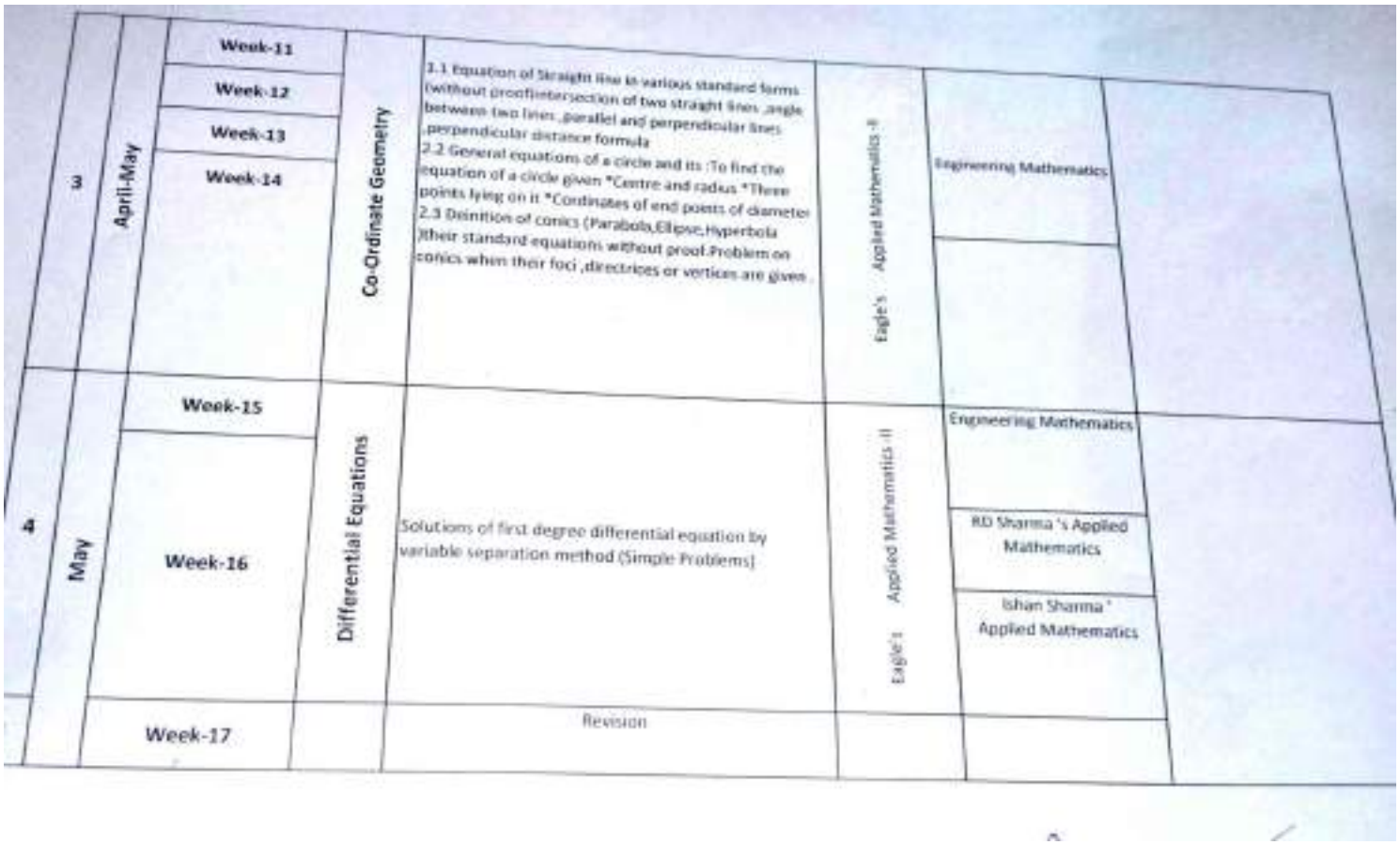
Government Polytechnic Kullu Seobagh
Lesson Plan

Department : Applied Sciences and Humanities
Subject : Mathematics -II
Classs : 2nd Semester Civil ,Electrical & Automobile Engineering
Session : Jan -May 2024

