Lesson Plan

Name of Faculty	Sh. Yudhvir Singh
Discipline	Applied Sciences & Humanities
Semester	1st (Automobile, Civil and Electrical Engg.)
Subject	Applied Chemistry **(BS105)**
Lesson Plan Duration	From Aug 2025to Dec 2025

Week	Chapter	Topics	Remarks/Coverage
1st (01Aug-07Aug)	Orientation Program w.e.f. 01/08/2025 to 07/08/2025		
08 Aug	Atomic Structure	1.1 Fundamental particles of atoms	
2nd (11Aug-14 Aug)		Electron, proton, neutron (Definitions) 1.2 Atomic Structure: Bohr's theory, successes and limitations (expression of energy and radius to be omitted), and Hydrogen spectrum explanation based on Bohr's model of atom,	
3rd (18Aug-23 Aug)		1.3 Heisenberg uncertainty principle, Quantum numbers – orbital concept, Shapes of s, p orbitals , difference between orbit and orbital 1.4 Pauli's exclusion principle, Hund's rule of maximum multiplicity Aufbau rule, electronic configuration(Z=1 to 30).	
4th (25Aug -30Aug)	Chemical bonding and Solutions	2.1 Concept of chemical bonding – cause of chemical bonding, types of bonds: ionic bonding (NaCl example) 2.2 Lewis concept of covalent bond (H2, F2, HF). Electronegativity, Difference between sigma and pie bond	
5th (01Sep- 06Sep)		2.3 Electron sea model of metallic bond. 2.4 Idea of solute, solvent and solution 2.5 Methods to express the concentration of solution- molarity (M = mole per liter), molality, mass percentage (Numerical excluded)	
6th (08Sep- 12Sep)	Electro Chemistry and Corrosion	3.1 Electronic concept of oxidation, reduction and redox reactions. Definition of terms: electrolytes, non-electrolytes with suitable examples, 3.2 Faradays laws of electrolysis and simple numerical problems. 3.3 Industrial application of Electrolysis – • Electrometallurgy • Electroplating • Electrolytic refining	
7th (15Sep-20Sep)		3.4 Application of redox reactions in electrochemical cells – • Primary cells – dry cell, • Secondary cell - commercially used lead acid storage battery. 3.5 Introduction to Corrosion of metals – definition, types of corrosion (electrochemical), H2 liberation and O2 absorption mechanism of electrochemical corrosion	
8th (22Sep -27Sep)		3.6 Internal corrosion preventive measures – Purification, alloying and heat treatment and External corrosion preventive measures: metal (anodic, cathodic) coatings. **4.1Natural occurrence of metals – minerals, ores of iron, aluminum and copper, gangue (matrix), flux, slag**	
9th (29Sep -04Oct)	Engineering Materials	Metallurgy – brief account of general principles of metallurgy(a).Crushing and grinding (b) Concentration of ore (Levigation, Froth flotation, Magnetic separation) (c) Extraction(Roasting and calcinations & smelting) (d) Refining (Electro refining, zone refining).	
10th (06Oct-10Oct)		4.2 Extraction of - iron from haematite ore using blast furnace along with reactions. 4.3 Alloys – definition, purposes of alloying, ferrous alloys (Invar steel) and non-ferrous(Simple Brass & Bronze, Nichrome, Duralumin, Magnelium) with suitable examples, properties and applications.	
11th (13Oct-18Oct)	Water	5.1Classification of soft and hard water based on soap test, salts causing water hardness, units of hardness(mg/L and ppm) and simple numerical on water hardness. Cause of poor lathering of soap in hard water, 5.2 Problems caused by the use of hard water in boiler (scale and sludge, foaming and priming, corrosion.)	
12th (21Oct-25Oct)		5.3 i) water softening techniques- zeolite process ii). Municipal water treatment (in brief only) – sedimentation, coagulation, filtration, sterilization. 5.4 Properties of water used for human consumption for drinking and cooking purposes from any water sources and Indian standard specification of drinking water.	
13th (27Oct-01Nov)	Fuels	6.1 Definition of fuel and combustion of fuel, classification of fuels 6.2 calorific values (HCV and LCV), calculation of HCV and LCV using Dulong's formula. Characteristics of good fuel 6.3 Petrol and diesel - fuel rating (octane and cetane numbers)	
14th (03Nov-07Nov)		6.4 Chemical composition, calorific values and applications of LPG, CNG, water gas, producer gas and biogas	

