



GOVERNMENT POLYTECHNIC FOR WOMEN
KANDAGHAT, DISTT. SOLAN (HP) - 173215

DEPARTMENT OF APPLIED SCIENCES
LESSON PLAN

Academic Year	2022-23
Semester	1st
Subject Code	BS101
Subject Title	Mathematics-I
Name of Faculty	Reema Choudhary
Semester Start & End Dates	01.10.2022 - 20.01.2023

STUDY AND EVALUATION SCHEME

Sr. No.	Name of the Subject	Th	DCS	Pr	Credits	Internal Assessment			External Assessment					Total Marks
						Th	Pr	Total	Th	Hrs	Pr	Hrs	Total	
1	Mathematics-I	3	2	0	3	40	-	40	60	3	-	-	60	100

Subject Details:

Day	Unit & Topic of Discussion	Topic Details	Delivery Method
	Unit-1 : Trigonometry		
Day 1	Measurement of Angles	Concept of angles, measurement of angles in degrees, grades and radians and their conversion	Chalk & Talk
Day 2	Measurement of Angles	Concept of angles, measurement of angles in degrees, grades and radians and their conversion	Chalk & Talk
Day 3	Trigonometric Ratios	T-Ratios of Allied angles (without proof)	Chalk & Talk
Day 4		DCS	Chalk & Talk
Day 5		DCS	Chalk & Talk
Day 6	Trigonometric Ratios	T-Ratios of Allied angles (without proof)	Chalk & Talk
Day 7	Addition and Subtraction	Sum, difference formulae and their applications (without proof).	Chalk & Talk
Day 8	Addition and Subtraction	Sum, difference formulae and their applications (without proof).	Chalk & Talk
Day 9		DCS	Chalk & Talk
Day 10		DCS	Chalk & Talk
Day 11	Multiplication	Product formulae (Transformation of product to sum, difference and vice versa	Chalk & Talk


Day 12	Multiplication	Product formulae (Transformation of product to sum, difference and vice versa)	Chalk & Talk
Day 13		DCS	Chalk & Talk
Day 14		DCS	Chalk & Talk
Day 15	Multiple and Sub-multiple angles	T-Ratios of multiple angles, sub-multiple angles (2A, 3A, A/2)	Chalk & Talk
Day 16	Graphs	Sinx, Cosx	Chalk & Talk
Day 17		DCS	Chalk & Talk
Day 18		DCS	Chalk & Talk
Day 19		1st Class Test (30% syllabus)	Chalk & Talk

Unit-II : Differential Calculus

Day 20	Function	Definition of function	Chalk & Talk
Day 21	Limit	Concept of limits	Chalk & Talk
Day 22	Limit	Four standard limits $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$ $\lim_{x \rightarrow 0} \frac{\sin x}{x}$	Chalk & Talk
Day 23		DCS	Chalk & Talk
Day 24		DCS	Chalk & Talk
Day 25	Limit	$\lim_{x \rightarrow 0} \left(\frac{a^x - 1}{x} \right)$, $\lim_{x \rightarrow 0} (1 + x)^{\frac{1}{x}}$	Chalk & Talk
Day 26	Differentiation by definition	$\sin x$, $\cos x$	Chalk & Talk
Day 27	Differentiation by definition	$\tan x$, e^x and x^x	Chalk & Talk
Day 28		DCS	Chalk & Talk
Day 29		DCS	Chalk & Talk
Day 30	Differentiation	Differentiation of sum, product	Chalk & Talk
Day 31	Differentiation	and quotient of functions .	Chalk & Talk
Day 32	Differentiation	Differentiation of a function of function	Chalk & Talk
Day 33		DCS	Chalk & Talk
Day 34		DCS	Chalk & Talk
Day 35	Differentiation	Differentiation of trigonometric function	Chalk & Talk
Day 36	Differentiation	Logarithmic differentiation, Exponential functions	Chalk & Talk
Day 37		DCS	Chalk & Talk
Day 37		DCS	Chalk & Talk
Day 38	Applications	Maxima and minima	Chalk & Talk
Day 39	Applications	Equations of tangent and normal to a curve (for explicit function only)	Chalk & Talk
Day 40	Applications	Calculations of small errors and rate	Chalk & Talk

