

Department of Applied Sciences & Humanities
Govt. Polytechnic Kullu at Seobagh
Distt. – Kullu (H.P.) - 175138

LESSON PLAN

Program Name	Electrical Engineering
Subject Name	Applied Mathematics-I
Subject Code	BS101
Semester	Ist
Subject Teacher Name	Monika Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study Scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		L	T	Th	Pr	Total	Th	Pr	Total
1.	Applied Mathematics- I	3	1	50	-	50	100	-	100
Reference Books		(vi) Mathematics for Class XI & XII, NCERT Publication, New Delhi.							
		(vii) B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, New Delhi, Latest Edition.							
		(viii) R. D. Sharma, "Applied Mathematics – I & II, Dhanpat Rai Publications, Latest Edition							
		(ix) Reena Kaur, Mathematics-I, True Edu Publications, 2024							
		(x) Satish Sharma, Eagle Prakashan, Applied Mathematics, Vol. I Jalandhar.							

Course Outcomes (COs)

CO – 1	Apply the fundamental concepts of trigonometry to solve mathematical problems.
CO – 2	Analyse mathematical functions and evaluate limits using standard limits and methods such as factorization, substitution, and rationalization.
CO – 3	Apply differentiation techniques, including first principles and rules of differentiation, to solve problems involving algebraic, trigonometric, and inverse trigonometric functions.
CO – 4	Solve algebraic operations on complex numbers; represent them geometrically using the Argand diagram, and use partial fraction decomposition to simplify rational expressions.
CO – 5	Use the concepts of permutations, combinations, and the binomial theorem to solve counting problems.

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I Basic Trigonometry Trigonometric Formulae & Graphs	Concept of angles	10/08/26		
	measurement of angles in degrees, grades and radians and their conversions	11/08/26 14/08/26		
	radian measure formula (Arc Length Formula in radians)	17/08/26 18/08/26		
	Ratios of Allied angles	21/08/26 22/08/26		
	Sum, Difference formulae and their application	24/08/26 25/08/26		

	Product formulae (Transformation of product to sum, difference and vice versa)	29/08/26 31/08/26		
	Graphs of $\sin x$	01/09/26		
	Graphs of $\cos x$	05/09/26		
UNIT-II Functions and Limits	Definition of function, Value of a function	07/09/26		
	Even and Odd Function, Function of a function,	08/09/26		
	Class Test-1	11/09/26		
	Limit of a function	14/09/26		
	Standard limits (with proof)	15/09/26 18/09/26		
	Limit of an algebraic function by using Factorization Method	19/09/26		
	Find limit using substitution Method	21/09/26		
	Find limit using Rationalization Method	22/09/26 25/09/26		
UNIT-III Differentiation	Differentiation by first principle (x , $\sin x$ & $\cos x$)	26/09/26		
	Rules of differentiation	28/09/26		
	Sum, Difference, Product and quotient Rule	29/09/26		
	Differentiation of function of a function(Chain Rule)	03/10/26		
	Differentiation of trigonometric and inverse trigonometric functions,	05/10/26		
	Differentiation of trigonometric and inverse trigonometric functions,	06/10/26		
	Class Test -2	09/10/26		
	Logarithmic differentiation	12/10/26		
UNIT-IV Complex Numbers and Partial Fractions	Definition of complex number, real and imaginary parts, conjugate of a complex number	13/10/26		
	Algebra of complex numbers (Addition, Subtraction, Multiplication and Division)	16/10/26		

	Additive and multiplicative inverse, solution of a quadratic equation having Discriminant less than 0	17/10/26		
	Geometrical Representation of a Complex Number-Argand Diagram	19/10/26		
	modulus & amplitude of a complex number, Polar form	23/10/26		
	Definition of polynomial fraction (proper, improper fractions) and definition of partial fractions.	24/10/26		
	Resolve a fraction (proper fractions) into partial fraction with denominator containing non-repeated linear factors.	27/10/26		
	Resolve a fraction (improper fractions) into partial fraction with denominator containing non-repeated linear factors.	30/10/26 31/10/26		
	House Test	1st week of November		
UNIT-V Permutations, Combinations and Binomial Theorem	Definition of $n!$, Simplification of factorial expressions	06/11/26 07/11/26		
	Permutation: Meaning, formula $P(n,r)$ and simple numerical problems	09/11/26 10/11/26		
	Combination: Meaning, formula $C(n,r)$ and simple numerical problems.	13/11/26 16/11/26		
	Binomial theorem for positive integral index (expansion and general form)	17/11/26 20/11/26		
	Binomial theorem for any index (expansion without proof)	21/11/26		
	First and second binomial approximation with applications to engineering problems.	23/11/26 26/11/26		
	Tutorial	27/11/26 28/11/26		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Trigonometry, Functions and limits	19/09/26		
A-2	Differentiation, Complex Numbers and Partial Fractions	06/11/26		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test - 1	30% of the syllabus	As per IPTSB Academic Schedule		
Class Test - 2	Next 30% of the syllabus			
House Test - 1	80% of the syllabus			

(Signature of Teacher)

(Signature of MOE)

Department of Applied Sciences & Humanities
Govt. Polytechnic Kullu at Seobagh
Distt. – Kullu (H.P.) - 175138

LESSON PLAN

Program Name	Civil Engineering
Subject Name *	Applied Mathematics- I
Subject Code	BS101
Semester	Ist
Subject Teacher Name	Sh. Lekhraj Sharma

Evaluation Scheme

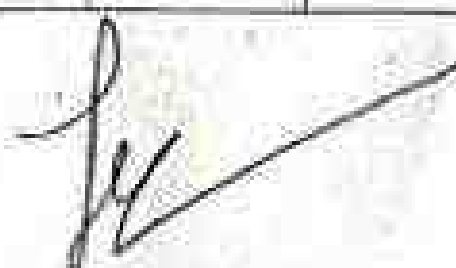
Sr. No.	Subject Name	Study Scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		L	T	Th	Pr	Total	Th	Pr	Total
1.	Applied Mathematics- I	3	1	50	-	50	100	-	100
Reference Books		(xi) Mathematics for Class XI & XII, NCERT Publication, New Delhi.							
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Course Outcomes (COs)

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CO – 2	Analyse mathematical functions and evaluate limits using standard limits and methods such as factorization, substitution, and rationalization.
CO – 3	Apply differentiation techniques, including first principles and rules of differentiation, to solve problems involving algebraic, trigonometric, and inverse trigonometric functions.
CO – 4	Solve algebraic operations on complex numbers; represent them geometrically using the Argand diagram, and use partial fraction decomposition to simplify rational expressions.
CO – 5	Use the concepts of permutations, combinations, and the binomial theorem to solve counting problems.

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I Basic Trigonometry Trigonometric Formulae & Graphs	Concept of angles	10/08/26		
	measurement of angles in degrees, grades and radians and their conversions	11/08/26 14/08/26		
	radian measure formula (Arc Length Formula in radians)	17/08/26 18/08/26		
	Ratios of Allied angles	21/08/26 22/08/26		
	Sum, Difference formulae and their application	24/08/26 25/08/26		



	Product formulae (Transformation of product to sum, difference and vice versa)	28/08/26 29/08/26		
	Graphs of $\sin x$	01/09/26		
	Graphs of $\cos x$	03/09/26		
UNIT-II Functions and Limits	Definition of function, Value of a function	07/09/26		
	Even and Odd Function, Function of a function,	08/09/26		
	Class Test-1	11/09/26		
	Limit of a function	14/09/26		
	Standard limits (with proof)	15/09/26 18/09/26		
	Limit of an algebraic function by using Factorization Method	19/09/26		
	Find limit using substitution Method	21/09/26		
	Find limit using Rationalization Method	22/09/26 25/09/26		
UNIT-III Differentiation	Differentiation by first principle (x , $\sin x$ & $\cos x$)	26/09/26		
	Rules of differentiation	28/09/26		
	Sum, Difference, Product and quotient Rule	29/09/26		
	Differentiation of function of a function(Chain Rule)	03/10/26		
	Differentiation of trigonometric and inverse trigonometric functions,	05/10/26		
	Differentiation of trigonometric and inverse trigonometric functions,	05/10/26		
	Class Test -2	09/10/26		
	Logarithmic differentiation	12/10/26		
UNIT- IV Complex Numbers and Partial Fractions	Definition of complex number, real and imaginary parts, conjugate of a complex number	13/10/26		
	Algebra of complex numbers (Addition, Subtraction, Multiplication and Division).	16/10/26		

	Additive and multiplicative inverse, solution of a quadratic equation having Discriminant less than 0	17/10/26		
	Geometrical representation of a Complex Number-Argand Diagram	19/10/26		
	modulus & amplitude of a complex number, Polar form	23/10/26		
	Definition of polynomial fraction (proper, improper fractions) and definition of partial fractions.	24/10/26		
	Resolve a fraction (proper fractions) into partial fraction with denominator containing non-repeated linear factors.	30/10/26		
	Resolve a fraction (improper fractions) into partial fraction with denominator containing non-repeated linear factors.	31/10/26		
	House Test	1st week of November		
UNIT-V Permutations, Combinations and Binomial Theorem	Definition of n!, Simplification of factorial expressions	06/11/26 07/11/26		
	Permutation: Meaning, formula $P(n,r)$ and simple numerical problems	09/11/26 10/11/26		
	Combination: Meaning, formula $C(n,r)$ and simple numerical problems.	13/11/26 16/11/26		
	Binomial theorem for positive integral index (expansion and general form)	17/11/26 20/11/26		
	binomial theorem for any index (expansion without proof)	21/11/26		
	First and second binomial approximation with applications to engineering problems.	23/11/26 27/11/26		
	Tutorial	28/11/26		



Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Trigonometry, Functions and limits	19/09/26		
A-2	Differentiation, Complex Numbers and Partial Fractions	06/11/26		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	30% of the syllabus	As per HPTSB Academic Schedule		
Class Test -2	Next 30% of the syllabus			
House Test - 1	80% of the syllabus			


(Signature of HOD)

Department of Applied Sciences & Humanities
Govt. Polytechnic Kullu at Seobagh
Distt. – Kullu (H.P.) - 175138

LESSON PLAN

Program Name	Automobile Engineering
Subject Name	Applied Mathematics- I
Subject Code	BS101
Semester	Ist
Subject Teacher Name	Monika Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study Scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		L	T	Th	Pr	Total	Th	Pr	Total
I.	Applied Mathematics- I	3	1	50	-	50	100	-	100
Reference Books		(i) Mathematics for Class XI & XII, NCERT Publication, New Delhi.							
		(ii) B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers, New Delhi, Latest Edition.							
		(iii) R. D. Sharma, "Applied Mathematics – I & II, Dhanpat Rai Publications, Latest Edition.							
		(iv) Beena Kumari, Mathematics-I, True Edu Publications, 2024							
		(v) Satish Sharma, Eagle Prakashan, Applied Mathematics, Vol. I Jalandhar.							

