Program Name DIPLOMA IN Eltx. & Comm. Engg.	
Course/Subject Name	Mathematics-I
Course/Subject Code	BS 101
Course/Subject Coordinator Name	Dr. Reena Kumari

#### **Evaluation scheme**

S.No.	Subject Name		Marks in evaluation scheme				
		Study scheme (Hrs/Week)	Internal Assessment		External Assessment		
			Theory	Practical	Theory	Practical	
1.	Mathematics-I	3(Th)+2(DCS)	40	-	60	1-	
Refere	nce books:		P			eering Mathematics, elhi, 40th Edition,	
			1			, Calculus and n Wesley, 9th	
				(3) Reena Garg, Engineering Mathematics, Khanna Publishing House, New Delhi (R Ed. 2018)			
			1		anan, Engine	amanian, K.A. eering Mathematics, se	
				(5) Reena Garg & Chandrika Prasad Advan Engineering Mathematics, Khanna Pub House, New Delhi.			
				(6) Satish Kumar Sharma, Mathematics-I, E Prakashan, 2023			

## Course Outcomes: After the completion of the course, the students will be able to learn:

CO1	Acquire necessary background in Trigonometry to appreciate the importance of the geometric study as well as for the calculation and the mathematical analysis.
CO2	The ability to find the effects of changing conditions on a system.
CO3	Complex numbers enter into studies of physical phenomena in ways that most people cannot imagine.
CO4	The partial fraction decomposition lies in the fact that it provides an algorithm for computing the anti derivative of a rational function.



## Teaching Plan:

ectur No.	Name of topic	Proposed date	Actual date	Remarks
1	Trigonometry : Concept of angles	12/08/2024		
2	Concept of angles	14/08/2024		
3	Measurement of angles in degrees, grades and radians and	16/08/2024		
4	Measurement of angles in degrees, grades and radians and	17/08/2024		
5	Measurement of angles in degrees, grades and radians and their conversions	21/08/2024		
6	T-Ratios of Allied angles	22/08/2024		
7	T-Ratios of Allied angles	23/08/2024		
8	Sum, difference formulae and their applications	24/08/2024		
9	Sum, difference formulae and their applications	28/08/2024		
10	Sum, difference formulae and their applications	29/08/2024		
11	Product formulae (Transformation of product to sum, difference and vice versa)	30/08/2024		
12	Product formulae (Transformation of product to sum, difference and vice versa)	31/08/2024		
13	Product formulae (Transformation of product to sum, difference and vice versa)	02/09/2024		
14	T- Ratios of multiple angles, sub-multiple angles (2A, 3A, A/2)	04/09/2024		
15	T- Ratios of multiple angles, sub-multiple angles (2A, 3A, A/2)	05/09/2024		
16	Graph of sin x	06/09/2024		
17	Graph of cos x	07/09/2024		
18	Differential Calculus: Definition of function	09/09/2024		
19	Definition of function	11/09/2024		
20	Concept of limits	12/09/2024		
21	Concept of limits	13/09/2024		
22	Concept of limits	16/09/2024		
23	Four standard limits, $\frac{x^n - a^n}{x - a}$ , $\frac{\sin x}{x}$ , $(1 + x)^{\frac{1}{x}}$ , $\frac{a^{x-1}}{x}$	18/09/2024		
24	Four standard limits, $\frac{x^n - a^n}{x - a}$ , $\frac{\sin x}{x}$ , $(1 + x)^{\frac{1}{x}}$ , $\frac{a^x - 1}{x}$	19/09/2024		
25	Differentiation by definition of sinx, cosx, tanx	20/09/2024		
26	Differentiation by definition of x <sup>n</sup> , e <sup>x</sup>	21/09/2024		
27	Differentiation formulae	23/09/2024		
28	Differentiation of sum and difference of functions	25/09/2024		
29	Differentiation of sum and difference of functions	26/09/2024	1	