15th (10Nov-15Nov)	Lubricants & Polymers	7.1Function and characteristic properties of good lubricant, 7.2 classification with examples. 7.3 Lubrication mechanism – hydrodynamic and boundary lubrication 7.4 Physical properties (viscosity and viscosity index oiliness, flash and fire point, cloud and pour point only)	
16th (17Nov-22Nov)		Chemical properties (coke number, total acid number, saponification value) of lubricants. **8.1 Monomer, homo and co polymers , degree of polymerization 8.2 simple reactions involved in preparation and their application of thermoplastics and thermosetting plastics (using Polythene, PVC, PS, PTFE, nylon-6,6 and Bakelite only**	
17th (24Nov-26 Nov)	Polymers	8.3 Vulcanization of rubber and properties of vulcanized rubber.	

Subject Teacher

HOD (AS&H)

Govt. Polytechnic Kullu at Seobagh
LESSON PLAN

Name Of Subject : Mathematics-1
Semester : First

Session : Aug2025-Nov2025
Branch :-Automobile Engg.

Month	Week	Name Of The Chapter	Contents To Be Tought	Remarks/ Coverage
August & September	01st Aug -07th Aug)		**Orientation Program w.e.f. 01/08/2025 to 07/08/2025**	
	week-1 08Aug- 14Aug Week-2 18Aug- 23Sep Week-3 25Sep- 30Sep	1. Trignometry	Concept of angles, measurement of angles in degrees, grades and radians and their conversions.T-Ratios of Allied angles (without proof), Sum, difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa). T- Ratios of multiple angles, sub-multiple angles (2A, 3A, A/2).	
September	Week-4 01Sep-06Sep Week-5 08Sep-12sep	2. Trignometry & Differential Calculus	Graphs of sin x,cos x, Definition of function; Concept of limits. Four standard limits Differentiation by definition of sinx,cosx,tanx,logx,e(x),xn	
	Week-6 15Sep-20Sep	3. Differential Calculus	Differentiation by definition of sinx,cosx,tanx,logx,e(x),xn Differentiation of sum, product and quotient of functions. Differentiation of function of a function.Differentiation of trigonometric and inverse trigonometric functions, Logarithmic differentiation	
Septiember	Week-7 22Sep-27Sep Week-8 29Sep-04Oct			
October	Week-9 06Oct-10Oct Week-10 13Oct-25Oct	4. Algebra	Complex Numbers: Definition, real and imaginary parts of a Complex number,polar and Cartesian representation of a complex number and its conversion from one form to other. conjugate of a complex number, modulus and amplitude of a complex number, Addition, Subtraction, Multiplication and Division of a complex numbers, De-movier's theorem, its applications	
	Week-11 27Oct-31Oct	5. Algebra	Partial fractions: Definition of polynomial fraction proper & improper fractions and definition of partial fractions. To resolve proper fraction into partial fraction with denominator containing non-repeated linear factors, repeated linear factors. Permutations and Combinations: Value of nPr and nCr.	
Novemb	Week-12 1Nov-07Nov			
November	Week-13 10Nov-15Nov Week-14 17Nov-26Nov	6. Algebra	Binomial theorem: Binomial theorem (without proof) for positive integral index (expansion and general form); binomial theorem for any index (expansion without proof) first and second binomial approximation with applications to engineering problems.	

Signature of the Teacher LEKH RAJ SHARMA (C'HOD ASSTH)