Day 41		2nd Class Test (next 30 % syllabus)	Chalk & Talk
	Unit-III : Algebra		
Day 42	Complex Number	Real and imaginary parts of a complex number	Chalk & Talk
Day 43	Complex Number	Polar and Cartesian representation of a complex number	Chalk & Talk
Day 44	Complex Number	and its conversion from one form to other, conjugate of a complex number	Chalk & Talk
Day 45	Complex Number	and its conversion from one form to other, conjugate of a complex number	Chalk & Talk
Day 46		DCS	Chalk & Talk
Day 47		DCS	Chalk & Talk
Day 48	Complex Number	modulus and amplitude of a complex number.	Chalk & Talk
Day 49	Complex Number	Addition , Subtraction, Multiplication	Chalk & Talk
Day 50	Complex Number	Addition , Subtraction, Multiplication	Chalk & Talk
Day 51	Complex Number	and Division of a complex numbers	Chalk & Talk
Day 52		DCS	Chalk & Talk
Day 53		DCS	Chalk & Talk
Day 54	Complex Number	, De-moivre's theorem, its application.	Chalk & Talk
Day 55	Partial fractions	Repeated linear factors; non-repeated linear	Chalk & Talk
Day 56	Partial fractions	Repeated linear factors; non-repeated linear	Chalk & Talk
Day 57		DCS	Chalk & Talk
Day 58		DCS	Chalk & Talk
Day 59		House Test (80% syllabus covered)	Chalk & Talk
Day 60	Permutations and Combinations	Value of $P(n, r)$, $C(n, r)$.	Chalk & Talk
Day 61	Permutations and Combinations	Value of $P(n, r)$, $C(n, r)$	Chalk & Talk
Day 62	Binomial theorem	Binomial theorem (without proof) for positive integral index (expansion without proof)	Chalk & Talk
Day 63		DCS	Chalk & Talk
Day 64		DCS	Chalk & Talk
Day 65	Binomial theorem	Binomial theorem (without proof) for positive integral index (expansion without proof)	Chalk & Talk
Day 66	Binomial theorem	Binomial theorem (without proof) for positive integral index (expansion without proof)	Chalk & Talk
Day 67	Binomial theorem	First and second binomial approximation with applications to engineering problems.	Chalk & Talk
Day 68		DCS	Chalk & Talk
Day 69		DCS	Chalk & Talk
Day 70	Binomial theorem	First and second binomial approximation with applications to engineering problems.	Chalk & Talk

	Name of Book	Author Name	Publication
Prescribed Books	Elementary Engineering Mathematics	B. S. Grewal	Khanna Publisher
	Engineering Mathematics	C Dass Chawla	Asian Pubsher
Reference Books	Engineering Mathematics	S. N. Iyegar	Vikas Publisher
	Engineering Mathematics	Reena Garg	Khanna Publisher


 Faculty
 (Reema Choudhary)


 HOD



Government Polytechnic for Women
Kandaghat, District Solan H. P. 173215
Department of Applied Sciences & Humanities

LESSON PLAN

Academic Year	2022
Semester	I st
Scheme	N-2022
Subject Code	BS- 103
Subject Title	Applied Physics-I
Name of Faculty	Mohan Negi, Lecturer (Applied Physics)
Semester Start & End Dates	01.10.2022 to 20.01.2023
Branch	Common to CE & ECE

Study and Evaluation Scheme:

Sr. No.	Name of Subject	Th.		Pr.	Credits	Internal Assessment			External Assessment					Total Marks
		L	DCS			Th.	Pr.	Total	Th.	Hrs.	Pr.	Hrs.	Total	
2.3	Applied Physics-I	03	01	02	03	40	40	80	60	3	60	3	120	200

Course Objectives:

- Imparting knowledge to the students
- The student will be able to use physical principles and analysis in various fields of Engineering and Technology
- The students will be able to apply the basics concepts and principles to solve engineering problems and to understand different technology based applications


Day	Topic of Discussion	Topic Details	Delivery Method
Unit-1	Physical world, Units and Measurements		
Day 1	Physical quantities	Some basics of Physics, Physical quantities Units - fundamental and derived units systems of units (FPS, CGS and SI units)	Chalk and Talk
Day 2	Dimensions and dimensional formulae	Dimensions and dimensional formulae of physical quantities	Chalk and Talk
Day 3	Principle of homogeneity	Principle of homogeneity of dimensions, dimensional equations and their applications	Chalk and Talk
Day 4		DCS	Chalk and Talk
Day 5	Conversion of system of units and checking of dimensional equations	Conversion of one system of units to other and checking of dimensional equations	Chalk and Talk
Day 6	Dimensional analysis	Derivation of simple equations and limitation of dimensional analysis	Chalk and Talk