G.P. Kullu							
Syllabus Coverage		Theory					
Sr. No.		Dates	Topics	Details	Instruction Reference	Additional Study Recommended	Remark
1	Jan-Feb	week-1	Algebra	1.1 **Determinants**: Elementary properties of determinants upto 3rd order ,consistency of equations ,Cramer's Rule 1.2 **Matrix** : Algebra of matrices ,Inverse of a matrix ,matrix inverse method to solve a system of linear equations in 3 variables.	Engg. Applied Mathematics -II	Engineering Mathematics	
		Week-2					
		Week-3					
		Week-4					
2	Feb,March-April	Week-5	Integral Calculus	3.1 Integration as inverse operation of differentiation 3.2 Simple integration by substitution ,By parts and by partial fractions (for linear factors only) formula		RD Sharma 's Applied Mathematics Ishan Sharma ' Applied Mathematics	
		Week-6					
		Week-7		3.3 Use of formula for solving problems			
		Week-8		3.4 Application of integration for (a)Simple problems on evaluation of area bounded by a curve and axis			
		Week-9					
		Week-10		(b)Calculation of Vol. of a solid formed by revolution of an area about axis(simple problems)			



3	April-May	Week-11	Co-Ordinate Geometry	2.1 Equation of Straight line in various standard forms (without proof)Intersection of two straight lines ,angle between two lines ,parallel and perpendicular lines ,perpendicular distance formula 2.2 General equations of a circle and its :To find the equation of a circle given *Centre and radius *Three points lying on it *Cordinates of end points of diameter 2.3 Deinition of conics (Parabola,Ellipse,Hyperbola)their standard equations without proof.Problem on conics when their foci ,directrices or vertices are given .	Eagle's Applied Mathematics-II	Engineering Mathematics	
		Week-12						
		Week-13						
		Week-14						
4	May	Week-15	Differential Equations	Solutions of first degree differential equation by variable separation method (Simple Problems)	Eagle's Applied Mathematics-II	Engineering Mathematics RD Sharma 's Applied Mathematics Ishan Sharma ' Applied Mathematics		
		Week-16						
		Week-17		Revision				

Govt. Polytechnic Kullu at Seobagh
Department of Applied Sciences & Humanities
Lesson Plan (Theory)

Name of the Subject: **Applied Physics-II** | Branch : **Automobile Engg , Civil Engg. & Electrical Engg**
Name of the Teacher : **Bandna Devi** | Semester : **Second**
Scheme : **N-22** | Session: **Jan-June 2025**

Month	Week	Name of the chapter	Contents to be tought	Remarks
JANUARY	5th Week	UNIT - 1: Wave motion and its applications	Wave motion, transverse and longitudinal waves with examples, definitions of wave velocity, frequency and wave length and their relationship, Sound and light waves and their properties,	
FEBRUARY	1st week		wave equation ($y = r \sin \omega t$) amplitude, phase, phase difference, Principle of superposition of waves and beat formation Simple Harmonic Motion (SHM): definition, expression for displacement, velocity, acceleration, time period, frequency etc. Free, forced and resonant vibrations and their examples. Acoustics of buildings – reverberation, reverberation time, echo, noise, coefficient of absorption of sound, methods to control reverberation time and their applications. Ultrasonic waves – Introduction and properties, engineering and medical applications of ultrasonic	
	2nd week			
	3rd week			
	4 th week	UNIT-2: Optics	Basic optical laws- reflection and refraction, refractive index, Images and image formation by mirrors, lens and thin lenses, lens formula, power of lens, magnification. Total internal reflection, Critical angle and conditions for total internal reflection, applications of total internal reflection in optical fiber. Optical Instruments- simple and compound microscope, astronomical telescope in normal adjustment and their magnifying powers.	
	5th week			
MARCH	1st week			
	2nd week			
	3rd week	UNIT-3: Electrostati	Coulomb's law, unit of charge. Electric field, Electric lines of force and their properties. Electric flux, Electric potential and potential difference, Gauss's law. Capacitor and its working, Capacitance and its units. Capacitance of a parallel plate capacitor, Series and parallel combination of capacitors (related numerical), dielectric and its effect on capacitance, dielectric break down.	
	4 th week			
	5th week			