Course Outcomes (COs)

CO – 1	Apply the fundamental concepts of trigonometry to solve mathematical problems.
CO – 2	Analyze mathematical functions and evaluate limits using standard limits and methods such as factorization, substitution, and rationalization.
CO – 3	Apply differentiation techniques, including first principles and rules of differentiation, to solve problems involving algebraic, trigonometric, and inverse trigonometric functions.
CO – 4	Solve algebraic operations on complex numbers; represent them geometrically using the Argand diagram, and use partial fraction decomposition to simplify rational expressions.
CO – 5	Use the concepts of permutations, combinations, and the binomial theorem to solve counting problems.

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I Basic Trigonometry Trigonometric Formulae & Graphs	Concept of angles	10/08/26		
	measurement of angles in degrees, grades and radians and their conversions.	11/08/26 13/08/26		
	radian measure formula (Arc Length Formula in radians)	17/08/26 18/08/26		
	Ratios of Allied angles	20/08/26		

		22/08/26		
	Sum, Difference formulae and their applications	24/08/26 25/08/26		
	Product formulae (Transformation of product to sum, difference and vice versa)	27/08/26 29/08/26		
	Graphs of $\sin x$	31/08/26		
	Graphs of $\cos x$	01/09/26		
UNIT-II Functions and Limits	Definition of function, Value of a function	03/09/26		
	Even and Odd Function, Function of a function,	05/09/26		
	Class Test-1	07/09/26		
	Limit of a function	08/09/26		
	Standard limits (with proof)	10/09/26 14/09/26		
	Limit of an algebraic function by using Factorization Method	15/09/26		
	Find limit using substitution Method	17/09/26		
	Find limit using Rationalization Method	19/09/26 21/09/26		
UNIT-III Differentiation	Differentiation by first principle (x , $\sin x$ & $\cos x$)	22/09/26		
	Rules of differentiation	24/09/26		
	Sum, Difference, Product and quotient Rule	26/09/26 28/09/26 29/09/26		
	Differentiation of function of a function (Chain Rule)	01/10/26		
	Differentiation of trigonometric and inverse trigonometric functions,	03/10/26		
	Differentiation of trigonometric and inverse trigonometric functions,	05/10/26		
	Logarithmic differentiation	06/10/26		
	Class Test -2	08/10/26		

UNIT- IV Complex Numbers and Partial Fractions	Definition of complex number, real and imaginary parts, conjugate of a complex number	12/10/26		
	Algebra of complex numbers (Addition, Subtraction, Multiplication and Division)	13/10/26 15/10/26		
	Additive and multiplicative inverse, solution of a quadratic equation having Discriminant less than 0	17/10/26		
	Geometrical Representation of a Complex Number-Argand Diagram	19/10/26		
	modulus & amplitude of a complex number, Polar form	22/10/26		
	Definition of polynomial fraction (proper, improper fractions) and definition of partial fractions.	24/10/26		
	Resolve a fraction (proper fractions) into partial fraction with denominator containing non-repeated linear factors.	27/10/26		
	Resolve a fraction (improper fractions) into partial fraction with denominator containing non-repeated linear factors.	31/10/26		
	House Test	1st week of November		
UNIT-V Permutations, Combinations and Binomial Theorem	Definition of n!, Simplification of factorial expressions	07/11/26 09/11/26		
	Permutation: Meaning, formula $P(n,r)$ and simple numerical problems	10/11/26 12/11/26		
	Combination: Meaning, formula $C(n,r)$ and simple numerical problems.	14/11/26 16/11/26		
	Binomial theorem for positive integral index (expansion and general form)	17/11/26 19/11/26		
	binomial theorem for any index (expansion without proof)	21/11/26		
	First and second binomial approximation with applications to engineering problems.	23/11/26 26/11/26		
	Tutorial	28/11/26		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Trigonometry, Functions and limits	19/09/26		
A-2	Differentiation, Complex Numbers and Partial Fractions	06/11/26		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	30% of the syllabus	As per HPTSB Academic Schedule		
Class Test -2	Next 30% of the syllabus			
House Test - 1	80% of the syllabus			


(Signature of Teacher)


(Signature of HOD)

**Department of
Automobile Engg.
Govt. Polytechnic Kullu
At Seobag Distt. Kullu**

LESSON PLAN

Program Name	Automobile Engineering
Subject Name	Applied Physics-I
Subject Code	BS103
Semester	1st
Subject Teacher Name	Mr. Gopal Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Applied Physics-I	3	4	50	50	100	100	100	300
Reference Books		(i) Text Book of Physics for Class XI& XII (Part-I, Part-II); N.C.E.R.T., Delhi.							
		(ii) Concepts in Physics by HC Verma, Vol. I & II, Bharti Bhawan Ltd. New Delhi.							

Course Outcomes (COs)

CO-1	Identify different physical quantities, choose appropriate units, and perform accurate measurements.
CO-2	Classify physical quantities as scalars and vectors, distinguish various types of motion
CO-3	Explain the concepts of work, energy, and power and solve related numerical problems.
CO-4	Interpret the properties of matter and apply the concepts of heat and temperature to explain the behavior of materials and related phenomena.
CO-5	physical principles and analytical methods in various technical and engineering contexts.

Teaching Plan

Unit No.	Name of Topic	Proposed Date	Actual Date	Remarks
Unit I: Units and Dimensions	Physical quantities - fundamental and derived quantities, System of units: CGS, FPS, MKS, SI.	11/08/26		
	Dimensional formulae and SI units of physical quantities - displacement, area, volume, density, velocity, acceleration, linear momentum, force, work, power, energy, pressure, stress & strain	12/08/26 18/08/26 19/08/26		
	Principle of homogeneity of dimensions, Application of dimensional analysis: checking the	22/08/26 25/08/26		

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	correctness of physical equation (three equations of motion),			
	Errors, Types of errors - Instrumental, Systematic, Random and Gross error.	29/08/26		
Unit 2: Force and Motion	Scalar and vector quantities - definition and examples, representation of vector, types of vectors (equal vectors, negative vectors, unit vectors, co-initial vectors, co-planar vectors)	2/09/26 3/09/26 5/09/26		
	linear momentum, law of conservation of linear momentum with derivation, angular displacement, angular velocity,	8/09/26 9/09/26 15/09/26		
	angular acceleration, relation between linear and angular velocity, torque, angular momentum,	16/09/26 19/09/26		
	law of conservation of angular momentum and its applications, moment of inertia and its physical significance.	22/09/26 23/09/26		
Unit 3: Work, Power, and Energy.	Work and types of work (zero work, positive work and negative work) with examples,	26/09/26 29/09/26		
	Energy - definition and its SI unit, examples of transformation of energy, Kinetic energy - definition, examples, formula and its derivation.	30/09/26 03/10/26 06/10/26		
	Potential energy - definition, examples, formula and its derivation,	07/10/26		
	Law of conservation of mechanical energy for freely falling bodies (with derivation)	13/10/26		
	Power and simple numerical problems based on Power.	14/10/26		
Unit 4: Properties of Matter	Elasticity and plasticity - definition, Definition of stress and strain	17/10/26 21/10/26		
	Types of stress and strain, Hooke's law,	24/10/26		
	Modulus of elasticity and its types	27/10/26		
	Pressure - definition, atmospheric pressure, gauge pressure, absolute pressure,	28/10/26 31/10/26		
Unit 5: Heat and Temperature	Definition of heat and temperature (on the basis of kinetic theory), Difference between heat and temperature	3/11/26 4/11/26		
	Modes of transfer of heat- conduction, convection and radiation with examples,	7/11/26 10/11/26 11/11/26		
	Different scales of temperature and their relationship	18/11/26		

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	Numerical problems based on conversion of temperature into various scales.	25/11/26 28/11/26		
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Assignment:-

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1 and Unit-2	9/09/2026		
A-2	Unit-3 and Unit-4	14/10/26		
A-3	Unit-5	4/11/26		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1 and Unit-2	As per HPTS8 Academic Schedule		
Class Test -2	Unit-3 and Unit-4			
House Test - 1	Unit-1, Unit-2, Unit-3 and Unit-4			

Lab Plan

Sr.no	Name of Practicals	Proposed Date		Actual Date		Rmks
		G-1	G-2	G-1	G-2	
1	To find the diameter of a solid cylinder using a Vernier Calliper.	13/08/26 20/08/26	14/08/26 21/08/26			
2	To find the internal diameter & depth of a beaker using a Vernier Calliper and hence find its volume.	27/08/26 3/09/26	28/08/26 11/09/26			
3	To find the diameter of wire & thickness of cardboard by using a screw gauge.	10/09/26 17/09/26	18/09/26 25/09/26			
4	To determine the thickness of the glass strip using a spherometer.	24/09/26 1/10/26	9/10/26 16/10/26			
5	To determine the radius of curvature of a given spherical surface by a spherometer.	8/10/26 15/10/26	23/10/26 30/10/26			
6	To determine the force constant of spring using Hooke's law.	22/10/26 29/10/26	6/11/26			
7	To verify the law of conservation of mechanical energy (PE to KE).	05/11/26	13/11/26			
8	To find the moment of inertia of a flywheel.	12/11/26	20/11/26			
9	To measure room temperature using a thermometer and convert it into different temperature scales.	19/11/26 26/11/26	27/11/26			

(Signature of Teacher)

(Signature of HOD)

**Department of
Civil Engg.**
Govt. Polytechnic Kullu
At Seobag Distt. Kullu

LESSON PLAN

Program Name	Civil Engineering
Subject Name	Applied Physics-I
Subject Code	BS103
Semester	Ist
Subject Teacher Name	Mr. Gopal Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
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Course Outcomes (COs)

CO - 1	Identify different physical quantities, choose appropriate units, and perform accurate measurements.
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CO - 3	Explain the concepts of work, energy, and power and solve related numerical problems.
CO - 4	Interpret the properties of matter and apply the concepts of heat and temperature to explain the behavior of materials and related phenomena.
CO-5	physical principles and analytical methods in various technical and engineering contexts.