Sign Of HOD /OIC
Lekh Raj Sharma

GOVT POLYTECHNIC KULLU

Lesson Plan Aug 2025- Nov 2025

Subject: Sports & Yoga	Branch : Electrical & Civil Engg.	Semester: 1st

MONTH/ WEEK	Name Of The Chapter	Content To be Taught	REMARKS
01Aug- 07Aug	Orientation programme w.e.f. 01/08/25 to 07/08/25		
week-1 08Aug- 14Aug	Introduction To Physical Education	Meaning & definition of Physical Education Aims & Objectives of Physical Education. Changing trends in Physical Education.	
Week-2 18Aug- 23Aug	Olympic Movement	Ancient & Modern Olympics (Summer & Winter.) Olympic Symbols, Ideals, Objectives & Values. Awards and Honours in the field of Sports in India (Dronacharya Award, Arjuna Award, Dhayanchand Award, Rajiv Gandhi Khel Ratna Award etc.).	
Week-3 25Aug- 30Aug	Physical fitness,Wellness &Lifestyle	Meaning & Importance of Physical Fitness & Wellness. Components of Physical fitness. Components of Health related fitness. Components of wellness. Preventing Health Threats through Lifestyle Change. Concept of Positive Lifestyle.	
Week-4 01Sep-06Sep	Fundamental of Anatomy & Physiology in Physical Education , Sports and Yoga	Define Anatomy, Physiology & Its Importance. Effect of exercise on the functioning of Various Body Systems. (Circulatory System, Respi- ratory System, Neuro-Muscular System etc.).	
Week-5 08Sep-12sep	Kinesiology ,Biomechanics &Sports	Meaning & Importance of Kinesiology & Biomechanics in Physical Edu. & Sports. Newton's Law of Motion & its application in sports. Friction and its effects in Sports.	
Week-6 15Sep-20Sep	Postures	Meaning and Concept of Postures. Causes of Bad Posture.Advantages & disadvantages of weight training. Concept & advantages of Correct Posture.Common Postural Deformities – Knock Knee; Flat Foot; Round Shoulders; Lordosis, Ky- phosis, Bow Legs and Scoliosis.Corrective Measures for Postural Deformities	
Week-7 22Sep-27 Sep	Yoga	Meaning & Importance of Yoga. Elements of Yoga. Introduction - Asanas, Pranayama, Meditation & Yogic Kriyas Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Sha-shankasana).Relaxation Techniques for improving concentration Yognidra.	

(Ushn Rajsharma)
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Week-8&9 29 Sep-04Oct & 06Oct-10Oct	**Yoga and Lifestyle**	Asanas as preventive measures.Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana,Sharasana.Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, ArdhMatsyendrasana.Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana.Diabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana.	
Week-10 13Oct-25Oct	**Training & Planning in sports**	Meaning of Training. Warming up and limbering down.Skill, Technique & Style.Meaning and Objectives of Planning.Tournament – Knock-Out, League/Round Robin & Combination.	
Week-11 & 12 27Oct-31Oct & 1Nov-7Nov	**Psychology & Sports**	Definition & Importance of Psychology in Physical Edu. & Sports. Define & Differentiate Between Growth & Development Adolescent Problems & Their Management.Emotion: Concept, Type & Controlling of emotions. Meaning, Concept & Types of Aggressions in Sports.Psychological benefits of exercise.Anxiety & Fear and its effects on Sports Performance. Motivation, its type & techniques.Understanding Stress & Coping Strategies.	
Weeek-13 10Nov-15Nov	**Doping**	Meaning and concept of doping.probhibited substances and methods . Side effects of prohibited substances. First Aid - Definition ,Aims & Objectives. Sports injuries : classification , causes & prevention.	
Week-14 17Nov-26Nov	**Sports Medicine , Sports / Games**	Management of injuries : soft tissue injuries and bone & joint injuries. Following sub topics related to anyone game / sport of choice of student out of : Atheletics , badminton , Basketball , Chess , Cricket , kabaddi , lawn tennis , Swimming , table tennis , Volleyball , Yoga etc.	

Teacher's sign. Lekh Raj Sharma

H.O.D. Sign

Govt. Polytechnic Kullu at Seobagh
LESSON PLAN

Name Of Subject : Mathematics-1
Semester : First

Session : Aug2025-Nov2025
Branch :-Electrical & Civil Engg.