APRIL	1st week	UNIT-4: Current Electricit	Electric Current and its units, Direct and alternating current. Resistance and its units, Specific resistance, Conductance, Specific conductance, Series and parallel combination of resistances. Factors affecting resistance of a wire, carbon resistances and colour coding. Ohm's law and its verification, Kirchhoff's laws. Concept of terminal potential difference and Electro motive force (EMF) Heating effect of current, Electric power, Electric energy and its units (related numerical problems), Advantages of Electric Energy over other forms of energy.		
	2nd week				
	3rd week	UNIT-5: Electromagnetism	Types of magnetic materials: dia, para and ferromagnetic with their properties. Magnetic field and its units, magnetic intensity, magnetic lines of force, magnetic flux and units, magnetization. Lorentz force (force on moving charge in magnetic field), Force on current carrying conductor. Moving coil galvanometer; principle, construction and working, Conversion of a galvanometer into ammeter and voltmeter.		
	4 th week				
	5th week	UNIT-6: Semiconductor Physics	Energy bands in solids, Types of materials (insulator, semi-conductor, conductor), intrinsic and extrinsic semiconductors. p-n junction, junction diode and V-I characteristics. Diode as rectifier – half wave and full wave rectifier (centre taped) Photocells, Solar cells; working principle and engineering applications.		
MAY	1st week				
	3rd week				
	4 th week	UNIT- 7: Modern Physics	Lasers: Energy levels, ionization and excitation potentials, spontaneous and stimulated emission; population inversion, pumping methods, optical feedback. Types of lasers; Ruby, He-Ne and semiconductor, laser characteristics, engineering and medical applications of lasers. Fiber Optics: Introduction to optical fibers, light propagation, acceptance angle and numerical aperture,fiber types, applications in; telecommunication, medical and sensors.		
	5th week				

Signature of the Teacher

H.O.D.

Lesson Plan

Name of Faculty	Sh. Yudhvir Singh
Discipline	Applied Sciences & Humanities
Semester	6th (AE CE &EE)
Subject	Composites Science & Technology
Lesson Plan Duration	From Jan 2025 to May 2025

Week	Theory	
	Topics	
1st (27 Jan-01 Feb)	Definition	Classification and characteristics of Composite materials
2nd (3 Feb- 8 Feb)		Terminology used in fiber science, Advantages and application of composites
3rd (10 Feb -15 Feb)		Introduction to composite materials: General characteristics of reinforcement- classification
4th (17 Feb -22 Feb)	Polymer matrix composites	Thermoplastic and thermosetting resins, Commonly used matrix reinforcement system
5th (24 Feb-1 March)		Fibre, Flake and particulate reinforced composites, Reinforcements used in PMC's glass, carbon
6th (3 March- 8 March)		Aramids, boron, Roving's, yarns, fabrics, etc
7th (10 March- 15 March)		Thermoset matrices for aerospace components- polyesters, epoxies, phenolics, vinyl esters, cyanate esters, etc
8th (17 March- 22 March)	Specialty composites	Composites for satellites and advanced launch vehicles. Design considerations PMC for structural composites. Silicon carbide composites , design, processing and properties
9th (24 March- 29 March)		Carbon-Carbon composites: Matrix precursors, Manufacturing considerations.
10th (1 April - 5 April)		Nanocomposites: Nano particle dispersion in polymer matrix, Polymer- nanoclay composites and polymer-carbon nanotubes composites
11th (7April - 12 April)	Manufacturing techniques	Hand lay-up, Filament winding, Pultrusion, Resin transfer molding,
12th (14 April - 19 April)		Processing science of reactive polymer composites, Process steps for production
13th (21 April - 26 April)		Selection of processing conditions toolings, Equipments
14th (28 April- 3 May)		Carbon-carbon composites, Processing, Thermal and mechanical properties, Quality control
15th (5 May –10 May)	Testing of composites	Raw material testing, Property evaluation at laminate level
16th (12 May –17 May)		NDT techniques
17th (19 May –24 May)		Revision
18th (26 May –29 May)		Revision

Class Teacher

HOD (AS&H)

GOVT POLYTECHNIC KULLU

Lesson Plan Jan 2025- June 2025

Subject: Introduction to IT system LAB | **Branches : Electrical Engg** | **Semester:2nd**

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

MONTH/ WEEK	Practical No.	Name of Practical	REMARKS
1st (27-Jan-2025 to 01 Fab-2025)	1	To identify the various hardware components of computer system	
(2nd (03-Feb to 07 Feb) 3rd (10-Feb to 15 Feb)	2	To assemble hardware components of computer system.	
4th (17-Feb to 22 Feb) 5th (24-Feb to 01-March)	3	To install window OS on computer system	
6th (03-March to 07- March)	4	To study the various feature offered on the desktop, creating new folder and new file on the desktop	
7th (10 March to 15 March)	5	To work in different web browsers (Google chrome, internet explorer), setting up default homepage on browser and study the various	
8th (17 March to 22 March) 9th (24 March to 29 March)	6	To open search engine (Google and yahoo) and search different information using the search engine. Creating an e-mail account	
10 th (01- April to 05- April)	7	Visit various e-governance /digital India Portals and understanding the services offered	
11th (07- April to 11 April) ,12th (16-April to 19 April)	8	Opening, creating and saving a document, locating files, copying contents in some different file(s), protecting files, giving password	
13th (21- April to 26 April) 14th (28- April to 03- May)	9	Formatting a document, creating and editing tables, mail-merge	
15th (05- May to 09- May)	10	Working on ms-excel – Creating a worksheet in Excel. Copy, Move and merge the cells and various Formatting feature	
16th (13- May to 17- May) 17th (19 May to 28- May,	11	Using formula and function prepare worksheet for storing subject marks of ten students and perform the following:Calculate the student wise total and average. Calculate the subject wise total and average.following:Calculate the overall percentage and also individual	