Day 7	Errors	Error in measurements(systematic and random), absolute error	Chalk and Talk
Day 8	DCS		Chalk and Talk
Day 9	Errors	Error estimation and significant figures	Chalk and Talk
Unit-2	Force and Motion		
Day 10	Scalar and Vector quantities, addition, subtraction, triangle and parallelogram law	Scalar and Vector quantities – examples, representation of vector, types of vectors. Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only)	Chalk and Talk
Day 11	Scalar and Vector Product	Scalar and Vector Product	Chalk and Talk
Day 12	Resolution of a Vector	Resolution of a Vector and its application to inclined plane (Rectangular components) and lawn roller	Chalk and Talk
Day 13	DCS		Chalk and Talk
Day 14	Force, Momentum	Force, Momentum, Statement and derivation of conservation of linear momentum, its applications such as recoil of gun & rockets	Chalk and Talk
Day 15	Impulse and Circular motion	Impulse and its applications, Circular motion, definition of angular displacement, angular velocity, angular acceleration, frequency, time period.	Chalk and Talk
Day 16	Relationship between some physical quantities	Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical)	Chalk and Talk
Day 17	DCS		Chalk and Talk
Day 18	CLASS TEST-1	30% of syllabus covered	
Day 19	Centripetal and Centrifugal forces	Centripetal and Centrifugal forces with live examples, Expression and applications such as banking of roads and bending of cyclist	Chalk and Talk
Unit-3	Work, Power and Energy		
Day 20	Work and Friction	Work: Concept and units, examples of zero work, positive work and negative work Friction: concept, types	Chalk and Talk
Day 21	Friction	Laws of limiting friction, coefficient of friction, methods for reducing friction and its engineering applications	Chalk and Talk
Day 22	Work	Work done in moving an object on horizontal and inclined plane for rough and plane surfaces and related applications	Chalk and Talk
Day 23	DCS		Chalk and Talk
Day 24	Energy	Energy and its units, kinetic energy	Chalk and Talk
Day 25	Energy	Gravitational potential energy with examples and derivations	Chalk and Talk
Day 26	Energy	Mechanical energy, conservation of mechanical energy for freely falling bodies, transformation of energy (examples)	Chalk and Talk

Day 27	DCS		Chalk and Talk
Day 28	Power	Power and its units, power and work relationship, calculation of power (numerical problems)	Chalk and Talk
Unit-4	Rotational Motion		
Day 29	Translational and rotational motion	Translational and rotational motions with examples	Chalk and Talk
Day 30	Torque and angular momentum	Definition of torque and angular momentum and their examples	Chalk and Talk
Day 31	Angular momentum	Conservation of angular momentum (quantitative) and its applications	Chalk and Talk
Day 32	DCS		Chalk and Talk
Day 33	Moment of inertia	Moment of inertia and its physical significance	Chalk and Talk
Day 34	Radius of gyration	Radius of gyration for rigid body	Chalk and Talk
Day 35	Theorems of parallel and perpendicular axes	Theorems of parallel and perpendicular axes (statements only)	Chalk and Talk
Day 36	CLASS TEST-II	Next 30% of syllabus covered	
Day 38	Moment of inertia	Moment of inertia of rod, disc, ring and sphere (hollow and solid): (Formulae only)	Chalk and Talk
Unit-5	Properties of Matter		
Day 39	Elasticity	Elasticity: Definition of stress and strain	Chalk and Talk
Day 40	Modulii of elasticity	Different types of modulii of elasticity, Hooke's law, significance of stress-strain curve	Chalk and Talk
Day 41	Pressure	Pressure: definition, units, atmospheric pressure, gauge pressure, absolute pressure	Chalk and Talk
Day 42	DCS		Chalk and Talk
Day 43	Fortin's Barometer and Surface tension	Fortin's Barometer and its applications. Surface tension: concept, units	Chalk and Talk
Day 44	Cohesive and adhesive forces	Cohesive and adhesive forces, angle of contact, Ascent Formula (No derivation)	Chalk and Talk
Day 45	Surface tension	Applications of surface tension, effect of temperature and impurity on surface tension	Chalk and Talk
Day 46	DCS		Chalk and Talk
Day 47	House Test	80 % of Syllabus covered	
Unit-6	Heat and Thermometry		
Day 48	Heat and Temperature	Concept of heat and temperature. Modes of heat transfer (conduction, convection and radiation with examples)	Chalk and Talk
Day 49	Scales of temperature	Scales of temperature and their relationship	Chalk and Talk
Day 50	Types of Thermometer	Types of Thermometer (Mercury thermometer, bimetallic thermometer) and their uses	Chalk and Talk
Day 51	DCS		Chalk and Talk
Day 52	Types of Thermometer	Platinum resistance thermometer,	Chalk and Talk

Day 53	Expansions solids, liquids and gases	Expansion of solids, liquids and gases, coefficient of linear	Chalk and Talk
Day 54	Surface and Cubical Expansions	surface and cubical expansions and relation amongst them	Chalk and Talk
Day 55	Expansions and thermal conductivity	Relation between coefficient of linear, surface and cubical expansions, Co-efficient of thermal conductivity	Chalk and Talk
Day 56	DCS		Chalk and Talk

Prescribed Books	Name of Book	Author Name	Publication
	Concepts of Physics	H. C. Verma	Bharati Bhawan
	Principles of Physics	Jearl Walker, David Halliday and Robert Resnic	Wiley
	Text book of Physics for Class XII	A.W. Joshi	NCERT


 Faculty 29.9.22


 HOD 29/9/22



GOVERNMENT POLYTECHNIC FOR WOMEN
RANDAGHAT, DISTT. SOLAN (HP) - 173215

DEPARTMENT OF APPLIED SCIENCES

LESSON PLAN

Academic Year	2022-23
Semester	Ist
Subject Code	N2022 BS105
Subject Title	Applied Chemistry
Name of Faculty	Rajender Kumar
Semester Start & End Dates	01.10.2022-20.01.2023