FI	Differentiation of product and quotient of functions	27/09/2024		
		28/09/2024		
	Differentiation of function of a function	30/09/2024		
		03/10/2024		
		04/10/2024		
	functions	05/10/2024		
5	Differentiation of trigonometric and inverse trigonometric functions	SPANIAL CONTRACTOR SPANIAL CONTRACTOR		
6	Differentiation of trigonometric and inverse trigonometric functions	07/10/2024		
7	Logarithmic differentiation	09/10/2024		
38	Logarithmic differentiation	10/10/2024		
39	Complex Numbers: Definition, real and imaginary parts of	11/10/2024		
10	a complex number, conjugate of a complex number  Addition and Subtraction of complex numbers	14/10/2024		
41	Multiplication and Division of complex numbers	16/10/2024		
42	Multiplication and Division of complex numbers	18/10/2024		
43	Multiplication and Division of complex numbers	19/10/2024	-	
44	Modulus and amplitude of a complex number	21/10/2024		
45	Polar and Cartesian, representation of a complex number and its conversion from one form to other	23/10/2024		
46	Polar and Cartesian, representation of a complex number and its conversion from one form to other	24/10/2024		
47	De-movier's theorem, its application	25/10/2024		
48	Partial fractions: Definition of polynomial fraction proper &	26/10/2024		
49	improper fractions and definition of partial fractions  To resolve proper fraction into partial fraction with	04/10/2024		
50	denominator containing non-repeated linear factors  To resolve proper fraction into partial fraction with	06/11/2024		
51	denominator containing repeated linear factors  To resolve proper fraction into partial fraction with denominator containing repeated and non repeated linear	07/11/2024		
52	Permutations and Combinations: Value of P(n,r) and	08/11/2024	11 2	
53	Value of P(n,r) and C(n,r)	16/11/2024		
54	Binomial theorem: Binomial theorem for positive integral	18/11/2024		
55	index (expansion and general form)  Binomial theorem for positive integral index (general form)	20/11/2024		
56	Binomial theorem for positive integral index (general form)	21/11/2024		
57	Binomial theorem for any index	22/11/2024		
58	Binomial theorem for any index	23/11/2024		
59	First and second binomial approximation with applications t			
60	this amproximation with applications			
61	d in provious classes	27/11/2024		



	20/14/2024	
DCS on the topic covered in previous classes	26/11/2024	
DCS on the topic covered in previous classes	29/11/2024	
DCS on the tonic covered in previous classes	30/11/2024	
DCS on the topic covered in previous classes	02/12/2024	
	DCS on the topic covered in previous classes  DCS on the topic covered in previous classes  DCS on the topic covered in previous classes  DCS on the topic covered in previous classes	DCS on the topic covered in previous classes 29/11/2024  DCS on the topic covered in previous classes 30/11/2024

#### Assignments:

Assignme nt serial	Contents of syllabus covered	Proposed week/date	Actual date	Remarks
A-1	Trigonometry & Differential Calculus	3rd week of Sept. 2024		
A-2	Differential Calculus & Algebra	Ist week of Nov. 2024		

## House Test/Class Test:

House/Class Test	Contents of syllabus covered	Proposed week/date	Actual date	Remarks
CT-I	30% of the syllabus	2 <sup>nd</sup> week of Sept. 2024		
CT-II	Next 30% of the syllabus	3 <sup>th</sup> week of Oct. 2024		
House Test	80% of the syllabus	2 <sup>nd</sup> week of Nov. 2024		

Signature of Teacher

Ox Reena Kumari

Signature of HOD

Program Name	Eltx & Comm. Engg	
Course/Subject Name	Applied Physics-I	
Course/Subject Code	BS-103 & BS-106	
Course/Subject Coordinator Name	Manoj Kumar	

#### Evaluation scheme

S.No.	Subject Name	Study scheme (Hrs/Week)	Marks in	evaluation sch	eme		
			Internal Assessment		External Assessment		
			Theory	Practical.	Theory	Practical	
1.	Applied physics-I & Applied Physics-I lab	TH [3+1(DCS)] + 2 (Lab)	40			60	
					Medical	V 1	
Referer	nce books		(i)		Physics for Cla I.C.E.R.T., Del	ss XI& XII (Part-I, hi	
			(ii)		nysics by HC V awan Ltd. New	Verma, Vol. I & II,  V Delhi	
	- 1		(iii) Applied Physics, Vol. I and Vol. II, TTTI Publications, Tata McGraw Hill, Delhi				
				(iv) Engineering Physics by DK Bhattacharya & Poonam Tandan; Oxford University Press, N Delhi			
				Manoj Ku		i-I by Amit Pathak, or. Raj Kumar Jagota,	
			(vi) Practical Physics by C. L. Arora, S. Chand Publication.				

## Course Outcomes: After the completion of the course the student will be able to

CO1	Understand the importance of applied physics in describing physical phenomena.	
CO2	Employ the knowledge of units and dimensions for various types of measurements.	
CO3	Understand the importance of various types of errors while doing measurements.	
CO4	Understand the basic forces present in the nature and their effects in daily life.	
CO5	Understand energy, work, power and their importance.	
CO6	Understand the basic phenomena like elasticity, surface tension, pressure etc.	
CO7	Differentiate between heat and temperature and their measurements.	