Govt. Polytechnic Kullu at Seobagh

Department of Applied Sciences & Humanities

Lesson Plan (Practical)

Name of the Subject: **Applied Physics-II Lab (BS-106)**	Branch : **Automobile Engg , Civil Engg. & Electrical Engg**
Name of the Teacher : **Bandna Devi**	Semester : **Second**
Scheme : **N-22**	Session: **Jan-June 2025**

Week	Practical to be Performed	Remarks
Week 1	1. To verify laws of reflection from a plane mirror/ interface.	
Week 2	2.To verify laws of refraction (Snell's law) using a glass slab.	
Week 3	3.To determine and verify the time period of a cantilever.	
Week 4	4. To verify Ohm's law by plotting graph between current and potential difference	
Week 5	5 To verify laws of resistances in series and parallel combination.	
Week 6	6. To verify Kirchhoff's laws using electric circuits.	
Week 7	7. To find resistance of a galvanometer by half deflection method.	
Week 8	8. To convert a galvanometer into an ammeter.	
Week 9	9. To convert a galvanometer into a voltmeter.	
Week 10	10. To draw V-I characteristics of a semiconductor diode (Ge, Si) and determine its knee voltage.	
Week 11	11. To study the dependence of capacitance of a parallel plate capacitor on various factors and determines permittivity of air at a place.	
Week 12	Revision	
Week 13	Revision	
Week 14	Revision	

Signature of the Teacher

H.O.D.

Government Polytechnic Kullu,Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er. Shikha
Discipline	Automobile Engineering
Semester	2nd
Subject	Fundamentals Of Electrical & Electronics Engineering (L-3,Ds-1, Hrs./Week)
Lesson Plan Duration	Jan. – May 2025

Week	Chapter	Topic to be covered
1st (27Jan. – 01Feb.)	Unit – I Overview of Electronic Components & Signals	Passive Active Components: Resistances, Capacitors, Inductors, Diodes, Transistors, FET, MOS and CMOS and their Applications.
2nd (02Feb. – 08Feb.)	Unit – I Overview of Electronic Components & Signals	Signals: DC/AC, voltage/current, periodic/non- periodic signals, average, rms, peak values, different types of signal waveforms.
3rd (09Feb. – 15Feb.)	Unit – I Overview of Electronic Components & Signals	Ideal/non-ideal voltage/current sources, independent/dependent voltage current sources.
4th (16Feb. – 22Feb.)	Unit – II Overview of Analog Circuits:	Operational Amplifiers-Ideal Op-Amp,Practical op amp, Open loop and closed loop configurations,
5th (23Feb. – 01Mar.)	Unit – II Overview of Analog Circuits:	Application of Op-Amp as amplifier, adder, differentiator and integrator.
6th (02 Mar. – 08Mar.)	Unit – III Overview of Digital Electronics	Introduction to Boolean Algebra, Electronic Implementation of Boolean Operations, Gates-Functional Block Approach
7th (09Mar. – 15Mar.)	Unit– III Overview of Digital Electronics	Storage elements-Flip Flops-A Functional block approach
Class Test – 1		**In Third Week of March 2025.**
8th (23Mar. – 29Mar.)	Unit– III Overview of Digital Electronics	Counters: Ripple, Up/down and decade, Introduction to digital IC Gates (of TTL Type).
9th (01Apr. – 05Apr.)	Unit– IV Electric and Magnetic Circuits	EMF, Current, Potential Difference, Power and Energy; M.M.F, magnetic force, permeability, hysteresis loop, reluctance, leakage factor and BH curve
10th (06Apr. – 12Apr.)	Unit– IV Electric and Magnetic Circuits	Electromagnetic induction, Faraday's laws of electromagnetic induction, Lenz's law; Dynamically induced emf, Statically induced emf;
11th (03Apr. – 19Apr.)	Unit– IV Electric and Magnetic Circuits	Equations ofself and mutual inductance; Analogy between electric and magnetic circuits.
Class Test – 2		**In Third Week of April 2025.**