STUDY AND EVALUATION SCHEME

Sr. No.	Name of the Subject	L	P	DCS	Internal Assessment			External Assessment				
					Th	Pr	Total	Th	Hrs	Pr	Hrs	Total
3.2	Applied Chemistry	3	2	1	40	40	80	60	3	60	3	120

Subject Details:

Day	Unit & Topic of Discussion	Topic Details	Delivery Method
Unit-1 : Atomic Structure			
Day 1	Atomic Structure	Fundamental particles-electrons, protons and neutrons (Definitions)	Chalk & Talk
Day 2	Atomic Structure	Bohr's Theory , successes and limitations of atomic theory (expression of energy and radius to be omitted),	Chalk & Talk & PPT
Day 3	Atomic Structure	Hydrogen spectrum explanation based on Bohr's model of atom	Chalk & Talk
Day 4	Atomic Structure	DCS	Chalk & Talk
Day 5	Atomic Structure	Heisenberg uncertainty principle, Quantum numbers orbital concept,	Chalk & Talk

Day 6	Atomic Structure	Shapes of s, p orbitals difference between orbit and orbital, Pauli's exclusion principle	Chalk & Talk
Day 7	Atomic Structure	Hund's rule of maximum multiplicity, Aufbau rule, electronic configuration (Z=1 to	Chalk & Talk
Day 8	Atomic Structure	DCS	Chalk & Talk

Unit-2 : Chemical Bonding and Solutions

Day 9	Chemical Bonding	chemical bonding - cause of chemical bonding	Chalk & Talk
Day 10	Chemical Bonding	types of bonds: ionic bonding (NaCl example)	Chalk & Talk
Day 11	Chemical Bonding	Lewis concept of covalent bond (H ₂ , F ₂ , HF).	Chalk & Talk
Day 12	Chemical Bonding	DCS	Chalk & Talk
Day 13	Chemical Bonding	Electronegativity, Difference between sigma and pi bond	Chalk & Talk
Day 14	Solutions	Electron sea model of metallic bond	
Day 15	Solutions	Idea of solution, solute and solvent with examples Methods to express the concentration of solution - molarity (M), molality (m) and normality (N), molality, mass percentage (Numerical excluded)	
Day 16	Solutions	DCS	

Unit-3 : Electro Chemistry and Corrosion

Day 17	Electro Chemistry	Electronic concept of oxidation, reduction and redox reactions	Chalk & Talk
Day 18	Electro Chemistry	Definition of terms: electrolytes, non-electrolytes with suitable examples,	Chalk & Talk
Day 19	Electro Chemistry	Faradays laws of electrolysis and simple numerical problems	Chalk & Talk
Day 20	CLASS TEST-1	1st 30 % syllabus is Covered	Chalk & Talk
Day 21	Electro Chemistry	Application of redox reactions in electrochemical cells - • Primary cells - dry cell, • Secondary cell - commercially used lead acid storage battery Industrial application of Electrolysis.	Chalk & Talk
Day 22	Corrosion	Introduction to Corrosion of metals - definition, types of corrosion	Chalk & Talk
Day 23	Corrosion	corrosion (electrochemical), H ₂ liberation and O ₂ absorption	Chalk & Talk

Day 24	Corrosion	mechanism of electrochemical corrosion DCS	Chalk & Talk
Day 25	Corrosion	Internal corrosion preventive measures – Purification, alloying and heat treatment External corrosion preventive measures: metal (anodic, cathodic) coatings.	Chalk & Talk

Unit-4 : Engineering Materials

Day 26	Natural occurrence of metals –	minerals, ores of iron, aluminium and copper, gangue (matrix), flux, slag,	Chalk & Talk
Day 27	Engineering Materials	metallurgy – brief account of general principles of metallurgy(a).Crushing and grinding	Chalk & Talk
Day 28	Engineering Materials	DCS	Chalk & Talk
Day 29	Engineering Materials	Concentration of ore, Levigation, Froth flotation, Magnetic separation	Chalk & Talk
Day 30	Engineering Materials	Extraction(Roasting and calcinations & smelting) (d) Refining	Chalk & Talk
Day 31	Engineering Materials	Extraction of - iron from haematite ore using blast furnace along with reactions.	Chalk & Talk and
Day 32	Engineering Materials	DCS	Chalk & Talk and Ppt
Day 33	Engineering Materials	Alloys – definition, purposes of alloying, ferrous alloys (Invar steel) and non-ferrous(Simple Brass & Bronze, Nichrome, Duralumin, Magnesium) with suitable examples, properties and applications	Chalk & Talk

Unit-5 : WATER

Day 34	WATER	Classification of soft and hard water based on soap test, salts causing water hardness	Chalk & Talk
Day 35	WATER	units of hardness(mg/L and ppm) and simple numerical on water hardness	Chalk & Talk
Day 36	WATER	DCS	Chalk & Talk
Day 37	WATER	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.)	
Day 38	WATER	2 ND 30 % Syllabus is covered	Chalk & Talk

Day 39	WATER	Water softening techniques- zeolite process if). Municipal water treatment (in brief only) - sedimentation, coagulation, filtration, sterilization	Chalk & Talk
Day 40	WATER	Indian standard specification of drinking water.	Chalk & Talk
Day 41	WATER	DCS	Chalk & Talk