## Teaching Plan:

Lecture No.	Name of topic	Proposed date	Actual date	Remark s
311	Unit-1 Physical world, Units & Dimensions: Physical quantities - fundamental and derived,	12/08/2024		
2	Units & systems of units (FPS, CGS and SI units)	14/08/2024		
3-4	Dimensions and dimensional formulae of physical quantities	16/08/2024		
		17/ 08/2024	3	
5	Principle of homogeneity of dimensions	19/08/2024		
6	Dimensional equations and their applications, conversion from one system of units to other,	21/08 /2024		
7	checking of dimensional equations and derivation of simple equations)	23/ 08/2024		
8	Limitations of dimensional analysis	24/08 /2024		
9	Error in measurement (systematic & random), absolute error, relative	28/08 /2024		

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1-12 13 14 5-16 17 18 19 20 21	Unit-2 Force &motion: Scalar and vector quantities – examples, representation of vector, types of vectors  Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only),  Scalar and Vector Product.  Resolution of Vectors 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 & rocket  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 such as banking of roads and bending of cyclist	30/08 /2024 31/08 /2024 02/09/2024 04/09 /2024 06/09 /2024 07/09 /2024 09/09/2024 11/09 /2024 13/09 /2024 16/09 /2024	20.00	
1-12 13 14 5-16 17 18 19 20 21	Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only),  Scalar and Vector Product.  Resolution of Vectors 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 & rocket  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 such as banking of roads and bending of cyclist	02/09/2024 04/09 /2024 06/09 /2024 07/09 /2024 09/09/2024 11/09 /2024 13/09 /2024	7 3	
13 14 5-16 17 18 19 20 21	(Statement only),  Scalar and Vector Product.  Resolution of Vectors 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 & rocket  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 such as banking of roads and bending of cyclist	02/09/2024 04/09 /2024 06/09 /2024 07/09 /2024 09/09/2024 11/09 /2024 13/09 /2024	20.00	
14 5-16 17 18 19 20 21	Resolution of Vectors 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 & rocket  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 such as banking of roads and bending of cyclist	06/09 /2024 07/09 /2024 09/09/2024 11/09 /2024 13/09 /2024	20	
5-16 17 18 19 20 21	(Rectangular components) and lawn roller  Force, Momentum, Statement and Derivation of Conservation of linear momentum, its applications such as recoil of gun & rocket  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 such as banking of roads and bending of cyclist	06/09 /2024 07/09 /2024 09/09/2024 11/09 /2024 13/09 /2024	у ::	
5-16 17 18 19 20 21	Force, Momentum, Statement and Derivation of Conservation of linear momentum, its applications such as recoil of gun & rocket 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 such as banking of roads and bending of cyclist	09/09/2024 11/09 /2024 13/09 /2024 16/09 /2024	or or	
17 18 19 20 21	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 such as banking of roads and bending of cyclist	11/09 /2024 13/09 /2024 16/09 /2024	y c	
18   19   4   6   6   6   6   6   6   6   6   6	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 such as banking of roads and bending of cyclist	13/09 /2024	20	
20 (	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 such as banking of roads and bending of cyclist	16/09 /2024	x s	
20 (	Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical)  Centripetal and centrifugal forces with live examples such as banking of roads and bending of cyclist	16/09 /2024		
20 (	Centripetal and centrifugal forces with live examples such as banking of roads and bending of cyclist	18/09 /2024		
Name of the last	Unit 2 World Down & France			
	Unit-3 Work, Power & Energy Work: Concept and units, examples of zero work, positive work and negative work	20/09 /2024		
1	Friction: concept, types, laws of limiting friction, Coefficient of friction, methods for reducing friction and its Engineering Applications	21/09/2024		
1	Work done in moving an object on horizontal and inclined plane for rough and plane surfaces and related applications	23/09 /2024		
24	Energy and its units: Kinetic energy and gravitational potential energy with examples and their derivation	25/09 /2024		
25- 1	Mechanical energy, conservation of mechanical energy for freely	27/09 /2024		
26 f	falling bodies, transformation of energy(examples )	28/09/2024		
27 I	Power and its units, power and work relationship, calculation of power (numerical problems)	30/09 /2024		
	Unit-4 Rotational motion Translational and rotational motions with examples	04/10 /2024		
29 I	Definition of torque and angular momentum and their examples	05/10 /2024		
	Conservation of angular momentum (quantitative) and its applications	07/10 /2024		
31 N	Moment of inertia and its physical significance, radius of gyration for	09/10 /2024		
	rigid body,			
l l	Theorems of parallel and perpendicular axes (statements only),  Moment of inertia of rod, disc, ring and sphere(hollow and solid):  Formulae only)	11/10 /2024		
33 L	Unit-5 Properties of matter Elasticity: definition of stress and strain, different types of modulii of elasticity,	14/10 /2024		
	Hooke's law, significance of stress strain curve	16/10 /2024		
35 P	Pressure: definition, units, atmospheric pressure, gauge pressure, absolute pressure, Fortin's barometer and its applications	18/10 /2024		
36 S	Surface tension: concept, units, cohesive and adhesive forces, angle of contact	19/10 /2024		
	Ascent Formula (No derivation), applications of surface tension,	21/10 /2024		
	effect of temperature and impurity on surface tension	23/10 /2024		
	Unit-6 Thermometry: Concept of heat and temperature	25/10 /2024		
40 N	Modes of transfer of heat (Conduction, convection and radiation with examples)	26/10 /2024		
	cales of temperature and their relationship	11/11/2024		