Teaching Plan

Unit No.	Name of Topic	Proposed Date	Actual Date	Remarks
Unit 1: Units and Dimensions	Physical quantities - fundamental and derived quantities, System of units: CGS, FPS, MKS, SI,	10/08/26 12/08/26		
	Dimensional formulae and SI units of physical quantities - displacement, area, volume, density, velocity, acceleration, linear momentum, force, work, power, energy, pressure, stress & strain	17/08/26 19/08/26 22/08/26		
	Principle of homogeneity of dimensions, Application of dimensional analysis; checking the	24/08/26 26/08/26		

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	correctness of physical equation (three equations of motion),			
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	angular acceleration, relation between linear and angular velocity, torque, angular momentum,	16/09/26 19/09/26		
	law of conservation of angular momentum and its applications, moment of inertia and its physical significance,	21/09/26 23/09/26		
	Work and types of work (zero work, positive work and negative work) with examples,	26/09/26 28/09/26		
Unit 3: Work, Power, and Energy.	Energy - definition and its SI unit, examples of transformation of energy, Kinetic energy - definition, examples, formula and its derivation.	30/09/26 3/10/26 5/10/26		
	Potential energy - definition, examples, formula and its derivation,	7/10/26		
	Law of conservation of mechanical energy for freely falling bodies (with derivation)	12/10/26 14/10/26		
	Power and simple numerical problems based on Power.	17/10/26		
	Elasticity and plasticity - definition, Definition of stress and strain	19/10/26 21/10/26		
Unit 4: Properties of Matter	Types of stress and strain, Hooke's law,	24/10/26 28/10/26		
	Modulus of elasticity and its types	31/10/26		
	Pressure - definition, atmospheric pressure, gauge pressure, absolute pressure.	2/11/26 4/11/26		
Unit 5: Heat and Temperature	Definition of heat and temperature (on the basis of kinetic theory). Difference between heat and temperature	7/11/26 9/11/26		
	Modes of transfer of heat- conduction, convection and radiation with examples.	11/11/26 16/11/26 18/11/26		
	Different scales of temperature and their relationship.	21/11/26 23/11/26		

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	Numerical problems based on conversion of temperature into various scales.	25/11/26 28/11/26		
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Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1 and Unit-2	09/09/26		
A-2	Unit-3 and Unit-4	14/10/26		
A-3	Unit-5	04/11/26		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1 and Unit-2	As per HPTSB Academic Schedule		
Class Test -2	Unit-3 and Unit-4			
House Test - 1	Unit-1, Unit-2, Unit-3 and Unit-4			

Lab Plan

Sr.no	Name of Practicals	Proposed Date		Actual Date		Rmks
		G-1	G-2	G-1	G-2	
1	To find the diameter of a solid cylinder using a Vernier Calliper.	13/08/26 20/08/26	14/08/26 21/08/26			
2	To find the internal diameter & depth of a beaker using a Vernier Calliper and hence find its volume.	27/08/26 3/09/26	28/08/26 11/09/26			
3	To find the diameter of wire & thickness of cardboard by using a screw gauge	10/09/26 17/09/26	18/09/26 25/09/26			
4	To determine the thickness of the glass strip using a spherometer	24/09/26 1/10/26	9/10/26 16/10/26			
5	To determine the radius of curvature of a given spherical surface by a spherometer.	8/10/26 15/10/26	23/10/26 30/10/26			
6	To determine the force constant of spring using Hooke's law.	22/10/26 29/10/26	06/11/26			
7	To verify the law of conservation of mechanical energy (PE to KE).	5/11/26	13/11/26			
8	To find the moment of inertia of a flywheel.	12/11/26	20/11/26			
9	To measure room temperature using a thermometer and convert it into different temperature scales	19/11/26 26/11/26	27/11/26			

(Signature of Teacher)

(Signature of HOD)

**Department of
Electrical Engg.
Govt. Polytechnic Kullu
At Seohag Distt. Kullu**

LESSON PLAN

Program Name	Electrical Engineering
Subject Name	Applied Physics-I
Subject Code	BS103
Semester	Ist
Subject Teacher Name	Mr. Gopal Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Applied Physics-I	3	4	50	50	100	100	100	300
Reference Books		(iii) Text Book of Physics for Class XI& XII (Part-I, Part-II); N.C.E.R.T., Delhi.							
		(iv) Concepts in Physics by HC Verma, Vol. I & II, Bharti Bhawan Ltd. New Delhi.							

Course Outcomes (COs)

CO - 1	Identify different physical quantities, choose appropriate units, and perform accurate measurements.
CO - 2	Classify physical quantities as scalars and vectors, distinguish various types of motion
CO - 3	Explain the concepts of work, energy, and power and solve related numerical problems.
CO - 4	Interpret the properties of matter and apply the concepts of heat and temperature to explain the behavior of materials and related phenomena.
CO-5	physical principles and analytical methods in various technical and engineering contexts.

Teaching Plan

Unit No.	Name of Topic	Proposed Date	Actual Date	Remarks
Unit 1: Units and Dimensions	Physical quantities - fundamental and derived quantities, System of units: CGS, FPS, MKS, SI,	10/08/26 12/08/26		
	Dimensional formulae and SI units of physical quantities - displacement, area, volume, density, velocity, acceleration, linear momentum, force, work, power, energy, pressure, stress & strain	13/08/26 17/08/26 19/08/26		
	Principle of homogeneity of dimensions, Application of	20/08/26 24/08/26		

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	dimensional analysis: checking the correctness of physical equation (three equations of motion),			
	Errors, Types of errors - Instrumental, Systematic, Random and Gross error.	26/08/26 27/08/26		
Unit 2: Force and Motion	Scalar and vector quantities - definition and examples, representation of vector, types of vectors (equal vectors, negative vectors, unit vectors, co-initial vectors, co-planar vectors)	31/08/26 02/09/26 03/09/26		
	linear momentum, law of conservation of linear momentum with derivation, angular displacement, angular velocity,	07/09/26 09/09/26		
	angular acceleration, relation between linear and angular velocity, torque, angular momentum,	10/09/26 14/09/26		
	law of conservation of angular momentum and its applications, moment of inertia and its physical significance.	16/09/26 17/09/26 21/09/26		
	Work and types of work (zero work, positive work and negative work) with examples,	23/09/26 24/09/26		
Unit 3: Work, Power, and Energy.	Energy - definition and its SI unit, examples of transformation of energy, Kinetic energy - definition, examples, formula and its derivation.	28/09/26 30/09/26 01/10/26		
	Potential energy - definition, examples, formula and its derivation,	05/10/26		
	Law of conservation of mechanical energy for freely falling bodies (with derivation)	07/10/26 08/10/26		
	Power and simple numerical problems based on Power.	12/10/26 14/10/26		
	Elasticity and plasticity - definition, Definition of stress and strain	15/10/26 19/10/26		
Unit 4: Properties of Matter	Types of stress and strain, Hooke's law,	21/10/26 22/10/26		
	Modulus of elasticity and its types	28/10/26		
	Pressure - definition, atmospheric pressure, gauge pressure, absolute pressure,	29/10/26 2/11/26		
Unit 5: Heat and Temperature	Definition of heat and temperature (on the basis of kinetic theory), Difference between heat and temperature	4/11/26 5/11/26 9/11/26		
	Modes of transfer of heat- conduction, convection and radiation with examples,	11/11/26 12/11/26		
	Different scales of temperature and their relationship	16/11/26 18/11/26		

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	Numerical problems based on conversion of temperature into various scales.	25/11/26 26/11/26		
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Assignments:-

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1 and Unit-2	09/09/26		
A-2	Unit-3 and Unit-4	14/10/26		
A-3	Unit-5	04/11/26		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1 and Unit-2	As per HPTSB Academic Schedule		
Class Test -2	Unit-3 and Unit-4			
House Test - 1	Unit-1, Unit-2, Unit-3 and Unit-4			

Lab Plan

Sr.no	Name of Practicals	Proposed Date		Actual Date		Rmks
		G-1	G-2	G-1	G-2	
1	To find the diameter of a solid cylinder using a Vernier Calliper.	22/08/26 29/08/26	11/08/26 18/08/26			
2	To find the internal diameter & depth of a beaker using a Vernier Calliper and hence find its volume.	5/09/26 19/09/26	25/08/26 1/09/26			
3	To find the diameter of wire & thickness of cardboard by using a screw gauge	26/09/26 3/10/26	08/09/26 15/09/26			
4	To determine the thickness of the glass strip using a spherometer	17/10/26 24/10/26	22/09/26 29/09/26			
5	To determine the radius of curvature of a given spherical surface by a spherometer.	24/10/26	06/10/26 13/10/26			
6	To determine the force constant of spring using Hooke's law.	31/10/26	27/10/26			
7	To verify the law of conservation of mechanical energy (PE to KE).	7/11/26	3/11/26			
8	To find the moment of Inertia of a flywheel.	21/11/26	10/11/26			
9	To measure room temperature using a thermometer and convert it into different temperature scales	28/11/26	17/11/26			