Unit-6 : FUELS

Day 42	FUELS	Definition of fuel and combustion of fuel, classification of fuels	Chalk & Talk
Day 43	FUELS	calorific values (HCV and LCV), calculation of HCV and LCV using Dulong's formula. Characteristics of good fuel	Chalk & Talk
Day 44	FUELS	Petrol and diesel - fuel rating (octane and cetane numbers. Chemical composition, calorific values and applications of LPG, CNG, water gas, producer gas and biogas.	Chalk & Talk
Day 45	FUELS	DCS	Chalk & Talk
Day 46	FUELS	80% syllabus is covered	Chalk & Talk

Unit-7 : LUBRICATION

Day 47	: LUBRICATION	Function and characteristic properties of good lubricant, classification with examples	Chalk & Talk
Day 48	: LUBRICATION	Lubrication mechanism – hydrodynamic and boundary lubrication	Chalk & Talk
Day 47	: LUBRICATION	DCS	Chalk & Talk
Day 49	: LUBRICATION	Physical properties (viscosity and viscosity index, oiliness	Chalk & Talk
Day 50	: LUBRICATION	flash and fire point, cloud and pour point only)	Chalk & Talk
Day 51	: LUBRICATION	chemical properties (coke number, total acid number, saponification value) of lubricants.	Chalk & Talk
Day 52	: LUBRICATION	DCS	Chalk & Talk

Unit-8 : Polymers

Day 53	: Polymers	Monomer, homo and co polymers , degree of	Chalk & Talk
--------	-------------------	---	--------------

		polymerization	
Day 54 :	Polymers	simple reactions involved in preparation and their application of thermoplastics and thermosetting plastics	Chalk & Talk
Day 55 :	Polymers	Vulcanization of rubber and properties of vulcanised rubber.	Chalk & Talk
Day 56 :	Polymers	DCS	Chalk & Talk

	Name of Book	Author Name	Publication
Prescribed Books	Modern ABC of Chemistry	Dr.S.P. Jauhaar	Modern Publication
Reference Books	Engineering Chemistry	PC Jain & Monika Jain	Dhanpat rai publications
	A Text book of Engineering Chemistry	P.K. Vij & shiksha vij	Katsons books S.K. kataria sonsPublication
	A Text book of Engineering Chemistry	OG palana	Mc grow Hill Education Publishers

Faculty

HOD

8/9/22



**GOVERNMENT POLYTECHNIC (W) KANDAGHAT,
DISTT. SOLAN (HP) - 173215**

**DEPARTMENT OF APPLIED SCIENCES &
HUMANITIES**

LESSON PLAN

Academic Year	2022-23
Semester	1 st
Course Code	ES101
Subject Title	ENGINEERING GRAPHICS
Name of Faculty	ER. HITESH KASHYAP
Semester Start & End Dates	01/10/22 to 20/01/23
Number of Credits	1.5 (L: 0, DCS:1, P: 3)
Prerequisites	NIL
Course Category	ES

STUDY AND EVALUATION SCHEME (SEMESTER- I GROUP- A)

Code No.	Name of the Subject	L	P	DCS	Total Hrs/ Week	Credits	Internal Assessment		External Assessment		Total Marks
							Th	Pr	Th.	Hrs	
ES101	Engineering Graphics	0	3	1	4	1.5	-	40	60	3	100

Subject Details:

Day	Unit & Topic of Discussion	Topic Details	Delivery Method
-----	----------------------------	---------------	-----------------

Day 1	Introduction & Types of lines	Drawing Instruments and supporting materials: method to use them with applications. Convention of lines and their applications.	
Day 2		Drawing Instruments and supporting materials: method to use them with applications. Convention of lines and their applications.	
Day 3	Free Hand & Instrument Letter Writing	Write alphabets and numerical in 7:4 scale (Vertical only) (do this exercise in sketch book).	
Day 4	DCS	Write alphabets and numerical in 7:4 scale (Vertical only) (do this exercise in sketch book).	
Day 5	Dimension Techniques	Dimensioning techniques as per SP-46:2003 – types and applications of chain, parallel and coordinate dimensioning.	
Day 6	Scales	Representative Fractions – reduced, enlarged and full size scales; Engineering Scales such as plain and diagonal scale.	
Day 7		Representative Fractions – reduced, enlarged and full size scales; Engineering Scales such as plain and diagonal scale.	
Day 8	DCS	Representative Fractions – reduced, enlarged and full size scales; Engineering Scales such as plain and diagonal scale.	
Day 9 CLASS TEST- I (First week of November)			
Unit 2. Orthographic projections			
Day 10	Introduction of projections	Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications. (No question to be asked in examination). Introduction to orthographic projection, First angle and Third angle method, their symbols. Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces. (use First Angle Projection method only)	