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42-43	Types of Thermometer (Mercury Thermometer, Bimetallic Thermometer)	13/11 /2024 11/11/2024	
44	Platinum resistance thermometer and pyrometer and their uses	16/11/2024	
45-46	Expansion of solids, liquids and gases, coefficient of linear, surface and cubical expansions and relation amongst them,	18/ 11/2024 20/11/2024	
47	Co-efficient of thermal conductivity	22/11 /2024	

#### Assignments:

Assignment serial	Contents of syllabus covered	Proposed date	Actual date	Remarks
A-1	Physical world, Units & dimensions, force and motion	02/09/2024	1,00,000,000	
A-2	Work, power, Energy and rotational motion	10/10/2024		
A-3	Properties of matter and thermometry	14/11/2024		

#### House Test/Class Test:

House/Class Test	Contents of syllabus covered	Proposed date	Actual date	Remarks
CT-I	30% of the syllabus	2 <sup>nd</sup> week of September		
CT-II	Next 30% of the syllabus	3rd week of October		
House Test	80% of the syllabus	2 <sup>nd</sup> week of November		

#### Lab Plan:

Exp.	Name of experiment	Actua	Actual date G-1 G-2	Remarks
No.		G-1		
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.			
2	To Determine diameter of wire, a solid ball and thickness of a cardboard using a screw gauge.	· *		
3	To determine radius of curvature of a convex and concave mirror/surface using a spherometer.			
4	To verify triangle and parallelogram law of forces.			
5	To determine force constant of spring using Hooke's law			
6	To verify law of conservation of Mechanical energy (PE to KE).			
7	To find the Moment of Inertia of a flywheel.			
8	To measure room temperature and temperature of a hot bath using mercury thermometer and convert it into different scales.			

(Signature of Teacher)

(Signature of HOD)

ProgramName	Diploma (ECE.)
Course/SubjectName	Applied Chemistry
Course/SubjectCode	BS105(Th)& BS109 Applied Chemistry Lab
Course/SubjectCoordinatorName	Ms.Swati Bhardwaj

## **Evaluation scheme**

S.No	Subject Name		Marks in	evaluation s	scheme			
			Study Scheme	Study Scheme	Internal Assessm	ient	External	Assessment
		(Hrs/Week)	Theory	Practical	Theory	Practical		
1.	Applied Chemistry +Applied Chemistry Lab	3(Th)+1(DCS) +2(Pr)	40	40	60	60		
	Reference b	oooks	2. Ea Ea 3. Te	vt.Ltd.,New agle's Appliedited by Dr VextBook Of (	Delhi, 201 ed Chemis Vibha Sha Chemistry	ng Chemistry,Wiley India 3 try By S C Ahuja rma and Aman Saini forClass XI & T.,Delhi,2017-18		
			4. Dr A	.G.Hugar & pplied Chen ITTTR.	Prof. A.N. nistry Labo	Pathak oratory Practices,		
				gnihotri, Raj dia Pvt.Ltd.		nistry for EngineersWile		

# Course Outcomes: After the completion of the course the student will be able to

CO1	Understand the classification and general properties of engineering materials such as metals, alloys and refractory using knowledge of chemical bonding.
CO2	Understand and assess the suitability of water source for domestic and industrial application, effluent and minimize water pollution.
CO3	Understand how to analyze engineering materials, their properties and applications.
CO4	Understand the use of fuel and lubricants suitable for economical industrial processing eco-friendly products
CO5	Understand construction and mechanism efficiency of electrochemical cells.
CO6	Understand the corrosion and develop prevention techniques.