Month	Week	Name Of The Chapter	Contents To Be Tought	Remarks/ Coverage
August & September	01st Aug -07th Aug)		**Orientation Program w.e.f. 01/08/2025 to 07/08/2025**	
	week-1 08Aug- 14Aug	1. Trignometry	Concept of angles, measurement of angles in degrees, grades and radians and their conversions.T-Ratios of Allied angles (without proof), Sum, difference formulae and their applications (without proof). Product formulae (Transformation of product to sum, difference and vice versa). T- Ratios of multiple angles, sub-multiple angles (2A, 3A, A/2).	
	Week-2 18Aug- 23Sep			
	Week-3 25Sep- 30Sep			
September	Week-4 01Sep-06Sep	2. Trignometry & Differential Calculus	Graphs of sin x,cos x, Definition of function; Concept of limits. Four standard limits Differentiation by definition of sinx,cosx,tanx,logx,e(x),xn	
	Week-5 08Sep-12sep			
September	Week-6 15Sep-20Sep	3. Differential Calculus	Differentiation by definition of sinx,cosx,tanx,logx,e(x),xn Differentiation of sum, product and quotient of functions. Differentiation of function of a function.Differentiation of trigonometric and inverse trigonometric functions, Logarithmic differentiation	
	Week-7 22Sep-27Sep			
	Week-8 29Sep-04Oct			
October	Week-9 06Oct-10Oct	4. Algebra	Complex Numbers: Definition, real and imaginary parts of a Complex number,polar and Cartesian representation of a complex number and its conversion from one form to other. conjugate of a complex number, modulus and amplitude of a complex number, Addition, Subtraction, Multiplication and Division of a complex numbers, De-movier's theorem, its applications	
	Week-10 13Oct-25Oct			
	Week-11 27Oct-31Oct	5. Algebra	Partial fractions: Definition of polynomial fraction proper & improper fractions and definition of partial fractions. To resolve proper fraction into partial fraction with denominator containing non-repeated linear factors, repeated linear factors. Permutations and Combinations: Value of nPr and nCr.	
Novemb	Week-12 1Nov-07Nov			
November	Week-13 10Nov-15Nov	6. Algebra	Binomial theorem: Binomial theorem (without proof) for positive integral index (expansion and general form); binomial theorem for any index (expansion without proof) first and second binomial approximation with applications to engineering problems.	
	Week-14 17Nov-26Nov			

Monika Sharma
Lect. - Math

Signature of the Teacher

01-08-2025

Sign. Of HOD /OIC

GOVT POLYTECHNIC KULLU

Lesson Plan Aug 2025- Nov 2025

Subject: Sports & Yoga	Branch : Auto Engg.	Semester: 1st

MONTH/ WEEK	Name Of The Chapter	Content To be Taught	REMARKS
01Aug- 07Aug	Orientation programme w.e.f. 01/08/25 to 07/08/25		
week-1 08Aug- 14Aug	Introduction To Physical Education	Meaning & definition of Physical Education Aims & Objectives of Physical Education. Changing trends in Physical Education.	
Week-2 18Aug- 23Aug	Olympic Movement	Ancient & Modern Olympics (Summer & Winter.) Olympic Symbols, Ideals, Objectives & Values. Awards and Honours in the field of Sports in India (Dronacharya Award, Arjuna Award, Dhayanchand Award, Rajiv Gandhi Khel Ratna Award etc.).	
Week-3 25Aug- 30Aug	Physical fitness,Wellness &Lifestyle	Meaning & Importance of Physical Fitness & Wellness. Components of Physical fitness. Components of Health related fitness. Components of wellness. Preventing Health Threats through Lifestyle Change. Concept of Positive Lifestyle.	
Week-4 01Sep-06Sep	Fundamental of Anatomy & Physiology in Physical Education , Sports and Yoga	Define Anatomy, Physiology & Its Importance. Effect of exercise on the functioning of Various Body Systems. (Circulatory System, Respi- ratory System, Neuro-Muscular System etc.).	
Week-5 08Sep-12sep	Kinesiology ,Biomechanics &Sports	Meaning & Importance of Kinesiology & Biomechanics in Physical Edu. & Sports. Newton's Law of Motion & its application in sports. Friction and its effects in Sports.	
Week-6 15Sep-20Sep	Postures	Meaning and Concept of Postures. Causes of Bad Posture.Advantages & disadvantages of weight training. Concept & advantages of Correct Posture.Common Postural Deformities – Knock Knee; Flat Foot; Round Shoulders; Lordosis, Ky- phosis, Bow Legs and Scoliosis.Corrective Measures for Postural Deformities	
Week-7 22Sep-27 Sep	Yoga	Meaning & Importance of Yoga. Elements of Yoga. Introduction - Asanas, Pranayama, Meditation & Yogic Kriyas Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Sha-shankasana).Relaxation Techniques for improving concentration Yognidra.	