(Signature of Teacher)

(Signature of HOD)

Government Polytechnic Kullu, Distt. Kullu (H.P)175138

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. Lalit Kumar
Discipline	Electrical Engineering
Semester	1 st
Subject	BEEE (L-3 Hrs./Week)
Lesson Plan Duration	August – December 2026

Week	Topic	Theory
1 st (01 Aug. – 07 Aug.)	Unit 1: Electrical Fundamentals	Electrical quantities (Definitions & S.I. Units); Charge, Current, Voltage, E.M.F., Power, Energy. Electrical circuit elements: Resistor, inductor, capacitor, Ohms law
2 nd (10 Aug. – 14 Aug.)	Unit 1: Electrical Fundamentals	combination of resistances in series and parallel, Factors affecting resistance and concept of resistivity.
3 rd (17 Aug. – 22 Aug.)	Unit 1: Electrical Fundamentals Unit 2: Electromagnetism and Magnetic Circuits	Kirchhoff's Voltage Law (KVL) and Kirchhoff's Current Law (KCL). Voltage and current divider rules. Basic concepts of magnetism (Definitions & S.I. Units); magnetic flux, flux density, magnetic field intensity, permeability, reluctance.
4 th (24 Aug. – 29 Aug.)	Unit 2: Electromagnetism and Magnetic Circuits	Faraday's laws of electromagnetic induction and Lenz's law
5 th (31 Aug. – 05 Sept.)	Unit 2: Electromagnetism and Magnetic Circuits	Analogy between electric and magnetic circuits.
Class Test – I		In Second Week of September
6 th (07 Sept. – 11 Sept.)	Unit 3: Electrical Energy: Advantages & Applications	Difference between AC and DC supply, Various domestic, commercial, and industrial applications of electrical energy. Advantages of electrical energy over other forms of energy.
7 th (14 Sept. – 19 Sept.)	Unit 3: Electrical Energy: Advantages & Applications	Earthing (Definition), Equipment Earthing, purpose of Earthing, Batteries; Various types of batteries, their comparisons & applications, Grouping of cells in series and parallel.
8 th (21 Sept. – 26 Sept.)	Unit 4: Introduction to Semiconductors Technology	Introduction to semi-conducting materials, Doping, intrinsic and extrinsic semiconductors.
9 th (28 Sept. – 03 Oct.)	Unit 4: Introduction to Semiconductors Technology	PN junction diode; PN junction formation, depletion region,

10 th (05 Oct. – 09 Oct.)	Unit 4: Introduction to Semiconductors Technology	Potential barrier, forward and reverse biasing, knee voltage, reverse breakdown voltage
Class Test – 2		In Second Week of October.
11 th (12 Oct. – 17 Oct.)	Unit 4: Introduction to Semiconductors Technology	V-I characteristics & its applications. LEDs and Applications of LEDs.
12 th (19 Oct. – 24 Oct.)	Unit 5: Basic of Digital Electronics	Number systems: Binary, Decimal, Hexadecimal & Octal. Base conversions of number systems (Binary to Decimal and vice versa)
13 th (27 Oct. – 31 Oct.)	Unit 5: Basic of Digital Electronics	Basic Laws & Theorems of Boolean algebra.
House Test		In First Week of November
14 th (09 Nov- 13 Nov)	Unit 5: Basic of Digital Electronics	Introduction to logic gates, their symbols and truth tables: AND, OR, NOT, NAND, NOR,
15 th (16 Nov- 21 Nov)	Unit 5: Basic of Digital Electronics	Exclusive OR and Exclusive NOR gates. Universal logic gates.
16 th (23 Nov- 28 Nov)		Revision and doubt clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Signature of Teacher/Prepared by
(Er. Lalit Kumar)

Signature of HOD

Government Polytechnic Kullu, Distt. Kullu (H.P)175138

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. Lalit Kumar
Discipline	Electrical Engineering
Semester	1 st
Subject	BEEE (P-2 Hrs./Week)
Lesson Plan Duration	August – December 2026

Week	Practical No.	Practical Name
1 st (01 Aug. – 07 Aug.)	To introduce students to the Basic Electrical and Electronics Laboratory and familiarize them with the laboratory environment, equipment, safety rules, and standard operating procedures.	
2 nd (08 Aug. – 14 Aug.)	Practical-I	Familiarization to basic equipment like ammeter, voltmeter, watt meter, energy meter, DSO/CRO, multi-meter etc. and their operation, uses.
3 rd (17 Aug. – 23 Aug.)	Practical-II	Determine the value of resistor and capacitor using multimeter/ LCR meter.
4 th (24 Aug. – 29 Aug.)	Practical-III	Apply the Kirchhoff's Current Law in a dc circuit and verify the result using current divider rule.
5 th (31 Aug. – 05 Sept.)	Practical-IV	Apply the Kirchhoff's Voltage Laws in a dc circuit and verify the result using voltage divider rule.
6 th (07 Sept. – 13 Sept.)	Practical-V	Demonstration of Faraday's law of electromagnetic induction.
7 th (14 Sept. – 19 Sept.)	Practical-VI	Observe the effect on voltage and current by grouping of cells in series and parallel.
8 th (21 Sept. – 26 Sept.)	Practical-VII	Measure the amplitude, frequency and time period using CRO/DSO
9 th (28 Sept. – 03 Oct.)	Practical-VIII	Identify the terminals of PN diode using multimeter and plot the VI characteristics of PN diode
10 th (05 Oct. – 09 Oct.)	Practical-IX	Verify the truth table of basic gates OR, AND and NOT.
11 th (12 Oct. – 17 Oct.)	Practical-X	Verify the truth table of universal gates NAND and NOR.
12 th (19 Oct. – 24 Oct.)	Revision and Evaluation	
13 th (27 Oct. – 31 Oct.)		
14 th (16 Nov. – 28 Nov.)		

• NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Prepared by

(Er. Lalit Kumar)

Signature of HOD/OIC

Lesson Plan

Name of Faculty	Sh. Yadvvir Singh
Discipline	Applied Sciences & Humanities
Semester	1 st (Civil and Electrical Engg.)
Subject	Applied Chemistry (BS106)
Lesson Plan Duration	From Aug 2026 to Nov 2026

Week	Chapter	Topics	Remarks/ Coverage
1st (01Aug-07Aug)	Orientation Program w.e.f. 01/08/2026 to 07/08/2026		
2nd (10Aug-14 Aug)	Atomic Structure and Chemical Bonding	Fundamental Particles of atoms; Electron, Proton, Neutron (definitions only), Bohr's Model of an atom (Postulates, Success and Limitations), atomic number, atomic mass number, isotopes, isobars and isomers	
3rd (17Aug-22 Aug)		Concept of orbitals, difference between orbit and orbital, shapes of s and p orbitals, quantum Numbers (Significance only), Aufbau's principle, Pauli's exclusion principles, Hund's rule of maximum multiplicity, electronic configuration of elements with atomic number (Z) 1 to 30 only.	
4th (24Aug-29Aug)		Chemical Bonding - quest of chemical bonding, Types of Bond: ionic bond (NaCl), covalent bond (O ₂ , N ₂ , H ₂), Difference between sigma and pi (π) bond.	
5th (31Aug- 05Sep)	Solution and Water	Definition of Solution, Solute and Solvent with examples, Methods to express the concentration of solutions - Molarity, Molality and Normality (Numerical excluded), pH of solution, Industrial applications of pH solution.	
6th (07Sep- 11Sep)		Definition of buffer solution and industrial applications of buffer solution. Definition of Hard and soft water, Types of hardness.	
7th (14Sep-18Sep)		Units of hardness (mg/lit. and ppm), and simple numerical based on hardness, Disadvantages caused by use of hard water in domestic and industrial use, removal of hardness - permutit process, Characteristics of drinking water.	
8th (21Sep-25Sep)	Electrochemistry and Corrosion	Electronic concept of oxidation, reduction and Redox reaction, Definition of Electrolyte and non-electrolyte with suitable examples.	
9th (28Sep-03Oct)		Faradays law of Electrolysis and industrial application of electrolysis (Electrometallurgy, Electroplating, Electro-refining)	
10th (06Oct-09Oct)		Introduction to corrosion of metals - definition, Internal corrosion preventive measure (purification, alloying and heat treatment) and External corrosion preventive measure: Metal coating (anodic and cathodic).	
11th (12Oct-17Oct)	Engineering Materials and Polymers	Natural occurrence of metals- minerals, ores, ores of iron, aluminium and copper, Definition of Gangue, Flux, Metallurgy, Pyrometallurgy, Electrometallurgy & Hydrometallurgy.	
12th (19Oct-24Oct)		A brief account of general principles of metallurgy- Crushing, Grinding, Concentration of ore (Froth floatation process); Extraction of metal (Roasting, Calcination & Smelting), Refining (Electrorefining)	
13th (27Oct-31Oct)		Extraction of iron from their Haematite ore by using blast furnace in brief along with diagram, Alloys - definition, Ferrous and non-ferrous alloy, purpose of making alloy.	
14th (02Nov-07Nov)	Chemistry of Fuels and Lubricants	Definition of Polymer, Monomer, Degree of Polymerization, name of monomer and simple reaction involved in preparation of Polythene, PVC, PTFE, PS and Nylon-6,6 only.	
15th (09Nov-13Nov)		Definition of fuel, Classification of fuels, Characteristics of a good fuel, Calculation of HCV and LCV by using Dulong's formulae,	
16th (15Nov-21Nov)		Fuel rating (octane and cetane numbers), Chemical composition, Calorific value application and diagram of water gas, producer gas and biogas.	
17th (23Nov-28 Nov)		Definition of Lubricants, Function of good lubricant, Physical properties (Viscosity, viscosity index, flash and fire point) and Chemical properties (TAN, Saponification value) of lubricants.	