# Teaching Plan:

Lect No.	Name of topic	Proposed Date	Actual Date	Remarks
1	Unit-1. Atomic Structure: Fundamental particles (electron, proton, neutron), Bohr's theory (Postulates)	12-08-2024		
2	Bohr's theory(successes&limitations).	13-08-2024		
3	Heisenberg uncertainty principle, Hydrogen Spectrum.	14-08-2024		
4	Orbital, difference between orbit and orbital & DCS.	17-08-2024	(ir	
5	Shapes of s, p orbitals	20-08-2024		
6	Quantum numbers.	21-08-2024		
7	Pauli's exclusion principle, Hund's rule of maximum multiplicity, Aufbau rule.	24-08-2024		S. In
8	Electronic configuration(Z=1 to 30) & DCS.	27-08-2024		
9	Unit-2 Chemical Bonding and Solutions: Concept of chemical bonding-cause of chemical bonding, types of bonds: ionic bonding (NaCl example) ,Lewis concept of covalent bond(H <sub>2</sub> , F <sub>2</sub> , HF). Electronegativity.	28-08-2024		
10	Difference between sigma and pie bond.	31-08-2024	1 (8	150
11	Electron sea model of metallic bond, Idea of solute, solvent and solution, Molarity, molality, mass percentage.	02-09-2024		
12	Unit-3 Electrochemistry and Corrosion: Faraday's laws of electrolysis & DCS.	03-09-2024		
13	Simple numerical problems on Faraday's laws of electrolysis & DCS.	04-09-2024		201
14	Industrial application of Electrolysis - • Electrometallurgy	07-09-2024		
15	Electroplating.	02-09-2024		*
16	Electrolytic refining & DCS.	09-09-2024		
17	CLASS TEST - I.	10-09-2024		
18	PrimaryApplication of redox reactions in electrochemical cells – dry cell.	11-09-2024		
19	Secondary cell - commercially used lead acid storage battery.	16-09-2024		
20	Introduction to Corrosion of metals – definition, types of corrosion (electrochemical) & DCS.	16-09-204		3.
21	H <sub>2</sub> liberation and O <sub>2</sub> absorption mechanism of electrochemical corrosion	17-09-204		
22	Internal corrosion preventive measures – Purification, alloying and heat treatment & DCS.	18-09-2024		
23	External corrosion preventive measures: metal anodic coating.	19-09-2024		
24	Cathodic coating & DCS.	19-09-2024		



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25	Unit-4 Engineering Materials: Natural occurrence of metals – minerals, ores of iron, aluminum and copper, gangue (matrix), flux, slag.	21-09-2024		
26	metallurgy – brief account of general principles of metallurgy(a). Crushing and grinding (b) Concentration of ore (Levigation).	23-09-2024		
27	Froth flotation	24-09-2024		
28	Magnetic separation & DCS.	25-09-2024		
29	(c) Extraction (Roasting and calcinations & smelting)	30-09-2024		
30	(d) Refining (Electrorefining, zone refining) & DCS.	30-09-2024	Take S	
31	Extraction of - iron from haematite ore using a blast furnace along with reactions.	01-10-2024		
32	Alloys – definition, purposes of alloying & DCS.	05-10-2024	-7	
33	Ferrous alloys (Invar steel), Non-ferrous alloys (Simple Brass & Bronzes) with properties and applications.	07-10-2024		
34	Nichrome, Duralumin, Magnelium (properties, applications)	08-10-2024		
35	Unit-5 Water: Classification of soft and hard water based on soap test, salts causing water hardness, Cause of poor lathering of soap in hard water	09-10-2024		
36	units of hardness(mg/L and ppm), simple numerical on water hardness & DCS.	14-10-2024	dh em	NA SET
37	Problems caused by the use of hard water in boilers (scale and sludge, foaming and priming, corrosion.)	15-10-2024		
38	water softening techniques- i) zeolite process	16-10-2024		1
39	ii). Municipal water treatment (in brief only) – sedimentation, coagulation,	19-10-2024		
40	filtration, sterilization & DCS.	21-10-2024		
41	CLASS TEST -II	22-10-2024		
42	Properties of water used for human consumption for drinking and cooking purposes from any water sources and Indian standard specification of drinking water.	23-10-2024		
43	Unit-6 Fuels: Definition of fuel and combustion of fuel, classification of fuels	26-10-2024		G94
44	Characteristics of good fuel, Calorific values (HCV and LCV) & DCS.	11-11-2024	-36	
45	Calculation of HCVandLCV using Dulong's formula, DCS	12-11-2024		
46	Petrol and diesel - fuel rating (octane and cetane numbers), Chemical composition	13-11-2024	h.	
47	Calorific values and applications of LPG, CNG, water gas.	16-11-2024		
48	Calorific values and applications of producer gas and biogas & DCS.	18-11-2024	10195	
49	Unit-7 Lubrication: Function and characteristic	19-11-2024		
	properties of good lubricant.			