Sh.Khg

12th (27Apr. – 03May.)	Unit– V A.C. Circuits	Cycle, Frequency, Periodic time, Amplitude, Angular velocity,RMS value, Average value, Form Factor Peak Factor, impedance, phase angle, andpower factor, Mathematical and phasor representation of alternating emf and current;
13th (29Apr. – 05May.)	Unit– V A.C. Circuits	Voltage and Current relationship in Star and Delta connections; A.C inresistors, inductors and capacitors; A.C in R-L series, R-C series, R-L-C series and parallel circuits; Power in A. C. Circuits, power triangle.
House Test		**In Second Week of May 2025.**
14th (11May. – 17 May.)	Unit– VI Transformer and Machines	General construction and principle of core and shell type of transformers; Emf equation and transformation ratio of transformers;
15th (18May- 29May)	Unit– VI Transformer and Machines	Autotransformers; Basic principle of Electromechanical energy conversion

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

Shikha

Prepared by
(Er. Shikha)

Signature of HOD
(Mr. L.R.Sharma)

Government Polytechnic Kullu,Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er. Shikha
Discipline	Automobile Engineering
Semester	2nd
Subject	Fundamentals Of Electrical & Electronics Engineering Lab (P-2 Hrs./Week)
Lesson Plan Duration	Jan. – May 2025

Week	Practical No.	Practical Name
1st	Practical-I	Identify various active electronic components in the given circuit
2nd	Practical-II	Use multimeter to measure the value of given resistor.
3rd	Practical-III	Determine the value of given resistor using digital multimeter to confirm with colour code.
4th	Practical-IV	Test the PN-junction diodes using digital multimeter.
5th	Practical-V	Test the performance of PN-junction diode.
6th	Practical-VI	Test the performance of Zener diode.
7th	Practical-VII	Identify three terminals of a transistor using digital multimeter.
8th	Practical-VIII	Test the performance of NPN transistor.
9th	Practical-IX	Determine the current gain of CE transistor configuration.
10th	Practical-X	Test the performance of transistor amplifier circuit.
11th	Practical-XI	Test Op Amp as amplifier and Integrator.
12th	Practical-XII	Test Op Amp as amplifier and Integrator.
13th	Practical-XIII	Determine the transformation ratio (K) of 1-phase transformer.
14th		**Revision and evaluation**

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

Prepared by
(Er. Shikha)

Signature of HOD
(Mr. LR Sharma)

of Faculty	Er. Devender kumar
line	Civil Engineering
ter	2nd
	Fundamentals Of Electrical & Electronics Engineering (L-3,Ds-1, Hrs./Week)
Plan Duration	Jan. – May 2025

k	Chapter	Topic to be covered
	Unit – I Overview of Electronic Components & Signals	Passive Active Components. Resistances, Capacitors, Inductors, Diodes, Transistors, FET, MOS and CMOS and their Applications
	Unit – I Overview of Electronic Components & Signals	Signals: DC/AC, voltage/current, periodic/non- periodic signals, average, rms, peak values, different types of signal waveforms,
	Unit – I Overview of Electronic Components & Signals	Ideal/non-ideal voltage/current sources, independent/dependent voltage sources
	Unit – II Overview of Analog Circuits	Operational Amplifiers-Ideal Op-Amp,Practical op amp, Open loop an loop configurations,
	Unit – II Overview of Analog Circuits	Application of Op-Amp as amplifier, adder, differentiator and integrat
	Unit – III Overview of Digital Electronics	Introduction to Boolean Algebra, Electronic Implementation of Boole Operations, Gates-Functional Block Approach
	Unit– III Overview of Digital Electronics	Storage elements-Flip Flops-A Functional block approach
lass Test – I		**In Third Week of March 2025.**
	Unit– III Overview of Digital Electronics	Counters: Ripple, Up/down and decade, Introduction to digital IC (Type)
	Unit– IV Electric and Magnetic Circuits	EMF, Current, Potential Difference, Power and Energy, M.M.F., m. permeability, hysteresis loop, reluctance, leakage factor and BH cu
	Unit– IV Electric and Magnetic Circuits	Electromagnetic induction, Faraday's laws of electromagnetic indu law; Dynamically induced emf; Statically induced emf,
	Unit– IV Electric and Magnetic Circuits	Equations ofself and mutual inductance; Analogy between electric circuits,

12th (27Apr - 03May)	Unit- V A.C. Circuits	Cycle, Frequency, Periodic time, Amplitude, Angular velocity,RMS value, Average value, Form Factor Peak Factor, impedance, phase angle, andpower factor, Mathematical and phasor representation of alternating emf and current.
13th (29Apr - 05May)	Unit- V A.C. Circuits	Voltage and Current relationship in Star and Delta connections. A.C. inresistors, inductors and capacitors, A.C in R-L series, R-C series, R-L-C series and parallel circuits, Power in A.C. Circuits, power triangle
House Test		**In Second Week of May 2025.**
14th (11May - 17May)	Unit- VI Transformer and Machines	General construction and principle of core and shell type of transformers. Emf equation and transformation ratio of transformers.
15th (18May- 29May)	Unit- VI Transformer and Machines	Autotransformers, Basic principle of Electromechanical energy conversion