Subject Teacher


HOD (AS&H)

Lesson Plan

Name of Faculty		Sb. Yudhvir Singh
Discipline		Automobile, Civil, and Electrical Engg.
Semester		5 th
Subject		ASOE303 Industrial Water Treatment
Lesson Plan Duration		From Aug 2026 to Nov 2026
Week	Theory	
	Chapter	Topics
1 st (10Aug-14 Aug)	Unit-I	Introduction to water resource management issues, access to safe drinking water, river pollution.
2 nd (17Aug-22 Aug)		Water quality standards, sources and classification of pollutants.
3 rd (24Aug-29Aug)	Unit-II	Chemical Treatment Technology: aeration, chemical coagulation-precipitation, neutralization.
4 th (31Aug-05Sep)		Chemical oxidation, adsorption, ion-exchange. And advanced oxidation, disinfection of water.
5 th (07Sep-11Sep)	Unit-III	Water treatment by membrane technology: Membrane-based processes, membrane modules, micro.
6 th (14Sep-18Sep)		Ultra, nano, reverse osmosis, membrane distillation in water treatment. Forward osmosis.
7 th (21Sep-25Sep)	Unit-IV	Industry-specific treatment of water: Coke oven wastewater treatment.
8 th (28Sep-30Oct)		Pharmaceutical wastewater treatment, tannery wastewater treatment, petroleum refinery wastewater treatment.
9 th (05Oct-09Oct)		Pulp and paper industry wastewater treatment.
10 th (12Oct-17Oct)	Unit-V	Nanotechnology in water treatment, Hybrid Water Treatment Technologies: Chemical biological.
11 th (19Oct-24Oct)		biological-membrane, membrane-c.
12 th (27Oct-31Oct)		Chemical hybrid treatment technologies in water treatment.
13 th (02Nov-07Nov)		Sustainable water treatment, ethics, compliance of regulations.
(09Nov-20Nov)		Revision


Subject Teacher


HOD (AS&H)

Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138
Department of Applied Sciences & Humanities
Lesson Plan

1	Programme Name	Applied Sciences & humanities
2	Subject Name	English & comm. Skills
3	Subject Code	HS101

4	Semester	1st
5	Session	August- Dec 2026
6	Teacher Name	Neetu Thakur

Evaluation Scheme

Evaluation Scheme																
Sr No	Subject Name	Study Scheme Hours per Week				Marks Distribution in Evaluation Scheme									Total Marks	Credits
						Internal Assessment			External Assessment							
		L	P	DCS	Total	Th	Pr	Total	Th	Hrs	Pr	Hrs	Total			
1	English & comm. Skills	3	2	0	5	50	50	100	100	3	100	3	200	300	4	
Reference Books		1	Essentials of Business Communication, Rajendra Pal and J.S. Korlahalli - Sultan Chand and Sons													
		2	Communication Techniques and Skills, R. K. Chadha - Dhanpat Rai Publications													

Course outcomes (COs):

- 1 Explain the fundamentals of communication, including its principles, process, barriers, and strategies to overcome these.
- 2 Comprehend listening and writing forms of communication.
- 3 Demonstrate proficiency in verbal and non-verbal communication skills in academic, personal and professional contexts.
- 4 Apply correct grammatical structures in speaking and writing.

Teaching Plan

Sr No	Name of the chapter	Topics to be covered	Proposed Date	Actual Date	Remarks
1	Orientation Program	Various Activities as per HPTSB	01-08-26 to 07-08-26		
2	Unit I: Fundamentals of Communication Skills	Concept, Significance and Process of Communication	10-08-2026 11-08-2026		
3		Levels and Types of Communication: Verbal and Non-verbal	17-08-2026		
4		Formal and Informal, Barriers to Effective Communication and how to Overcome these	18-08-2026 22-08-2026		
5		7C's for Effective Communication, Listening Skills	24-08-2026		
6		Significance and Essentials of Active Listening Skills, Speaking Skills: Significance and Essentials of Effective Spoken Communication,	25-08-2026 29-08-2026		
7		Concept and Significance of Soft and Life Skills – Role of Communication Skills in Developing Soft and Life Skills.	31-08-2026 01-09-2026		
8		Definition, Meaning and Significance of Reading Skills	05-09-2026		

		Class Test -I	07-09-2026		
9	Unit II: Reading Skills	Techniques of Reading: SQ3R method of Reading – Survey, Question, Read, Recite, Review, Skimming and Scanning, Extensive and Intensive Reading	08-09-2026 14-09-2026		
10		Poetry: Daffodils by William Wordsworth.	15-09-2026		
11		Prose: Life Sketch of Dr. A.P.J. Abdul Kalam	19-09-2026		
12		Short Story: With the Photographer by Stephen Leacock	21-09-2026		
13	Unit III: Functional Grammar and Vocabulary	Tenses	22-09-2026		
14		Change of Voice	26-09-2026		
15		Change of Narration	28-09-2026		
16		Article	29-09-2026		
17		Parts of Speech: Noun, Pronoun, Adjective, Verb, Adverb, Conjunction, Preposition	03-10-2026 05-10-2026		
18		Glossary of Administration terms	08-10-2026		
19		Pair of Words	12-10-2026		
		Class Test -II	13-10-2026		
20		Synonyms, Antonyms	17-10-2026		
21		Significance and Essential Components of Writing Skills	24-10-2026 27-10-2026		
22	Unit IV: Writing Skills	Drafting Skills: Significance of Notice	31-10-2026		
		House Test	1st week of Nov		
23		Circular	16-11-2026		
24		Official letters and Email etiquette	17-11-2026		
25		Writing Paragraphs through Outlines	21-11-2026		
26		Resume Writing and Forwarding Letter	23-11-2026		

Assignments

Sr No	Assignments No.	Contents of syllabus covered	Proposed Date	Actual Date	Remarks
1	Assignments No. 1				
2	Assignments No. 2				

House Test/Class Test

Sr No	Name of Test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
1	Class Test 1	30 % of the syllabus	07-09-2026		
2	Class Test 2	next 30 % of the syllabus	12-10-2026		
3	House Test	80 % of the syllabus	03-11-2026		


 Teacher's signature
 Naetu Thakur


 H.O.D.

Sr. No.	Name of Practical	Proposed Date		Actual Date		Remarks
		G-I	G-II	G-I	G-II	
1.	a) Demonstration of listening skills with suitable and relevant examples of Difference between hearing and listening; process and steps in listening effectively; Types of listening , barriers in listening; tips for effective listening. b) Exercise of listening to Monologues and dialogues through – audio/ video, with appropriate feedback for improvement.	14 Aug 21 Aug	13 Aug 20 Aug			
2.	a) Demonstration and practice of basic phonetics and sound recognition : Structure of language , Phonemes(word Sound), Phonetics (Production of speech sounds)); Consonant sounds , Vowel sounds, Monophthongs(Short , Long Sounds) and diphthongs; Phonetics Soundsof English Alphabet b) Practice on Phonetics: Word Stress And Intonation in effective speech.	28 Aug 11 Sep	27 Aug 03 Sep			
3.	a) Speaking Skills: Recapitulation of Significance and essentials of Effective Spoken Communication. b) Confidently Introduce Yourself and Others, extend greetings, in Formal and Informal settings.	18 Sep	10 Sep 17 Sep			
4.	a) Deliver Short Speeches: Welcome Speech, Farewell Speech, Impromptu Speech, Using Essentials Elements of a good Speech. b) Deliver effective Academic presentations using audio-visual aids(PPTs/ Videos)	25 Sep 09 Oct	24 Sep 01 Oct			
5.	a) Practice Writing Skills Using Correct Formats: 1. Formal Letter and emails 2. Notice and Circular 3. Different Reports 4. Resume and Covering letter	16 Oct	08 Oct 15 Oct			
6.	a) Demonstration and Practice of appropriate Body Language and other important aspects of Non-Verbal Communication b) Demonstration and Practice of appropriate Etiquette and Manners for various	23 Oct	22 Oct			
7.	a) Participate effectively in Group Discussion and Meetings, displaying Team Spirit and Collaboration b) Mock Interview – Personal and Telephonic Interview	30 Oct 13 Nov	12 Nov 19 Nov			
8.	a) Role Play Activities- Situational Conversations. b) Do's and Don't in Digital Communication and Social Media	20 Nov	26 Nov			


Signature of Teacher


Signature of HOD

Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138

Applied sciences & Humanities Department

Lesson Plan

1	Programme Name	AS&H
2	Subject Name	Applied Mechanics Lab
3	Subject Code	ES110

4	Semester	1st
5	Session	August- Dec 2026
6	Teacher Name	Er Sumedha Sharma

Evaluation Scheme

Sr No	Subject Name	Study Scheme Hours per Week				Marks Distribution in Evaluation Scheme								Total Marks	Credits
						Internal Assessment			External Assessment						
		L	P	DCS	Total	Th	Pr	Total	Th	Hrs	Pr	Hrs	Total		
1	Applied Mechanics Lab	0	2	0	2	40		40	60	3			60	100	1
Reference Books		1	Text Book of Applied Mechanics, Brindar Singh - Katson Publishing House, New Delhi.												
		2	Text Book of Applied Mechanics, A.K. Upadhyay - SK Kataria & Sons, New Delhi.												

Course outcomes (COs):

1	Perform experiments to verify the polygon law of forces, Lami's theorem using standard laboratory apparatus.
2	Determine the coefficient of friction, angle of friction and angle of repose for different contact surfaces through laboratory experiments.
3	Analyze experimental observations, compare them with theoretical principles and prepare laboratory reports.
4	Evaluate the mechanical advantage, velocity ratio and efficiency of different types of simple lifting machines.