## Lab Plan:

Exp. No.	Name of experiment	Proposed Date (G-1&G-2)	Actual Date (G-1&G-2)	Remark s
1	Preparation of standard solution of oxalic acid.	16-08-2024 & 22-08-2024		
2	To determine strength of solution by titrating against standard oxalic acid solution using phenolphthalein as indicator.	23-08-2024 & 29-08-2024	-	
3	Experimental verification of Faraday's first law of electrolysis using copper sulfate solution and copper electrode.  OR To construct and measure emf of ElectroChemical Cell(Daniel cell)	30-08-2024 & 12-09-2024		
4	Iodometric estimation of Copper in the given Copper ore using standard Hypo solution.  OR To determine the percentage of Iron present in the given Haematite ore by standard Potassium Permanganate solution.	13-09-2024 & 19-09-2024	1	
5	Estimation of total hardness of water using standard EDTA solution and using eriochrome black-T (solochrome black-T) indicator and approximately neutral buffer solution (pH range 7-11).  OR To estimate total alkalinity of a given water sample by titrating it against standard Sulphuric acid.	20-09-2024 & 26-09-2024		
6	To estimate moisture in a given coal sample gravimetrically.	27-09-2024 & 24-10-2024		
7	To estimate ash in a given coal sample gravimetrically.	18-10-2024 & 07-11-2024		
8	To determine viscosity of given lubricating oil by Redwood viscometer.	08-11-2024 & 21-11-2024	A	3-17

Signature of Teacher

HOD(AS&H)

(Swati Bhardwaj)

Program Name	DIPLOMA IN ECE
Course/Subject Name	Communication Skills In English
Course/Subject Code	HS 101
Course/Subject Coordinator Name	Renu Patial

#### **Evaluation scheme**

S.No.	Subject Name	Study scheme	Marks in	n evaluation	scheme		
		(Hrs/Week)	Internal Assessr		External	Assessment	
1.			Theory	Practical	Theory	Practical	
1.	Communicatio n Skills in English	2(Th)+1(DCS) +2(Pr.)	40	40	60	60	
Refere	nce books:		(1) T	he Fur communica	nctional tion Skills	Aspects of	
			(2) H	I. G Publica	ations Engl	ish Grammar	
				inglish & Clublications	& Comm. Skills-I & II by Eag		
			(4) G	Seneral Eng	lish By Lu	cent	

## Course Outcomes: After the completion of the course the students will:

CO1	Develop basic speaking and writing skills including proper usage of language and vocabulary so that they can become highly confident and skilled speakers writers.
CO2	Be informed of the latest trends in basic verbal activities such as presentation facing interviews and other forms of communication.
CO3	Also Develop Skill of group presentation and communication in team.
CO4	Develop Non-Verbal Communication such as proper use of body language and gesture.

#### Teaching Plan:

Lecture No.	Name of topic	Propose d Date	Actual date	Remarks
1	Unit-1 Communication: Theory and Practice Introduction	12/08/24		
2	Basics of communication, Introduction meaning and definition, process of communication etc.	14/08/24		
3	Types of Communication: Formal & Informal, Verbal, Non-Verbal and written Barriers to effective communication.	19/08/24		



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4	7Cs for effective communication( Consideration, concrete,concise, clear,complete, correct, courteous)	21/08/24		
5	Art of effective communication, (Choosing words, Voice, Modulation, Clarity, Time, Simplification of Words and Technical Communication.	22/08/24		
6	Unit-2 Soft Skills For Professional Excellence: Introduction: Soft Skills and Hard skills Importance of soft skills	28/08/24		
7	Life Skills, Self Awarness and self analysis, Adaptability, resilience, emotional intelligence and empathy etc.	29/08/24		
8	Unit- 3 Reading Comprehension Section: Short Stories 1. The Gift Of Magi	02/09/24	SF IF	
9	The Gift Of Magi	04/09/24		
10	2.Uncle Podger Hangs a Picture	05/09/24		
11	Uncle Podger Hangs a Picture	09/09/24		1000
12	Section :2 Poetry  1.Night Of the Scorpion	11/09/24		
13	1.Night Of the Scorpion	12/09/24		1
14	2.Stopping By Woods On A snowy Evening	16/09/24		
15	Stopping By Woods On A snowy Evening	18/09/24		
16	3. Where Mind Is without fear	19/09/24		
17	Unit-4. Professional writing The Art of précis writing	23/09/24	_	
18	The Art of precis Writing	25/09/24		
19	Letters: Business and Personal	26/09/24		
20	Letters: Business and Personal	30/09/24		
21	Letters: Business and Personal	03/10/24		
22	Drafting e-mail	07/10/24		
23	Drafting Notices	09/10/24		
24	Minutes Of Meeting	10/10/24		
25	Minutes Of Meeting	14/10/24		
26	Unit -5 Vocabulary and Grammar Glossary of administrative terms( Hindi and English)	16/10/24	3	
27	One-word substitution	21/10/24		
28	One-word substitution	23/10/24		
29	Idioms and phrases	24/10/24		
30	Idioms and phrases	28/10/24		
31	Parts of Speech	30/10/24		
32	Parts of Speech	04/11/24		
33	Parts of Speech	06/11/24		
	Tenses	07/11/24		
34				
35	Tenses	11/11/24		



