electrolytes & Non Electrolytes with Example		Pradeep Publication	

be approved from concerned HOD within seven days from beginning of semester & will be kept with the course file as rec