Teaching Plan

Sr No	Topics to be covered	Proposed Date (G1&G2)	Actual Date	Remarks
1	Verification of polygon law of forces graphically using universal force table.	13/8/2026 22/8/2026		
2	Verification of Lami's theorem.	20/8/2026 29/8/2026		
3	Study forces in various members of Jib crane.	27/8/2026 5/9/2026		
4	Determine coefficient of friction and angle of friction on horizontal plane for two or three different contact surfaces.	3/9/2026		
		19/9/2026		
		10/9/2026		
		26/9/2026		
5	To verify relation between angle of friction and angle of repose on inclined plane.	17/9/2026 3/10/2026		
6	To find out center of gravity of a regular & irregular lamina.	24/9/2026 17/10/2026		
7	To find the M.A., V.R. and efficiency of a Worm and	1/10/2026 24/10/2026		

	Worm wheel	6/10/2026 31/10/2026		
8	To find the M.A., V.R. and efficiency of a Simple Screw Jack	15/10/2026 7/11/2026		
9	To find the M.A., V.R. and efficiency of a Single winch crab	22/10/2026 21/11/2026		
10	Revision	29/10/2026 28/11/2026		
11	Revision	5/11/2026 29/11/2026		


Teacher signature
Er Sumedha Sharma


H.O.B. Civil Engg
Er Lekh Raj Sharma

Approved

Principal
Govt Polytechnic Kullu at Seobag
Distt Kullu, H.P. 175138

Department of Applied Sciences & Humanities
Govt. Polytechnic Kallu
Distt. Kallu (H.P.) - 175138

LESSON PLAN

Program Name	Electrical Engg.
Subject Name	Sports & Yoga
Subject Code	AU101
Semester	Ist
Subject Teacher Name	Monika Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Sports & Yoga	-	2	-	50	50	-	-	-

Course Outcomes (COs)

The course will enable the students to

CO - 1	Participate in physical fitness activities to improve strength, flexibility, endurance, coordination, and overall physical fitness.
CO - 2	Demonstrate yoga practices, including selected asanas, pranayama, and relaxation techniques, for physical and mental well being
CO - 3	Participate in individual and team sports by following the rules of the game, discipline, teamwork, and sportsmanship for lifelong healthy living

REFERENCE BOOKS AND SUGGESTED LEARNING RESOURCES

1. The Complete Book of Yoga, Swami Vivekananda Yoga Prakashana.
2. Physical Education and Sports, V.K. Sharma, Friends Publications.
3. Fitness and Wellness, Werner W.K. Hoeger and Sharon A. Hoeger, Cengage Learning.
4. Yoga: A Healthy Way of Living, Ministry of AYUSH, Government of India

Lesson Plan

Sr. No	Name of the activity	Proposed Date	Actual Date	Remarks
1	Physical Fitness Activities(warm up, stretching, flexibility exercise)	12/08/26 14/08/26 19/08/26		
2	Yoga(loosening and Surya Namaskar)	21/08/26 26/08/26 02/09/26		

3	Sports Activities(Kho-Kho/ Kabaddi/Athletics)	11/09/26 16/09/26 18/09/26		
4	Physical Fitness activities(Strength exercises, Edurance, cool down)	23/09/26 25/09/26 30/09/26		
5	Yoga(Asanas & Prananyama)	07/10/26 09/10/26 14/10/26		
6	Sports Activities(Volleyball/Badminton/Tab le Tennis)	16/10/26 21/10/26		
7	Physical Fitness Activities(Warm up, Flexibility and Stretching exercise)	23/10/26 28/10/26		
8	Yoga(Prananyama & Relaxation techniques))	30/10/26 04/11/26 06/11/26		
9	Sports Activities(Athletics:Shotput, Javelin, Discus throw, Races)	13/11/26 18/11/26 20/11/26		
10	Physical fitness Activities(Strength exercises)	25/11/26 27/11/26		

Assignments

S.No	Syllabus/Contents covered	Proposed Date	Actual Date	Remarks
1	Physical Fitness & Yoga	23/09/26		
2	Yoga & Sports	09/11/26		

(Signature of Teacher)

(Signature of HOD)

Department of Applied Sciences & Humanities
Govt. Polytechnic Kullu
Distt. Kullu (H.P.) - 175138

LESSON PLAN

Program Name	Civil Engg.
Subject Name	Sports & Yoga
Subject Code	AU101
Semester	Ist
Subject Teacher Name	Sh. Lekhraj Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Sports & Yoga	-	2	-	50	50	-	-	-

Course Outcomes (COs)

The course will enable the students to

CO-1	Participate in physical fitness activities to improve strength, flexibility, endurance, coordination, and overall physical fitness.
CO-2	Demonstrate yoga practices, including selected asanas, pranayama, and relaxation techniques, for physical and mental well being
CO-3	Participate in individual and team sports by following the rules of the game, discipline, teamwork, and sportsmanship for lifelong healthy living

REFERENCE BOOKS AND SUGGESTED LEARNING RESOURCES

1. The Complete Book of Yoga, Swami Vivekananda Yoga Prakashana.
2. Physical Education and Sports, V.K. Sharma, Friends Publications.
3. Fitness and Wellness, Werner W.K. Hoeger and Sharon A. Hoeger, Cengage Learning.
4. Yoga: A Healthy Way of Living, Ministry of AYUSH, Government of India

Lesson Plan

Sr. No	Name of the activity	Proposed Date	Actual Date	Remarks
1	Physical Fitness Activities(warm up, stretching, flexibility exercise)	10/08/26 12/08/26 17/08/26		
2	Yoga(loosening and Surya Namaskar)	19/08/26 24/08/26 26/08/26		



3	Sports Activities(Kho-Kho/ Kabaddi/Athletics)	31/08/26 03/09/26 07/09/26		
4	Physical Fitness activities(Strength exercises, Edurance, cool down)	09/09/26 14/09/26 30/09/26		
5	Yoga(Asanas & Prananyama)	16/09/26 21/09/26 23/09/26		
6	Sports Activities(Volleyball/Badminton/Ta ble Tennis)	28/09/26 30/09/26 05/10/26		
7	Physical Fitness Activities(Warm up, Flexibility and Stretching exercise)	07/10/26 12/10/26 14/10/26		
8	Yoga(Prananyama & Relaxation techniques))	19/10/26 21/10/26 28/10/26		
9	Sports Activities(Athletics:Shotput, Javelin, Discus throw, Races)	09/11/26 11/11/26 16/11/26		
10	Physical Fitness Activities(Strength exercises)	18/11/26 23/11/26 28/11/26		

Assignments

S.No	Syllabus/Contents covered	Proposed Date	Actual Date	Remarks
1	Physical Fitness & Yoga	23/09/26		
2	Yoga & Sports	09/11/26		

(Signature of HOD)

LESSON PLAN

Program Name	Automobile Engg.
Subject Name	Sports & Yoga
Subject Code	AUI01
Semester	Ist
Subject Teacher Name	Sh. Lekhraj Sharma

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Sports & Yoga	-	2	-	50	50	-	-	-

Course Outcomes (COs)

The course will enable the students to

CO - 1	Participate in physical fitness activities to improve strength, flexibility, endurance, coordination, and overall physical fitness.
CO - 2	Demonstrate yoga practices, including selected asanas, pranayama, and relaxation techniques, for physical and mental well being.
CO - 3	Participate in individual and team sports by following the rules of the game, discipline, teamwork, and sportsmanship for lifelong healthy living.

REFERENCE BOOKS AND SUGGESTED LEARNING RESOURCES

1. The Complete Book of Yoga, Swami Vivekananda Yoga Prakashana.
2. Physical Education and Sports, V.K. Sharma, Friends Publications.
3. Fitness and Wellness, Werner W.K. Hoeger and Sharon A. Hoeger, Cengage Learning.
4. Yoga: A Healthy Way of Living, Ministry of AYUSH, Government of India

Lesson Plan

Sr. No	Name of the activity	Proposed Date	Actual Date	Remarks
1	Physical Fitness Activities(warm up, stretching, flexibility exercise)	10/08/26 13/08/26 17/08/26		
2	Yoga(loosening and Surya Namaskar)	20/08/26 24/08/26 27/08/26		
3	Sports Activities(Kho-Kho/ Kabaddi/Athletics)	31/08/26 03/09/26 07/09/26		



4	Physical Fitness activities(Strength exercises, Edurance, cool down)	10/09/26 14/09/26 17/09/26		
5	Yoga(Asanas & Prananyama)	21/09/26 24/09/26 28/09/26		
6	Sports Activities(Volleyball/Badminton/ Table Tennis)	01/10/26 05/10/26 08/10/26		
7	Physical Fitness Activities(Warm up, Flexibility and Stretching exercise)	12/10/26 15/10/26 19/10/26		
8	Yoga(Prananyama & Relaxation techniques))	22/10/26 29/10/26 09/11/26		
9	Sports Activities(Athletics:Shotput, Javelin, Discus throw, Races)	12/11/26 16/11/26 19/11/26		
10	Physical fitness Activities(Strength exercises)	23/11/26 26/11/26		

Assignments

S.No	Syllabus/Contents covered	Proposed Date	Actual Date	Remarks
1	Physical Fitness & Yoga	23/09/26		
2	Yoga & Sports	09/11/26		

(Signature of HOD)

Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138
Department of Applied Sciences & Humanities
Lesson Plan

1	Programme Name	Open Elective- I
2	Subject Name	Life Skills for Professional & Personal Life(LSPPL)
3	Subject Code	ASOE301

4	Semester	5th
5	Session	August- Dec 2026
6	Teacher Name	Neetu Thakur

Evaluation Scheme

Evaluation Scheme															
Sr No	Subject Name	Study Scheme Hours per Week				Marks Distribution in Evaluation Scheme								Total Marks	Credits
						Internal Assessment			External Assessment						
		L	P	DCS	Total	Th	Pr	Total	Th	Hrs	Pr	Hrs	Total		
1	Life Skills for Professional & Personal Life(LSPPL)	3		1	4	40		40	60	3			60	100	3
Reference Books		1	Soft Skills & Employability Skills. Sabina Pillai&Agnaf Fernandez. Cambridge University Press.												
		2	Soft Skills. K. Alex. S. Chand												

Course outcomes (COs):

1	To apply the concepts of self-awareness, self-esteem and self-confidence in their professional and personal lives.
2	To manage their time effectively.
3	To display ethics in their professional and personal lives.
4	To build inter-personal communication skills to promote their mental and emotional
5	To demonstrate positive attitudes and actions for healthy and meaningful social
6	To communicative assertively.
7	To live an emotionally healthy life.
8	To demonstrate a balance in their cognitive, physical and social lives, including working in teams.