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

Prepared By
(Mr. Surender Kumar)

Signature of HOD
(Mr. [illegible])

Government Polytechnic Kullu,Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	: Er. Devender kumar
Discipline	: Civil Engineering
Semester	: 2nd
Subject	: Fundamentals Of Electrical & Electronics Engineering Lab (P-2 Hrs /Week)
Lesson Plan Duration	: Jan May 2025

Week	Practical No.	Practical Name
1st	Practical-I	Identify various active electronic components on the given circuit board
2nd	Practical-II	Use multimeter to measure the value of given resistor
3rd	Practical-III	Determine the value of given resistor using digital multimeter to confirm with colour code
4th	Practical-IV	Test the PN junction diodes using digital multimeter
5th	Practical-V	Test the performance of PN junction diode
6th	Practical-VI	Test the performance of Zener diode
7th	Practical-VII	Identify three terminals of a transistor using digital multimeter
8th	Practical-VIII	Test the performance of NPN transistor
9th	Practical-IX	Determine the current gain of a Transistor configuration
10th	Practical-X	Test the performance of transistor amplifier circuit
11th	Practical-XI	Test Op Amp as amplifier and binary adder
12th	Practical-XII	Test Op Amp as amplifier and Integrator
13th	Practical-XIII	Determine the transformation ratio & test 1-phase transformer
14th		Revision and evaluation

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

Signature
Er. Devender kumar

Signature
Er. J.R. Sharma

Government Polytechnic Kullu,Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er. Devender kumar
Discipline	Electrical Engineering
Semester	2nd
Subject	Fundamentals Of Electrical & Electronics Engineering (L-3,Ds-1, Hrs./Week)
Lesson Plan Duration	Jan – May 2025

Week	Chapter	Topic to be covered
1st (27Jan. – 01Feb.)	Unit – I Overview of Electronic Components & Signals	Passive Active Components: Resistances, Capacitors, Inductors, Diodes, Transistors, FET, MOS and CMOS and their Applications.
2nd (02Feb. – 08Feb.)	Unit – I Overview of Electronic Components & Signals	Signals: DC/AC, voltage/current, periodic/non- periodic signals, average, rms, peak values, different types of signal waveforms.
3rd (09Feb. – 15Feb.)	Unit – I Overview of Electronic Components & Signals	Ideal/non-ideal voltage/current sources, independent/dependent voltage/current sources.
4th (16Feb. – 22Feb.)	Unit – II Overview of Analog Circuits:	Operational Amplifiers-Ideal Op-Amp,Practical op amp, Open loop and closed loop configurations.
5th (23Feb. – 01Mar.)	Unit – II Overview of Analog Circuits:	Application of Op-Amp as amplifier, adder, differentiator and integrator
6th (02 Mar. – 08Mar.)	Unit – III Overview of Digital Electronics	Introduction to Boolean Algebra, Electronic Implementation of Boolean Operations, Gates-Functional Block Approach
7th (09Mar. – 15Mar.)	Unit– III Overview of Digital Electronics	Storage elements-Flip Flops-A Functional block approach
Class Test – 1		**In Third Week of March 2025.**
8th (23Mar. – 29Mar.)	Unit– III Overview of Digital Electronics	Counters: Ripple, Up/down and decade, Introduction to digital IC Gates (of TTL Type)
9th (01Apr. – 05Apr.)	Unit– IV Electric and Magnetic Circuits	EMF, Current, Potential Difference, Power and Energy; M.M.F, magnetic force, permeability, hysteresis loop, reluctance, leakage factor and BH curve
10th (06Apr. – 12Apr.)	Unit– IV Electric and Magnetic Circuits	Electromagnetic induction, Faraday's laws of electromagnetic induction, Lenz's law; Dynamically induced emf; Statically induced emf;
11th (03Apr. – 19Apr.)	Unit– IV Electric and Magnetic Circuits	Equations ofself and mutual inductance; Analogy between electric and magnet circuits.
Class Test – 2		**In Third Week of April 2025.**