Day 11	Introduction to orthographic projection	Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications. (No question to be asked in examination). Introduction to orthographic projection, First angle and Third angle method, their symbols. Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces. (use First Angle Projection method only)	
Day 12		Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications. (No question to be asked in examination). Introduction to orthographic projection, First angle and Third angle method, their symbols. Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces. (use First Angle Projection method only)	
Day 13	DCS	Introduction of projections-orthographic, perspective, isometric and oblique: concept and applications. (No question to be asked in examination). Introduction to orthographic projection, First angle and Third angle method, their symbols. Conversion of pictorial view into Orthographic Views – object containing plain surfaces, slanting surfaces, slots, ribs, cylindrical surfaces. (use First Angle Projection method only)	
Unit 3. Isometric Projections			
Day 14		Introduction to isometric projections. Isometric scale and Natural scale. Isometric view and isometric projection. Illustrative problems related to objects containing lines, circles and arcs shape only. Conversion of orthographic views into isometric view/projection.	
Day 15		Introduction to isometric projections. Isometric scale and Natural scale. Isometric view and isometric projection. Illustrative problems related to objects containing lines, circles and arcs shape only. Conversion of orthographic views into isometric view/projection.	
Day 16		Introduction to isometric projections. Isometric scale and Natural scale. Isometric view and isometric projection. Illustrative problems related to objects containing lines, circles and arcs shape only.	

		Conversion of orthographic views into isometric view/projection.	
Day 17	DCS	Introduction to isometric projections. Isometric scale and Natural scale. Isometric view and isometric projection. Illustrative problems related to objects containing lines, circles and arcs shape only. Conversion of orthographic views into isometric view/projection.	

Day 18 CLASS TEST- II (2nd Week of December)

Unit 4. Free Hand Sketches of engineering elements

Day 19		Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements. (For branches other than mechanical Engineering, the teacher should select branch specific elements for free hand sketching). Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper).	
Day 20		Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements. (For branches other than mechanical Engineering, the teacher should select branch specific elements for free hand sketching). Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper).	
Day 21	DCS	Free hand sketches of machine elements: Thread profiles, nuts, bolts, studs, set screws, washer, Locking arrangements. (For branches other than mechanical Engineering, the teacher should select branch specific elements for free hand sketching). Free hand sketches of orthographic view (on squared graph paper) and isometric view (on isometric grid paper).	

Unit 5. Computer aided drafting interface

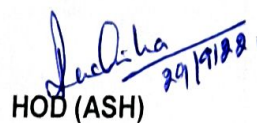
Day 22		Computer Aided Drafting: concept. Hardware and various CAD software available. System requirements and Understanding the interface. Components of AutoCAD software window: Title bar, standard tool bar, menu bar, object properties tool bar, draw tool bar, modify tool bar, cursor cross hair. Command window,	
--------	--	---	--

		status bar, drawing area, UCS icon. File features: New file, Saving the file, opening an existing drawing file, Creating templates, Quit. Setting up new drawing: Units, Limits, Grid, Snap. Undoing and redoing action.	
Unit 6. Computer aided drafting			
Day 23		Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Poly line. Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates. Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers. Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated Baseline, Continuous, Diameter, Radius, And Angular Dimensions. Dim scale variable. Editing dimensions. Text: Single line Text, Multiline text.	
HOUSE TEST (January 1st Week)			
Day 24		Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Poly line. Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates. Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers. Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated Baseline, Continuous, Diameter, Radius, And Angular Dimensions. Dim scale variable. Editing dimensions. Text: Single line Text, Multiline text.	
Day 25	DCS	Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Poly line. Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates. Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers. Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated Baseline, Continuous, Diameter, Radius, And Angular Dimensions. Dim scale variable. Editing dimensions. Text: Single line Text, Multiline text.	
Day 26		Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Poly line. Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates. Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers. Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated Baseline, Continuous,	

		Diameter, Radius, And Angular Dimensions. Dim scale variable. Editing dimensions. Text: Single line Text, Multiline text.	
Day 27		Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Poly line. Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates. Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers. Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated Baseline, Continuous, Diameter, Radius, And Angular Dimensions. Dim scale variable. Editing dimensions. Text: Single line Text, Multiline text.	
Day 28	DCS	Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Poly line. Method of Specifying points: Absolute coordinates, Relative Cartesian and Polar coordinates. Modify and edit commands like trim, extend, delete, copy, offset, array, block, layers. Dimensioning: Linear, Horizontal Vertical, Aligned, Rotated Baseline, Continuous, Diameter, Radius, And Angular Dimensions. Dim scale variable. Editing dimensions. Text: Single line Text, Multiline text.	



(Hitesh Kashyap)
29.09.2022



HOD (ASH)
(Dr. Ruchika Chauhan)



**GOVERNMENT POLYTECHNIC FOR WOMEN
KANDAGHAT, DISTT. SOLAN (HP) - 173215**

DEPARTMENT OF APPLIED SCIENCES & HUMANITIES

Common to Eltx & Comm. Engg. & Computer Engg.