38	Active and Passive voice	14/11/24	
39	Active and Passive Voice	18/11/24	
40	Active and Passive Voice	20/11/24	
41	Punctuation.	21,25/11/	
42	Punctuation.	28/11/24 02/12/24	

## Assignments:

Assignment serial	Contents of syllabus covered	Actual date	Remarks
A-1	Communication and Soft Skills		
A-2	Reading Comprehension		

#### House Test/Class Test:

House/Class Test	Contents of syllabus covered	Proposed Date	Actual date	Remark
CT-I	30% of the syllabus			
CT-II	Next 30% of the syllabus			
House Test	80% of the syllabus			

## Lab Plan( 101 ):

Month	Name of Practical	Act	ual Date	Remarks	
	6	G-A G-B			
AUG	Unit-1 listening Skills: Listening process and practice, introduction to recorded lectures, poems, interviews and speeches, listening tests.				
SEP	<ol> <li>Unit-2 introduction to phonetics</li> <li>Sounds: Consonant, Vowel,         Diphthongs etc. transcription of         words(IPA) Syllable Division     </li> <li>Words, Stress, Intonation, Voice         Modulation etc.</li> </ol>				
OCT- NOV	Unit-3 Speaking Skills Standard and Formal speech Group Discussion Oral Presentation Public Speaking ,Business presentation etc. Conversation Practice Role playing Mock Interview				

Signature of Teacher

Signature of HOD

Branch	ECQ.
Course Title	Sports and Yoga
Course Code	HS103
Number Of Credits	1 (L:0, DCS:0, P:2)
Course Category	HS
	Maria Maria

#### **Evaluation Scheme**

Sr No.	Subject Name	Study Scheme Hrs/Week	Marks Evaluation Scheme					
1	Sports and Yoga		Internal Assessment		External Assessment			
150	100			Theory	Practical	Theory	Practical	
	*	02 Hrs/week		40		60		
2	2 Reference Books Mo		Modern trends and physical Edu. By Prof. Ajmer singh					
120		Light on Yoga	By B.K.S. Iyenger.					
		Health and Phy	sical Edu	NCERT (	11 th and 12	2 th Classes)		

Course Outcome: On successful completion of the course the students will be able to:

i	Practice physical activities and hatha yoga focusing on yoga for strength, flexibility, and relaxation.
ii	Learn techniques for increasing concentration and decreasing anxiety which leads to stronger academic performance.
iii	Learn breathing exercises and healthy fitness activities. Understand basic skills associated with yoga and physical activities including strength and flexibility, balance and coordination.
iv	Perform yoga movements in various combination and forms
V	Asssess current personal fitness levels.
vi	Identify opportunities for participation in yoga and sports activities
vii	Develop understanding of health related fitness components cardiorespiratory endur-ance, flexibility and body composition etc.
viii	Improve personal fitness through participation in sports and yogic activities
ix	Develop understanding of psychological problems associated with the age and life style
X	Demonstrate and understanding of sound nutritional practices as related to health and physical performance
xi	Assess yoga activities in terms of fitness value
xii	Identify and apply injury prevention principals related to yoga and physical fitness activities.

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Lab Plan: Sports and Yoga( ECE.)