12th (27Apr. – 03May)	Unit– V A.C. Circuits	Cycle, Frequency, Periodic time, Amplitude, Angular velocity,RMS value, Average value, Form Factor Peak Factor, impedance, phase angle, andpower factor, Mathematical and phasor representation of alternating emf and current.
13th (29Apr. – 05May.)	Unit– V A.C. Circuits	Voltage and Current relationship in Star and Delta connections, A.C inresistors, inductors and capacitors, A.C in R-L series, R-C series, R-L-C series and parallel circuits, Power in A. C. Circuits, power triangle
House Test		**In Second Week of May 2025.**
14th (11May – 17 May.)	Unit– VI Transformer and Machines	General construction and principle of core and shell type of transformers, Emf equation and transformation ratio of transformers.
15th (18May– 29May)	Unit– VI Transformer and Machines	Autotransformers; Basic principle of Electromechanical energy conversion

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

Prepared By
(Er. Devender Kumar)

Signature of HOD
(Mr. A.R. Sharma)

Government Polytechnic Kullu,Distt. Kullu H.P.

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. Devender kumar
Discipline	Electrical Engineering
Semester	2nd
Subject	Fundamentals Of Electrical & Electronics Engineering Lab. (P-2 Hrs /Week)
Lesson Plan Duration	Jan – May 2025

Week	Practical No.	Practical Name
1st	Practical-I	Identify various active electronic components in the given circuit
2nd	Practical-II	Use multimeter to measure the value of given resistor
3rd	Practical-III	Determine the value of given resistor using digital multimeter to confirm with colour code
4th	Practical-IV	Test the PN-junction diodes using digital multimeter
5th	Practical-V	Test the performance of PN-junction diode
6th	Practical-VI	Test the performance of Zener diode
7th	Practical-VII	Identify three terminals of a transistor using digital multimeter
8th	Practical-VIII	Test the performance of NPN transistor
9th	Practical-IX	Determine the current gain of CE transistor configuration
10th	Practical-X	Test the performance of transistor amplifier circuit
11th	Practical-XI	Test Op Amp as amplifier and Integrator
12th	Practical-XII	Test Op Amp as amplifier and Integrator
13th	Practical-XIII	Determine the transformation ratio (K) of 1-phase transformer
14th		Revision and evaluation

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

Prepared by
(Er. Devender kumar)

Signature of HOD
(Mr. A.R.Sharma)

Government Polytechnic Kullu,Distt. Kullu H.P.
Department of Electrical Engineering
Lesson Plan

Name of Faculty	Er. Devender kumar
Discipline	Electrical Engineering
Semester	2nd
Subject	Fundamentals Of Electrical & Electronics Engineering Lab (P-2 Hrs /Week)
Lesson Plan Duration	Jan – May 2025

Week	Practical No.	Practical Name
1st	Practical-I	Identify various active electronic components in the given circuit
2nd	Practical-II	Use multimeter to measure the value of given resistor
3rd	Practical-III	Determine the value of given resistor using digital multimeter to confirm with colour code
4th	Practical-IV	Test the PN-junction diodes using digital multimeter
5th	Practical-V	Test the performance of PN-junction diode
6th	Practical-VI	Test the performance of Zener diode
7th	Practical-VII	Identify three terminals of a transistor using digital multimeter
8th	Practical-VIII	Test the performance of NPN transistor
9th	Practical-IX	Determine the current gain of CE transistor configuration
10th	Practical-X	Test the performance of transistor amplifier circuit
11th	Practical-XI	Test Op Amp as amplifier and Integrator
12th	Practical-XII	Test Op Amp as amplifier and Integrator
13th	Practical-XIII	Determine the transformation ratio (K) of 1-phase transformer
14th		Revision and evaluation

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

Prepared by
(Er. Devender kumar)

Signature of HOD
(Er. A.R. Sharma)

Govt. Polytechnic Kullu (H.P.)
Engineering Workshop Practices Planning

Branch : Automobile & Civil Engineering Semester: 2nd

Subject : Engineering Workshop Practices Session: Jan-202

Teacher: Anurudh , WSI Fitting

Workshop	Month	Dates	Detail of Contents	Reference Resources	Remarks
Fitting Workshop	Feb.	Week 1 Week 2 Week 3 Week 4	i) Demonstration of different fitting tools and drilling machines and power tools	R1,R2	
	Mar.	Week 1 Week 2 Week 3 Week 4	ii) Demonstration of different operations like chipping, filing, drilling, tapping, sawing, cutting etc.		
	April	Week 1 Week 2 Week 3 Week 4	iii) One simple fitting job involving practice of chipping, filing, drilling, tapping, cutting etc.		
	May.	Week 1 Week 2 Week 4	Report Checking and evaluation.		

Teacher's references.