Teaching Plan

Sr No	Name of the chapter	Topics to be covered	Proposed Date	Actual Date	Remarks
1	Unit 1: Life Skills, Soft Skills & Interpersonal Skills	Definition of Life Skills and Soft Skills	10-08-2026		
2		Significance of Life Skills and Soft Skills in Personal and Professional life	11-08-2026 12-08-2026		
3		Types of Soft skills and Life skills, Ways to develop Soft Skills and Life Skills	13-08-2026 17-08-2026		
4		Concept of Interpersonal Skills and tips to improve Interpersonal Skills	18-08-2026 19-08-2026		

5		Meaning of Team dynamics and Tips for improving Team dynamics	20-08-2026 24-08-2026		
6	Unit 2. Communication Skills	Meaning of Communication Skills	25-08-2026		
7		Significance and Characteristics of Assertive Communication.	26-08-2026 27-08-2026		
8		Techniques of Assertive Communication	31-08-2026 01-09-2026		
9		Tips to develop Assertive Communication	02-09-2026		
10	Unit 3. Life Skills	(A) Self Awareness: 1. Self Introspection Meaning of Self awareness Introspection, Self Reflection and Insight, Strategies to improve self awareness, Importance of counseling and coaching	03-09-2026 07-09-2026		
		Class Test - I	08-09-2026		
11		2. Stress Management: a) Meaning of Stress (b) Factors causing positive and negative types of stress (c) Effects of Stress on mind and body. (d) Stress Management techniques	09-09-2-26 10-09-2026		
12		3. Emotional Intelligence: (a) Meaning and Significance of EI (b) Strategies to develop and enhance Emotional Intelligence	14-09-2026		
13		4. Self-Esteem: (a) Concept, Meaning and Significance of Self-Esteem (b) Types of Self-Esteem (c) Characteristics of people with High and Low Self -Esteem (d) Steps and Tips for improving Self-Esteem	15-09-2026		
14		(B) Social Awareness: 1. Meaning and Techniques of social awareness and social skills	16-09-2026		
15		2. Empathy: (a) Meaning and types of Empathy (b) Benefits of Empathy (c) Steps for developing Empathy	16-09-2026 17-09-2026		

16		3. Compassion: (a) Meaning and Benefits of Compassion (b) Steps to practice Compassion.	21-09-2026 22-09-2026		
17		4. Body Language: (a) Elements of Body Language (b) Develop Positive Body language that helps in building positive relationships (c) Avoiding Negative Body Language	23-09-2026 24-09-2026		
18		(C) Thinking Skills: 1. Positive Thinking (a) Meaning and Benefits of Positive Thinking (b) Tips to develop positive attitude and practice Positive Thinking	28-09-2026 29-09-2026		
19		2. Listening Skills: (a) Concept, Significance and Process of Listening Skills (b) Kinds of Listening (c) Factors hindering effective Listening (d) Tips for Active and Empathetic Listening	30-09-2026 01-10-2026		
20		3 Resilience: (a) Meaning and Types of Resilience (b) Case studies of Resilience	05-10-2026 06-10-2026		
		Class Test - II	07-10-2026		
21	Unit 4. Time Management Skills	1. Concept and Significance of Time Management.	08-10-2026		
22		2. Benefits of Time Management.	12-10-2026		
23		3. Tools and techniques of Time Management	13-10-2026		
24		4. How to overcome procrastination and avoid time-wasters	14-10-2026 15-10-2026		
25		1. Meaning of Human values, Morals and Ethics.	21-10-2026 22-10-2026		
26		2. What is Value and types of values	27-10-2026 28-10-2026		
		House Test	1st week of Nov.		

27	Unit 5. Human Values and Ethics	3. Human Dignity and Humility: Meaning of Human Dignity and Fundamental rights of a person, Meaning of Humility, Significance of humility, Developing and cultivating humility	16-11-2026 17-11-2026 18-11-2026 19-11-2026		
28	Revision	revision and Doubt removing	23 Nov - 25-Nov		

Assignments

Sr No	Assignments No.	Contents of syllabus covered	Proposed Date	Actual Date	Remarks
1	Assignments No. 1				
2	Assignments No. 2				

House Test/Class Test

Sr No	Name of Test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
1	Class Test 1	30 % of the syllabus	08-09-2026		
2	Class Test 2	next 30 % of the syllabus	07-10-2026		
3	House Test	80 % of the syllabus	04-11-2026		


 Teacher signature
 Neetu Thakur


 H.O.D.

Govt. Polytechnic Kullu (H.P.)
Lesson Planning

Branch : Civil Engineering

Semester: 1st

Subject : Engineering Graphics

Session: Aug. - Nov. -2026

Teacher : Pankaj Kumar

Scheme: N-2026

Subject Code: ES 101

Evaluation Scheme

Sr. No	Subject Name	Study scheme (Hrs/Week)		Credit	Marks in Evaluation Scheme			
					Internal Assessment		External Assessment	
		Th	Pr		Th	Pr	Th	Pr
1.	Engineering Graphics	-	6	3	-	50	-	100
Reference Books		PS Gill, "Engineering Drawing", SK Kataria & Sons, New Delhi.						
		ND Bhatt, "Elementary Engineering Drawing in First Angle Projection", Charotar Publishing House Pvt. Ltd., Anand.						
		Surjit Singh, "A Text Book of Engineering Drawing", Dhanpat Rai & Co., Delhi.						
		RB Gupta, "Engineering Drawing", Satya Prakashan, New Delhi.						

Course Outcomes (COs)

CO - 1	Identify and use standard drawing instruments accurately.
CO - 2	Prepare geometrical constructions and apply different types of lines.
CO - 3	Draw orthographic projections, sectional and isometric views of simple objects.
CO - 4	Apply standard dimensioning techniques on engineering drawings.
CO - 5	Interpret and use civil, electrical and mechanical symbols and conventions.

Teaching Plan

Sheet No.	Detail of Contents	Proposed Date	Actual Date	Remarks
Sheet 1	LETTER WRITING	11/08/2026 12/08/2026 13/08/2026 18/08/2026		
Sheet 2	DIMENSIONING & TYPES OF LINES	19/08/2026 20/08/2026 25/08/2026		
Sheet 3	PLAIN SCALES	26/08/2026 27/08/2026 01/09/2026		
Sheet 4	DIAGONAL SCALES	02/09/2026 03/09/2026 09/09/2026		
Sheet 5	ORTHOGRAPHIC PROJECTION-I	10/09/2026 15/09/2026 16/09/2026 17/09/2026		
Sheet 6	ORTHOGRAPHIC PROJECTION-II	22/09/2026 23/09/2026 24/09/2026		
Sheet 7	ORTHOGRAPHIC PROJECTION-III	29/09/2026 30/09/2026 01/10/2026		
Sheet 8	SECTIONING - I	06/10/2026 07/10/2026 08/10/2026		

Sheet 9	SECTIONING - II	14/10/2026 15/10/2026 21/10/2026 22/10/2026		
Sheet 10	ISOMETRIC VIEWS	27/10/2026 28/10/2026 29/10/2026		
Sheet 11	SYMBOLS - I	12/11/2026 17/11/2026 18/11/2026		
Sheet 12	SYMBOLS - II	19/11/2026 20/11/2026 26/11/2026		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Sheet no. 1,2,3 and 4. 08/09/2026	As per HPTSD Academic Schedule		
Class Test -2	Sheet no. 5,6,7 and 8 13/10/2026			
House Test	Sheet no. 1 to 10 1 st week Nov.			


 04/08/26
 Pankaj Kumar
 (Signature of Teacher)-


 Sh. Lekh Raj Sharma
 (Signature of HOD)

Govt. Polytechnic Kullu (H.P.)
Lesson Planning

Branch : Electrical Engineering

Semester: 1st

Subject : Engineering Graphics

Session: Aug. - Nov. -2026

Teacher : Pankaj Kumar

Scheme: N-2026

Subject Code: ES 103

Evaluation Scheme

Sr. No	Subject Name	Study scheme (Hrs/Week)		Credit	Marks in Evaluation Scheme			
					Internal Assessment		External Assessment	
		Th	Fr		Th	Fr	Th	Fr
1.	Engineering Graphics	-	6	3	-	50	-	100
Reference Books:		PS Gill, "Engineering Drawing", SK Kataria & Sons, New Delhi.						
		ND Bhatt, "Elementary Engineering Drawing in First Angle Projection", Charotar Publishing House Pvt. Ltd., Anands.						
		Surjit Singh, "A Text Book of Engineering Drawing", Dhanpat Rai & Co., Delhi.						
		RB Gupta, "Engineering Drawing", Satya Prakashan, New Delhi.						

Course Outcomes (COs)

CO - 1	Identify and use standard drawing instruments accurately
CO - 2	Prepare geometrical constructions and apply different types of lines
CO - 3	Draw orthographic projections, sectional and isometric views of simple objects
CO - 4	Apply standard dimensioning techniques on engineering drawings
CO - 5	Interpret and use civil, electrical and mechanical symbols and conventions.