	Lab Plan: Sports ar	Proposed	date	Actual	date	Remarks
1	Name of Contents	G-I	G-II	G-I	G-II	Remarks
	& definition of Physical Education.	12/10/2014	19/08/24			
	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. )	92/8/24	29/8/24	, 4	ar a	
	Physical Fitness, Wellness & Lifestyle. Meaning	219/24	15/09/2014			
	Fundamentals of Anatomy & Physiology in physical Education, Sports and yoga. Define anatomy, Physiology & Its importance. Effect of exercise on the fuctioning of various body system. (Circulatory system, Respi- ratory system. Neuro-Muscular system etc.)	· •9 09 24	12/9/24			
5	Kinesiology, Biomechanics & sports. Meaning & Importance of Kinesiology & Biomechanics in Physical Edu. & sports. Friction and its effects in sports.	16/9/24	1919/24	128		
6	Postures.  Meaning and concept of Postures.  Bad Posture.  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.		26/9/24			
7	Yoga.  & Importance of Yoga.  Introducation - Asanas, Pranayama, Meditation & Yogic Kriyas. Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Sha- Shankasana). Relaxation Techniques for imporving concentration Yognidra.		310124			
8	Yoga & Lifestyle. Asanas as preventive measures. Hypetension: Tedasana, Vajrasana, Pravan Muktasana, Ardha Chakrasana, Bhujagasana, sharasana. Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, Ardh matsyendrasana, Matsyendrasana. Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, shalabhasana, Bhujangasana		10/10/24			



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Trade : El-	ctronic 9 Commis	Lab Plan (Carpe			
Trade : Electronic & Comm. Engg. Sem: 1st		Session: July - Dec 2024			
Sr. No	Name of Practical				
- 8	Tractical Tractical	Proposed Date  9-1 12-8-24 13-8-24	Actual Date	Remarks	
1	(i)Demonstration of different w working tools/Machines	9-11 19-8-24 12-8-24 12-8-24			
		9-11 27-8-24	Mari	2.	
	(ii) Demonstration of different wood working processes like	9-9-24 5-9-24 9-9-24			
2	Plaining, Marking, chiseling, grooving, truning of wood etc.	9-11 10-9-24 12-9-24 9-11 17-9-24 19-9-24			
	One simple to be to disconnected to	9-I 24-9-24			
3	One simple job involving any on joint like mortise and tenon Join	03-10-24 Q TI 7-10-24			
		9-10-24 10-10-24 9-1 15-10-24 4-11-24			
		5-11-24 7-11-24 21-10-24	41 1		
	Practice on Dovetail, bridle and Half lap Joint etc.	9-11 22-10-24 24-10-24 18-11-24 19-11-24			
		9-11 29-10-24 25-11-24 16-11-24			

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Foreman Instr.
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Workshop Supdt.

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Trade: F	ectronic & Comm. Engg.	T		cal shop)		
Sem: 1st		Session: July - Dec 2024				
Sr. No	The Control of the Control of Con		osed Date	Actual Date	Remarks	
1	(i)Demonstrarion of advance power tools, Pneumatic tools, electrical wiring tools and accessories.		12-08-24	Actual Date	Kemarks	
		G-III	19-8-24 20-8-24 22-8-24			
		G-I	27-8-24			
2	(ii)Tools for cutting and drilling (iii) Demonstration of measurement of current, voltage, Power and energy.	G-II	02-9-24 03-9-24 05-9-24			
		G-II	10-9-24		17	
		G-1	16-9-24			
3	Practice of simple lamp circuit (iv) One lamp conrtrolled by one switch by surface conduit wiring. (v) Lamp circuits- connection of lamp and socket by seprate switches.	G-II	23-9-24			
		G-II	30-9-24 01-10-24 03-10-24			
		G-I	07-10-24			
4	(vi) Connection of Fluorescent lamp/tube light (vii) Simple Lamp Circuits install bedroom lighting. (viii) Simple lamp circuit install stair case wiring	G-II	14-10-24 16-10-24 04-11-24 05-11-24		×	
		G-II	21-10-24 22-10-24 24-10-24 18-11-24 19-11-24			
		G-I	21-11-24 28-10-24 29-10-24 29-11-24 26-11-24			

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Workshop Supdt.

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Trade : Electronic & Comm. Engg. Sem: 1st			Plan (Sheet Metal shop) Session: July - Dec 2024				
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r. No	Name of Practical		Proposed Date	Actual Date	Remarks		
1			13-8-24				
		heet G-T	19-8-24 20-8-24 22-8-24				
		9-II	27-0-24	1	20.3		
2	(ii) Demonstration of different Sheet Metal operations like shee cutting, bending, edging	9- <u>n</u>	2-9-14 3-9-24 5-9-24				
		ef-I	9-9-24				
		9-1	19-9-24				
3	Demonstration of sheet metal operations like curling, lancing soldering, brazing and riveting	9-11	26-9-24				
		9-I	30-9-24 01-10-24 03-10-21				
		9-1	7-10-24 8-10-24 10-10-24				
4	One simple job involving sheet 4-metal operation and soldering and riveting.	9-11	14-10-24 15-10-24 4-11-24 5-11-24				
			21-10-24 22-10-24 24-10-24 18-11-24 19-11-24				
		9-II	21-11-24				

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