Monika Sharma

Week-8&9 29 Sep-04Oct & 06Oct-10Oct	**Yoga and Lifestyle**	Asanas as preventive measures.Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana,Sharasana.Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, ArdhMatsyendrasana.Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana.Diabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana.	
Week-10 13Oct-25Oct	**Training & Planning in sports**	Meaning of Training. Warming up and limbering down.Skill, Technique & Style.Meaning and Objectives of Planning.Tournament – Knock-Out, League/Round Robin & Combination.	
Week-11 & 12 27Oct-31Oct & 1Nov-7Nov	**Psychology & Sports**	Definition & Importance of Psychology in Physical Edu. & Sports. Define & Differentiate Between Growth & Development Adolescent Problems & Their Management.Emotion: Concept, Type & Controlling of emotions. Meaning, Concept & Types of Aggressions in Sports.Psychological benefits of exercise.Anxiety & Fear and its effects on Sports Performance. Motivation, its type & techniques.Understanding Stress & Coping Strategies.	
Weeek-13 10Nov-15Nov	**Doping**	Meaning and concept of doping.probhibited substances and methods . Side effects of prohibited substances. First Aid - Definition ,Aims & Objectives. Sports injuries : classification , causes & prevention.	
Week-14 17Nov-26Nov	**Sports Medicine , Sports / Games**	Management of injuries : soft tissue injuries and bone & joint injuries. Following sub topics related to anyone game / sport of choice of student out of : Atheletics , badminton , Basketball , Chess , Cricket , kabaddi , lawn tennis , Swimming , table tennis , Volleyball , Yoga etc.	

Monika Sharma

Teacher's sign.

01-08-2024

H.O.D. Sign

Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138		
Department of Applied Sciences& Humanities		
Lesson Plan w.e.f 01/08/2025 to 26/11/2025		
Subject: Communication skills in English		Name of the teacher : Neetu Thakur
Branches : Auto Engg, Civil Engg., Elect. Engg.		Semester: 1st
MONTH/ WEEK	**Chapter**	**Contents taught**
1st (01Aug-07Aug)	Orientation programme w.e.f. 01/08/25 to 07/08/25	
2nd (11Aug-14Aug)	Unit 1: Communication : Theory and Practice	1.Basics of communication: introduction, process of communication
3rd (18Aug-23Aug)		2.Types of communication: Formal & Informal, barriers to effective comm.
		3.7C's for effective communication
4th(25Aug-30Aug)		4.Art of effective communication
		5.Technical communication
5th (01Sep-06Sep)	Unit 2: Soft Skills for Professional Excellence	1.Introduction: Soft Skills & Hard Skills
		2.Importance of soft skills
6th (08Sep-12Sep)		3. Life skills: Self-awareness and Self-analysis, adaptability, resilience, emotional intelligence and empathy etc.
		4.Applying soft skills across cultures.
08 Sep -12 Sep		**Class Test I**
7th (15th Sep-20Sep)	Unit 3 : Reading Comprehension	**Section 1: Short Stories** 1."The Gift of the Magi" by O. Henry.
8th (22Sep-27Sep) 9th (29Sep-04Oct)		Section 2: Poetry 1."Night of the Scorpion" by Nissim Ezekiel 2. "Stopping by Woods on a Snowy Evening" by Robert Frost.
10th (06 Oct-10Oct)		3. "Where the Mind is Without Fear" by Rabindranath Tagore
(13Oct-18Oct)		**Class Test II**
10th (13Oct-18Oct)	Unit 4: Professional Writing	1. The art of précis writing.
11th(21Oct-25Oct)		2.Letters: business and personal
12th (27Oct-1Nov)		3.Drafting e-mail, notices, minutes of a meeting etc
14th (03Nov-07Nov)	Unit 5: Vocabulary and Grammar	1. Glossary of administrative terms (English and Hindi).
13th (10Nov -15 Nov)		**House Test**
15th (17Nov-22 Nov)		2.One-word substitution,Idioms and phrases etc.
16th (24Nov-26Nov)		3.Parts of speech,Tenses,active and passive voice, Punctuation etc.

Teacher's sign.

Neetu Thakur
Lect. (English)

H.O.D 01-08-2025

GOVT. POLYTECHNIC KULLU			
LESSON PLANS (LABS)			
NAME OF THE TEACHER: NEETU THAKUR		DESIGNATION: LECTURER	
NAME OF THE LAB: LANGUAGE LAB		SESSION:Aug 2025-Nov 2025	
BRANCHES: Auto Engg., Civil Engg, Elect. Engg.			SEMESTER: 1st
		PROPOSED DATES	Remarks
Sr. No.	DESCRIPTION OF PRACTICALS	GROUP-I/Group II	
1	Unit 1: Listening Skills Listening Process and Practice: Introduction to recorded lectures, poems,	2nd week August	
2	Unit 1: Listening Skills Listening Process and Practice: Introduction to recorded lectures, poems,	3rd & 4th week August	
3	Unit II: Introduction to Phonetics 1. Sounds: consonant, vowel, diphthongs, etc.	1st & 2nd Week September	
4	Word stress, intonation, voice modulation etc.	3rd week September	
5	Unit III Speaking Skills Standard and formal speech: Group discussion,	4th week September	
6	Public speaking, business presentations etc.	1st & 2nd Week October	
7	Conversation practice	3rd week October	
8	Role playing	1st Week November	
9	Mock interviews	3rd Week November	
10	Oral presentations	4th Week November	