R1. A Text Book Workshop Technology by Dr. R. K. Singal

R2. Workshop Practices by Swarn singh

Signature of Teacher Foreman Workshop Supdt. Signature of H.O.D.

Govt. Polytechnic Kullu (H.P.)
Engineering Workshop Practices Planning

Civil & Automobile Engineering — Semester: 2nd

Subject: Engineering Workshop Practices — Session: Jan.-2025

Teacher: Rajesh Kumar, WSI Electronics

Workshop	Month	Dates	Detail of Contents	Reference Resources	Remarks
Electrical House Wiring	Feb.	Week 1 Week 2 Week 3 Week 4	Demonstration of advance power tools, pneumatic tools, electrical wiring tools and accessories. Practice on simple lamp circuits (i) one lamp controlled by one switch by surface conduit wiring.	R1	
	Mar.	Week 1 Week 2 Week 3 Week 4	DCS (ii) Lamp circuitsconnection of lamp and socket by separate switches DCS (iii) Connection of Fluorescent lamp/tube light.		
	April	Week 1 Week 2 Week 3 Week 4	DCS (iv) simple lamp circuits-in- stall bedroom lighting. (v) Simple lamp circuits- install stair case wiring.		
	May.	Week 1 Week 2 Week 3 Week 4	vi) Demonstration of measurement of Current, Voltage, Power and Energy.vii) viii) Tools for Cutting and drilling Report Checking and evaluation.		

Teacher's references.

R1. A text book of Electrical Workshop practices by Dr. Umesh Rathore , Katson Publication

Signature of Teacher — Foreman — Workshop Supdt. — Signature of H.O.D.

Govt. Polytechnic Kullu (H.P.)
Engineering Workshop Practices Planning

Branch : **Civil & Automobile Engineering** Semester: **2nd**

Subject : **Engineering Workshop Practices** Session: **Feb.-2025**

Teacher: **Bhupinder , WSI Welding**

Workshop	Month	Week	Detail of Contents	Reference Resources	Remarks
Welding Workshop	**Feb.**	Week 1 Week 3 Week 3 Week 4	i) Demonstration of different welding tools / machines.	R1,R2	
	March	Week 1 Week 2 Week 3 Week 4	ii) Demonstration on Arc Welding, Gas Welding, MIG, MAG welding, gas cutting and rebuilding of broken parts with welding		
	April	Week 1 Week 2 Week 3 Week 4	ii) Demonstration on gas cutting and rebuilding of broken parts with welding		
	May	Week 1 Week 3 Week 4	iii) One simple job involving butt and lap joint Report Checking and evaluationReport Checking and evaluation		

Teacher's references.

R1. A Text Book Workshop Technology by Dr. R. K. Singal

R2. Advanced Welding Technology by Dr. S.P. Tewari

Signature of Teacher

Workshop Supdt.

Signature of H.O.D.

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

Lesson Plan w.e.f 27/01/2025 to 29/05/2025

Name of Subject:-	IITS	Session :-	Jan-May 2025	
Name of Teacher	Monika	Semester:-	2nd Semester	
Designation:-		Scheme :-	N-2022	

Sr No	Month	Week	Contents	Remarks
1	January	Week 5	**Unit I: Basic of Computer** Block Diagram of Computer System General Understanding of Various Hardware Components	
2	February	Week 1	Understanding about the CPU, Memory, Display (CRT and LCD Monitors)	
		Week 2	Understanding about the Keyboard, Mouse, HDD/Revision	
		Week 3	Unit II: Software Concept Software and its types	
		Week 4	Operating system: Definition, types and function of Operating system	
3	March	Week 1	Booting of the system / Revision	
		Week 2	**Unit III: Internet Skills** Understanding the terminology of internet-web browser search engine, World wide web	
		Week 3	**Class Test -I**	
		Week 4	Types of networks	
4	April	Week 1	Awareness about the government portals(state portals and national portals) and institute portals	
		Week 2	**Unit IV: Working with MS-Word** File Management (Creating new document, saving a document, printing a document)	
		Week 3	**Class Test -II**	

4		Week 4	Editing a document, use of Home, Insert, Design Layout ribbons
		Week 5	Use different type of shortcut and Revision
5	May	Week 1	**Unit V: Working with MS-Excel** Working with spread sheets, enting data into the cells, merging cells, formula bar
		Week 2	**House Test**
		Week 3	Usage of simple functions such as sum, average min, max,percentage round, floor, ceiling , Conditional formating of cells, And Revision
		Week 4	**Unit VI: Information security** Concept of online frauds , threat of online crime
		Week 5	Virus attacks and use of antivirus and Revison

Signature of Teacher

(Ms Monika)

Signature of H

Dr. R. Shar