Teaching Plan

Sheet No.	Detail of Contents	Proposed Date	Actual Date	Remarks
Sheet 1	LETTER WRITING	10/08/2026 19/08/2026 20/08/2026		
Sheet 2	DIMENSIONING & TYPES OF LINES	23/08/2026 23/08/2026 23/08/2026		
Sheet 3	PLAIN SCALES	28/08/2026 29/08/2026 02/09/2026		
Sheet 4	DIAGONAL SCALES	05/09/2026 11/09/2026 17/09/2026		
Sheet 5	ORTHOGRAPHIC PROJECTION-I	18/09/2026 19/09/2026 24/09/2026		
Sheet 6	ORTHOGRAPHIC PROJECTION-II	25/09/2026 26/09/2026		
Sheet 7	ORTHOGRAPHIC PROJECTION-III	01/10/2026 03/10/2026 09/10/2026		
Sheet 8	SECTIONING - I	09/10/2026 16/10/2026 17/10/2026		

Sheet 9	SECTIONING - II	22/10/2026 23/10/2026 24/10/2026		
Sheet 10	ISOMETRIC VIEWS	29/10/2026 30/10/2026 31/10/2026		
Sheet 11	SYMBOLS - I	12/11/2026 13/11/2026 14/11/2026		
Sheet 12	SYMBOLS - II Revision	20/11/2026 21/11/2026 26,27,28/11/2026		

Home Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Sheet no. 1,2,3 and 4 10/09/2026	As per HPTSB Academic Schedule		
Class Test -2	Sheet no. 5,6,7 and 8 15/10/2026			
Home Test	Sheet no. 1 to 10 14 Nov, 2026			


 Pankaj Kumar
 (Signature of Teacher)


 Sh. Lekh Raj Sharma
 (Signature of HOD)

Govt. Polytechnic Kullu (H.P.)
Lesson Planning

Branch : Automobile Engineering

Subject : Engineering Graphics

Teacher : Pankaj Kumar

Subject Code: ES 103

Semester: 1st

Session: Aug. - Nov. -2026

Scheme: N-2026

Evaluation Scheme

Sr. No	Subject Name	Study scheme (Hrs/Week)		Credit	Marks in Evaluation Scheme			
					Internal Assessment		External Assessment	
		Th	Fr		Th	Fr	Th	Fr
1.	Engineering Graphics	-	6	3	-	50	-	100
Reference Books		PS Gill, "Engineering Drawing", SK Kataria & Sons, New Delhi.						
		ND Bhatt, "Elementary Engineering Drawing in First Angle Projection", Charotar Publishing House Pvt. Ltd., Ananda.						
		Sugit Singh, "A Text Book of Engineering Drawing", Dhanpat Rai & Co., Delhi.						
		Raj Gupta, "Engineering Drawing", Satya Prakashan, New Delhi.						

Course Outcomes (COs)

CO - 1	Identify and use standard drawing instruments accurately.
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Teaching Plan

Sheet No.	Detail of Contents	Proposed Date	Actual Date	Remarks
Sheet 1	LETTER WRITING	10/08/2026 11/08/2026 17/08/2026 18/08/2026		
Sheet 2	DIMENSIONING & TYPES OF LINES	22/08/2026 24/08/2026 25/08/2026		
Sheet 3	PLAIN SCALES	29/08/2026 01/09/2026 05/09/2026		
Sheet 4	DIAGONAL SCALES	07/09/2026 08/09/2026 13/09/2026		
Sheet 5	ORTHOGRAPHIC PROJECTION-I	19/09/2026 21/09/2026 22/09/2026 26/09/2026		
Sheet 6	ORTHOGRAPHIC PROJECTION-II	28/09/2026 29/09/2026 03/10/2026		
Sheet 7	ORTHOGRAPHIC PROJECTION-III	05/10/2026 06/10/2026 13/10/2026		
Sheet 8	SECTIONING - I	17/10/2026 18/10/2026 24/10/2026		

Sheet 9	SECTIONING - II	27/10/2026 31/10/2026		
Sheet 10	ISOMETRIC VIEWS	16/10/2026 17/10/2026 21		
Sheet 11	SYMBOLS - I	23/10/2026 23/10/2026		
Sheet 12	SYMBOLS - II	28/10/2026 30/10/2026		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Sheet no. 1, 2, 3 and 4	14/08/2026		
Class Test -2	Sheet no. 5, 6, 7 and 8	19/10/2026		
House Test	Sheet no. 1 to 10	1st week of Nov.		


 21/08/26
 Pankaj Kumar
 (Signature of Teacher)


 Sh. Lakh Raj Sharma
 (Signature of HOD)

Department of Applied Science
Govt. Polytechnic Kulla
Dist. – Kulla (H.P.)- 175101

LESSON PLAN

Branch: Automobile Engineering

Semester: Ist

Subject: Basics of Information Technology & AI

Session: Aug-Nov 2026

Subject Code: ES301

Teachers: Dr. Bigin Aggarwal

Evaluation Scheme

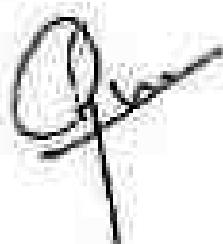
Sr. No	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Fr	Th	Fr	Total	Th	Fr	Total
1.	Basics of Information Technology & AI	3	-	40	-	40	40	-	40
Reference Books		1. Introduction to Computers, Peter Norton, McGraw-Hill Education.							
		2. Fundamentals of Computers, V. Rajaraman, PHI Learning.							
		3. Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Leon Vihar.							
		4. Foundations of Computing, Pradeep K. Sinha and Freed Sinha, BPB Publications.							
		5. Computer Fundamentals, Anita Goel, Pearson Education.							
		6. Computer Fundamentals, R. S. Salaria, Khanna Publishing House.							
		7. Artificial Intelligence, Pradeep K. Sinha and Preeti Sinha, BPB Publications.							

Course Outcomes (COs)

CO - 1	Identify internal and peripheral components of a computer system
CO - 2	Explain the working principles of a computer system and its major peripheral devices.
CO - 3	Explain the functions of system software and application software in a computer system.
CO - 4	Use office productivity tools to create documents, spreadsheets, presentations, and digital content.
CO - 5	Describe common cyber security threats and suggest appropriate preventive measures for safe digital practices.
CO - 6	Explain the role and applications of Artificial Intelligence in everyday life and professional domains.

Teaching Plan

Units	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I Introduction to Computers and Information Technology	characteristics and applications of computers; data and information;	12/08/2026		
	hardware and software; block diagram and functional units of a computer system.	13/08/2026		
	Information Technology: Concept and applications of Information Technology (IT);	19/08/2026		



	digital transformation; e-Governance, e-Commerce, e-Learning, e-Banking, digital payments; cloud services;	20/08/2026		
	Impact of IT on society Discussion Day	22/08/2026		
UNIT-II Computer Hardware	Computer hardware components – Motherboard, CPU, Memory.	26/08/2026		
	Computer hardware components – Storage Devices, Input Devices and Output Devices.	27/08/2026		
	Central Processing Unit - Functions of CPU, Arithmetic Logic Unit (ALU), Control Unit (CU),	29/08/2026		
	Class test-1	02/09/2026		
	Central Processing Unit - Registers (overview), CPU Clock Speed	03/09/2026		
	Input Devices – Keyboard, mouse, scanner, touch screen, microphone, web camera.	05/09/2026		
	Output Devices – Monitor, printer, plotter, speaker, multimedia projector.	09/09/2026		
	Memory and Storage – Units of memory, memory hierarchy, primary memory (RAM, ROM), cache memory (overview only)	10/09/2026		
	Memory and Storage –, secondary storage devices - Hard Disk Drive, optical disks (CD/DVD/Blu-ray), flash drives.	16/09/2026		
	Computer ports and connectivity – USB, HDMI, audio ports, Bluetooth (overview), Wi-Fi (overview)	17/09/2026		
	Discussion Day	19/09/2026		
	Operating System – Functions, Types of Operating Systems,	23/09/2026		
UNIT-III Computer Software	Operating System – GUI and CLI	24/09/2026		
	System Software – Device drivers, Language translators, Utility software	26/09/2026		
	Application Software – General-purpose software, Domain-specific software,	30/09/2026		
	Application Software – Examples of popular application software (Web browsers, Media players, Accounting software, CAD software)	01/10/2026		

	Class Test-2	03/10/2026		
	Office Productivity Tools – Word Processing,	07/10/2026		
	Office Productivity Tools – Spreadsheet,	08/10/2026		
	Office Productivity Tools – Presentation, PDF tools, Collaboration tools	14/10/2026		
	Discussion day	15/10/2026		
UNIT-IV Cyber Security & Ethics	Cyber Security Fundamentals – Cyber threats, Malware, Virus, Worm, Trojan, Ransomware, Spyware, Phishing	17/10/2026		
	Safe Computing Practices – Strong password, Multi-factor authentication, Safe browsing, Secure email,	21/10/2026		
	Safe Computing Practices – Data backup	22/10/2026		
	Cyber Ethics – Digital citizenship, Copyright, Plagiarism, Privacy,	24/10/2026		
	Cyber Ethics – Responsible use of social media	28/10/2026		
	Discussion day	31/10/2026		
	House Test	04/11/2026		
UNIT-V Artificial Intelligence	Introduction – Concept of AI, History, AI vs ML vs Deep Learning (basic distinction)	07/11/2026		
	Applications – Education, Healthcare, Agriculture,	12/11/2026		
	Applications – Manufacturing, Transportation, Finance, Smart Cities	18/11/2026		
	Generative AI – Concept, Examples, Benefits, Limitations,	19/11/2026		
	Generative AI – Examples of Generative AI (ChatGPT, Gemini, Microsoft Copilot).	21/11/2026		
	Responsible AI – Ethics, Bias, Privacy, Human oversight	25/11/2026		
	Revision/Discussion Day	26/11/2026		
	Revision/Discussion Day	28/11/2026		

[Signature]

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1, Unit-2	26/08/2026		
A-2	Unit-3, Unit-4	19/09/2026		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1, Unit-2	As per HPTSB Academic Schedule		
Class Test -2	Unit-3			
House Test	Unit-1 to Unit-4			


Dr. Rigzin Angmo
(Signature of Teacher)


(Signature of HOD)

Approved

Principal
Govt. Polytechnic Kullu
at Seobagh Distt. Kullu (H.P.)