Teacher
Neetu Thakur
(Lect. English)

HOD
01-08-2025

GOVT POLYTECHNIC KULLU

Lesson Plan Aug 2025- Nov. 2025

Subject: Introduction to IT system LAB **Branches : Civil Engg** **Semester: 1st**

Name of the teacher : Er. Anil Kumar **Discription of Practical (G1/G2)** **Code No : ES108**

MONTH/ WEEK	Practical No.	Pratical Name	Remarks/ Coverage
1st (01Aug- 07Aug)	Orientation programme w.e.f. 01/08/25 to 07/08/25		
2nd (08Aug- 14Aug)	1	To identify the various hardware components of computer system	
3rd (18Aug- 23Aug.)	2	To assemble hardware components of computer system.	
4th (25 Aug-30Aug)	3	To install window OS on computer system	
5th (01Sep-06Sep), 6th (08Sep-12Sep)			
7th (15 Sep- 20Sep)	4	To study the various feature offered on the desktop, creating new folder and new file on the desktop	
8th (22 Sep -27 Sep)	5	To work in different web browsers (Google chrome, internet explorer), setting up default homepage on browser and study the various	
9th (29 Sep.-4Oct)	6	To open search engine (Google and yahoo) and search different information using the search engine. Creating an e-mail account	
10th (06Oct-10Oct)			
11th(13Oct-18Oct)	7	Visit various e-governance /digital India Portals and understanding the services offered.	
12th (21Oct-25 Oct), 13th (27 Oct -01 Nov)	8	Opening, creating and saving a document, locating files, copying contents in some different file(s), protecting files, giving password	
14th (03Nov-07Nov)	9	Formatting a document, creating and editing tables, mail-merge	
15th (10Nov-15 Nov)	10	Working on ms-excel – Creating a worksheet in Excel. Copy, Move and merge the cells and various Formatting feature	
16th (17Nov-26 Nov)	11	Using formula and function prepare worksheet for storing subject marks of ten students and perform the following:Calculate the student wise total and average. Calculate the subject wise total and average.following:Calculate the overall percentage and also individual	

Signautre of Teacher

Anil Kumar

01-08-2025

Signature of HOC/OIC

Govt. Polytechnic Kullu at Seobagh
LESSON PLAN

Name Of Subject : Physics-I
Semester : First

Session : Aug2025-Nov2025
Branch :-Electrical , Civil, Automobile Engg.