LESSON PLAN

Academic Year	2022-23
Semester	I
Subject Code	HS101
Subject Title	Communication Skills in English
Name of Faculty	Ms. Nisha Kumari , Lecturer in English
Number of Credits	2(L: 2,DCS: 1, P: 0)
Semester Start & End Dates	01.10.2022-20.01.2023

STUDY AND EVALUATION SCHEME

Sr. No.	Name of the Subject	Th	Pr	DCS	Internal Assessment			External Assessment					Total Marks
					Th	Pr	Total	Th	Hrs	Pr	Hrs	Total	
1.	Communication Skills in English	2	2	1	40	40	80	60	3	60	3	120	200

Subject Details:

Day	Unit & Topic of Discussion	Topic Details	Delivery Method
Unit-1 :Communication: Theory and Practice			
Day 1	Previous knowledge Testing, Discussion of Syllabus. 1. Basics of Communication	(a)Introduction, meaning and definition, process of communication etc.	Chalk &Talk
Day 2	Types of communication:	formal and informal, verbal, non-verbal and written	Chalk & Talk
Day 3	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 4	Communication: Theory and Practice	Barriers to effective communication.	Chalk & Talk
Day 5	7Cs for effective communication	(a)considerate, concrete, concise, clear, complete, correct, courteous	Chalk& Talk
Day 6	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 7	Art of Effective communication Technical Communication.	(b) A. Choosing words B. Voice C. Modulation D. Clarity E. Time F. Simplification of words	Chalk& Talk
Unit-2 Soft Skills for Professional Excellence			
Day 8	Soft Skills for Professional Excellence	1. Introduction: Soft Skills and Hard Skills. 2. Importance of soft skills	Chalk & Talk
Day 9	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 10.	Life skills:	1. Self-awareness and Self-analysis, adaptability, resilience, emotional intelligence and empathy etc	Chalk & Talk
Day 11.	Life skills:	2. Applying soft skills across cultures.	Chalk & Talk
Day 12.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 13	CLASS TEST I ON 30% OF SYLLABUS COVERED		
Unit-3: Reading Comprehension, vocabulary enhancement and grammar exercises based on reading of the following texts:			
Day 14	Section-1 Short Stories	1. "The Gift of the Magi" by O. Henry. 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk

15.	Short Stories	1. "Uncle Podger Hangs a Picture" Jerome K. Jerome 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 16.			
DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES			
Day 17	Section-2 Poetry	Section-2 Poetry 1. "Night of the Scorpion" by Nissim Ezekiel 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 18	Poetry	1. "Stopping by Woods on a Snowy Evening" by Robert Frost 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 19	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 20	Poetry	1. "Where the Mind is Without Fear" by Rabindranath Tagore 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 21	Poetry	Central Idea of three poems	Chalk & Talk
Day 22	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 23	CLASS TEST II FROM NEXT 30% OF SYLLABUS COVERED		
Unit-4 Professional Writing			
Day 24	Drafting	1. The art of précis writing.	Chalk & Talk
Day 25.	Drafting	2. Letters: business and personal	Chalk & Talk
Day 26	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 27	Drafting	Drafting e-mail, notices	Chalk & Talk
Day 28.	Drafting	Agenda and its essential characteristics. Minutes of a meeting etc.	Chalk & Talk
Day 29.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 30.	HOUSE TEST FROM 80% OF SYLLABUS		
Unit-5 Vocabulary and Grammar			
Day 31	1. Glossary of administrative terms	(English and Hindi). One-word substitution, Idioms and phrases etc.	Chalk & Talk

Day 32.	Parts of speech,	Noun, Pronoun, Adjective, Verb	Chalk & Talk
Day 33.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 34.	Parts of speech,	Adverbs, Conjunctions, Preposition, Interjections	Chalk & Talk
Day 35	GRAMMAR	Tenses Rules	Chalk & Talk
Day 36.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 37	GRAMMAR	Tenses Rules and Punctuation	Chalk & Talk
Day 38.	Day 39.	Active and passive voice	Chalk & Talk
Day 39.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		

	Name of Book	Author Name	Publication
References	Oxford Dictionary	Thomson and Martinet.	Oxford University Press
	Roget's Thesaurus of English Words and Phrases	Peter Mark Roget	Longmans, Green & Co./Dell Publishing Co., Inc.
	Collin's English Dictionary	William Collins	Harper Collins
	Practical English Usage	Michael Swan	Oxford University Press
Prescribed Books	A Practical English Grammar	Thomson and Martinet.	Oxford University Press
	Essentials of Business Communication	Rajender Pal and J.S.Korlahalli	Sultan Chand and Sons
	Self Instruction in English Grammar	Dr. K.S. Joseph	Anmol Publication

Faculty

(Miss Nisha Kumari)

HOD

(Dr. Ruchika Chaudhary)



**GOVERNMENT POLYTECHNIC FOR WOMEN
KANDAGHAT, DISTT. SOLAN (HP) - 173215**

DEPARTMENT OF APPLIED SCIENCES & HUMANITIES

Common to Eltx & Comm. Engg. & Computer Engg.