Month	Week	Name Of The Chapter	Contents To Be Tought	Remarks/ Coverage
	01st Aug -07th Aug)		**Orientation Program w.e.f. 01/08/2025 to 07/08/2025**	
August & September	week-1 08Aug- 14Aug	1. Physical World , Units and dimensions	Physical quantities Units : Funamental and derived units , system of units (FPS, CGS and SI units) , Dimensions and dinmensional formulae of physical quantities., Principle of homogenity of dimensions, Dimension equations and their applications , Conversion from one system of units to other , checking of dimensional equationas , Derivation of simple equations and limitation of dimensional analysis, Error in measurement ,absolute error,relative error and significant figures.	
	Week-2 18Aug- 23Sep			
	Week-3 25Sep- 30Sep			
September	Week-4 01Sep-06Sep			
	Week-5 08Sep-12sep	2. Force and Motion	Scalar and vector quantities , representation of vector and types of vector, Addition and subtraction of vectors, Triangle and parallelogram law , scalar and vector product, Resolution of vectors and its application to lawn roller, Force, Momentum, statement and derivation of conservation of linear momentum, its application such as recoil of gun, Imulse and its application, circular motion, definition of angular displcement, velocity, acceleration, frequency and time period . Relation between linear and angular velocity, linear acceleration and	
	Week-6 15Sep-20Sep			
September	Week-7 22Sep-27Sep			
	Week-8 29Sep-04Oct	3. Work, Power and Energy	Work and its uints, examples of zero work, positive work and negative work, Friction: Modern concept, types, laws of limiting friction, Coefficient of friction and its applications, Workn done in moving an object on horizontal and inclined plane for rough and plane surfaces with its applications. Energy and its	
October	Week-9 06Oct- 10Oct	4. Rotational Motion	Concept of translatory and rotatory motions with examplesd, Definition of torque and angular momentum and their examples, Conservation of angular momrntum and its examples, Moment of	
	Week-10 13Oct-25Oct	5. Properties of Matter	Elasticity : Definition of stress and strain, Different types of moduli of elasticity , Hookes law , significance of stress strain curve, Pressure: definition , its units, atmospheric pressure, gauge pressure,absolute pressure, Fortins barometer and its applications, surface tension : concept and units, Angle of contact , Ascent Formula, Angle of contact , Ascent Formula, Application of surface tension , effect of temperature and impurities on surface tension.	
	Week-11 27Oct-31Oct			
Novemb	Week-12 1Nov-07Nov			
November	Week-13 10Nov-15Nov	6. Heat & Thermometry	Heat and tempearture definition. Differencev between heat and temperature, Modes of transfer of heat i.e. Conduction, convection and radiation with examples, Different scale of temperature and their relationship, Types of Thermometry : Mercury thermometer , bimetallic thermometer, Platinum resistance thermometer and pyrometer ,Expansion of solid , liquid and gases, Coefficient of linear and surface expansion, Coefficient of cubic expansion and relationship amongst them, Coefficient of	
	Week-14 17Nov-26Nov			

Gopal Sharma
Lect In Applied Physics

Signature of the Teacher

01-08-25

Sign. Of HOD /OIC

GOVT POLYTECHNIC KULLU

Lesson Plan Aug 2025- Nov. 2025

Subject: Applied Physics-I LAB **Branches : Electrical, Automobile & Civil Engg** **Semester: 1st**

Name of the teacher : Sh. Gopal Sharma **Discription of Practical (G1/G2)**

MONTH/ WEEK	Practical No.	Pratical Name	Remarks/ Coverage
1st (01Aug- 07Aug)	Orientation programme w.e.f. 01/08/25 to 07/08/25		
2nd (08Aug- 14Aug)	1	To measure length, radius of a given cylinder, a test tube and a beaker using a Vernier caliper and find volume of each object.	
3rd (18Aug- 23Aug.)	2	To determine diameter of a wire, a solid ball and thickness of cardboard using a screw gauge	
4th (25 Aug-30Aug)	3	To determine radius of curvature of a convex and a concave mirror/surface using a spherometer	
5th (01Sep-06Sep), 6th (08Sep-12Sep)	4	To verify triangle law of forces	
7th (15 Sep- 20Sep)	5	To verify parallelogram law of forces .	
8th (22 Sep -27 Sep)			
9th (29 Sep.-4Oct)	6	To determine force constant of a spring using Hook's Law.	
10th (06Oct-10Oct)			
11th(13Oct-18Oct)	7	To verify law of conservation of mechanical energy (PE to KE).	
12th (21Oct-25 Oct), 13th (27 Oct -01 Nov)	8	To find the moment of inertia of a flywheel	
14th (03Nov-07Nov)	9	To determine atmospheric pressure at a place using Fortin's barometer	
15th (10Nov-15 Nov)	10	To measure room temperature and temperature of a hot bath using mercury thermometer and convert it into different scales	
16th (17Nov-26 Nov)			

Gopal Sharma
Lect. in Applied Physics

Signautre of Teacher

Signature of HOC/OIC

Lesson Plan

Name of Faculty	Sh. Yudhvir Singh
Discipline	Applied Sciences & Humanities
Semester	1st (Automobile, Civil and Electrical Engg.)
Subject	Applied Chemistry **(BS105)**
Lesson Plan Duration	From Aug 2025to Dec 2025

Week	Chapter	Topics	Remarks/Coverage
1st (01Aug-07Aug)	Orientation Program w.e.f. 01/08/2025 to 07/08/2025		
08 Aug	Atomic Structure	1.1 Fundamental particles of atoms	
2nd (11Aug-14 Aug)		Electron, proton, neutron (Definitions) 1.2 Atomic Structure: Bohr's theory, successes and limitations (expression of energy and radius to be omitted), and Hydrogen spectrum explanation based on Bohr's model of atom,	
3rd (18Aug-23 Aug)		1.3 Heisenberg uncertainty principle, Quantum numbers – orbital concept, Shapes of s, p orbitals , difference between orbit and orbital 1.4 Pauli's exclusion principle, Hund's rule of maximum multiplicity Aufbau rule, electronic configuration(Z=1 to 30).	
4th (25Aug -30Aug)	Chemical bonding and Solutions	2.1 Concept of chemical bonding – cause of chemical bonding, types of bonds: ionic bonding (NaCl example) 2.2 Lewis concept of covalent bond (H2, F2, HF). Electronegativity, Difference between sigma and pie bond	
5th (01Sep- 06Sep)		2.3 Electron sea model of metallic bond. 2.4 Idea of solute, solvent and solution 2.5 Methods to express the concentration of solution- molarity (M = mole per liter), molality, mass percentage (Numerical excluded)	
6th (08Sep- 12Sep)	Electro Chemistry and Corrosion	3.1 Electronic concept of oxidation, reduction and redox reactions. Definition of terms: electrolytes, non-electrolytes with suitable examples, 3.2 Faradays laws of electrolysis and simple numerical problems. 3.3 Industrial application of Electrolysis – • Electrometallurgy • Electroplating • Electrolytic refining	
7th (15Sep-20Sep)		3.4 Application of redox reactions in electrochemical cells – • Primary cells – dry cell, • Secondary cell - commercially used lead acid storage battery. 3.5 Introduction to Corrosion of metals – definition, types of corrosion (electrochemical), H2 liberation and O2 absorption mechanism of electrochemical corrosion	
8th (22Sep -27Sep)		3.6 Internal corrosion preventive measures – Purification, alloying and heat treatment and External corrosion preventive measures: metal (anodic, cathodic) coatings. **4.1Natural occurrence of metals – minerals, ores of iron, aluminum and copper, gangue (matrix), flux, slag**	
9th (29Sep -04Oct)	Engineering Materials	Metallurgy – brief account of general principles of metallurgy(a).Crushing and grinding (b) Concentration of ore (Levigation, Froth flotation, Magnetic separation) (c) Extraction(Roasting and calcinations & smelting) (d) Refining (Electro refining, zone refining).	
10th (06Oct-10Oct)		4.2 Extraction of - iron from haematite ore using blast furnace along with reactions. 4.3 Alloys – definition, purposes of alloying, ferrous alloys (Invar steel) and non-ferrous(Simple Brass & Bronze, Nichrome, Duralumin, Magnelium) with suitable examples, properties and applications.	
11th (13Oct-18Oct)	Water	5.1Classification of soft and hard water based on soap test, salts causing water hardness, units of hardness(mg/L and ppm) and simple numerical on water hardness. Cause of poor lathering of soap in hard water, 5.2 Problems caused by the use of hard water in boiler (scale and sludge, foaming and priming, corrosion.)	
12th (21Oct-25Oct)		5.3 i) water softening techniques- zeolite process ii). Municipal water treatment (in brief only) – sedimentation, coagulation, filtration, sterilization. 5.4 Properties of water used for human consumption for drinking and cooking purposes from any water sources and Indian standard specification of drinking water.	
13th (27Oct-01Nov)	Fuels	6.1 Definition of fuel and combustion of fuel, classification of fuels 6.2 calorific values (HCV and LCV), calculation of HCV and LCV using Dulong's formula. Characteristics of good fuel 6.3 Petrol and diesel - fuel rating (octane and cetane numbers)	
14th (03Nov-07Nov)		6.4 Chemical composition, calorific values and applications of LPG, CNG, water gas, producer gas and biogas	

15th (10Nov-15Nov)	Lubricants & Polymers	7.1Function and characteristic properties of good lubricant, 7.2 classification with examples. 7.3 Lubrication mechanism – hydrodynamic and boundary lubrication 7.4 Physical properties (viscosity and viscosity index oiliness, flash and fire point, cloud and pour point only)	
16th (17Nov-22Nov)		Chemical properties (coke number, total acid number, saponification value) of lubricants. **8.1 Monomer, homo and co polymers , degree of polymerization 8.2 simple reactions involved in preparation and their application of thermoplastics and thermosetting plastics (using Polythene, PVC, PS, PTFE, nylon-6,6 and Bakelite only**	
17th (24Nov-26 Nov)	Polymers	8.3 Vulcanization of rubber and properties of vulcanized rubber.	

Subject Teacher

HOD (AS&H)