LESSON PLAN

Academic Year	2022-23
Semester	I
Subject Code	HS101
Subject Title	Communication Skills in English
Name of Faculty	Dr. Ruchika Chauhan ,HoD, Applied Sciences & Humanities
Number of Credits	2(L: 2,DCS: 1, P: 0)
Semester Start & End Dates	01.10.2022-20.01.2023

STUDY AND EVALUATION SCHEME

Sr. No.	Name of the Subject	Th	Pr	DCS	Internal Assessment			External Assessment					Total Marks
					Th	Pr	Total	Th	Hrs	Pr	Hrs	Total	
1.	Communication Skills in English	2	2	1	40	40	80	60	3	60	3	120	200


Subject Details:


Day	Unit & Topic of Discussion	Topic Details	Delivery Method
	Unit-1 :Communication: Theory and Practice		
Day 1	Previous knowledge Testing, Discussion of Syllabus. 1. Basics of Communication	(a)Introduction, meaning and definition, process of communication etc.	Chalk &Talk
Day 2	Types of communication:	formal and informal, verbal, non-verbal and written	Chalk & Talk
Day 3	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 4	Communication: Theory and Practice	Barriers to effective communication.	Chalk & Talk
Day 5	7Cs for effective communication	(a)considerate, concrete, concise, clear, complete, correct, courteous	Chalk& Talk
Day 6	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 7	Art of Effective communication Technical Communication.	(b) A. Choosing words B. Voice C. Modulation D. Clarity E. Time F. Simplification of words	Chalk& Talk
Unit-2 Soft Skills for Professional Excellence			
Day 8	Soft Skills for Professional Excellence	1. Introduction: Soft Skills and Hard Skills. 2. Importance of soft skills	Chalk & Talk
Day 9	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 10.	Life skills:	1. Self-awareness and Self-analysis, adaptability, resilience, emotional intelligence and empathy etc	Chalk & Talk
Day 11.	Life skills:	2. Applying soft skills across cultures.	Chalk & Talk
Day 12.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 13	CLASS TEST I ON 30% OF SYLLABUS COVERED		
Unit-3: Reading Comprehension, vocabulary enhancement and grammar exercises based on reading of the following texts:			
Day 14	Section-1 Short Stories	1. “The Gift of the Magi” by O. Henry. 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk

15.	Short Stories	1. "Uncle Podger Hangs a Picture" Jerome K. Jerome 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 16.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
	Section-2 Poetry		
Day 17	Section-2 Poetry	1. "Night of the Scorpion" by Nissim Ezekiel 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 18	Poetry	1. "Stopping by Woods on a Snowy Evening" by Robert Frost 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 19	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 20	Poetry	1. "Where the Mind is Without Fear" by Rabindranath Tagore 2. Text Reading, Vocabulary and Grammar exercises	Chalk & Talk
Day 21	Poetry	Central Idea of three poems	Chalk & Talk
Day 22	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 23	CLASS TEST II FROM NEXT 30% OF SYLLABUS COVERED		
	Unit-4 Professional Writing		
Day 24	Drafting	1. The art of précis writing.	Chalk & Talk
Day 25.	Drafting	2. Letters: business and personal	Chalk & Talk
Day 26	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 27	Drafting	Drafting e-mail, notices	Chalk & Talk
Day 28.	Drafting	Agenda and its essential characteristics. Minutes of a meeting etc.	Chalk & Talk
Day 29.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 30.	HOUSE TEST FROM 80% OF SYLLABUS		
	Unit-5 Vocabulary and Grammar		
Day 31	1. Glossary of administrative terms	(English and Hindi). One-word substitution, Idioms and phrases etc.	Chalk & Talk

Day 32	Parts of speech,	Noun, Pronoun, Adjective, Verb	Chalk & Talk
Day 33.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 34.	Parts of speech,	Adverbs, Conjunctions, Preposition, Interjections	Chalk & Talk
Day 35	GRAMMAR	Tenses Rules	Chalk & Talk
Day 36.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		
Day 37	GRAMMAR	Tenses Rules and Punctuation	Chalk & Talk
Day 38.		Active and passive voice	Chalk & Talk
Day 39.	DCS ON THE TOPICS COVERED IN THE PREVIOUS 2 CLASSES		

	Name of Book	Author Name	Publication
References	Oxford Dictionary	Thomson and Martinet.	Oxford University Press
	Roget's Thesaurus of English Words and Phrases	Peter Mark Roget	Longmans, Green & Co./Dell Publishing Co., Inc.
	Collin's English Dictionary	William Collins	Harper Collins
	Practical English Usage	Michael Swan	Oxford University Press
Prescribed Books	A Practical English Grammar	Thomson and Martinet.	Oxford University Press
	Essentials of Business Communication	Rajender Pal and J.S.Korlahalli	Sultan Chand and Sons
	Self Instruction in English Grammar	Dr. K.S. Joseph	Anmol Publication


 Faculty
 HOD Applied Sciences
 & Humanities


 HOD/Principal
 Principal
 Govt. Polytechnic (W)
 Kandaghat Distt. Solan