

### STUDY AND EVALUATION SCHEME

#### SIXTH SEMESTER

Sr. No.	Category	Code	Subjects	Study Scheme Hours/Week			Total Study Hrs.	Credits	Evaluation Scheme								Total
				L.	PR	DCS			Internal Assessment			External Assessment					
									TH	PR	Total	TH	Hrs.	PR	Hrs.	Total	
1	Program Core Course	EEPC302	Building Electrification	4	-	2	6	4	40	-	40	60	3	-	-	60	100
2	Program Core Course	EEPC304	Building Electrification Lab	-	2	-	2	1	-	40	40	-	-	60	3	60	100
3	Humanities & Social Sciences Courses	HS302	## Entrepreneurship & Start-Ups	4	-	-	4	4	40	-	40	60	3	-	-	60	100
4	Open Elective-II	--OE--	* Open Elective-II	3	-	1	4	3	40	-	40	60	3	-	-	60	100
5	Open Elective-III	--OE--	* Open Elective-III	3	-	1	4	3	40	-	40	60	3	-	-	60	100
6	Audit Course	AU302	## Indian Constitution	2	-	-	2	0	40	-	40	60	3	-	-	60	100
7	Project Course	PR302	Major Project	-	6	2	8	3	-	40	40	-	-	60	3	60	100
8	Seminar	SE302	Seminar	-	2	-	2	1	-	100	100	-	-	-	-	-	100
9			Student Centered Activities	-	2	-	2	0	-	25	25	-	-	-	-	-	25
<b>Total</b>				<b>16</b>	<b>12</b>	<b>6</b>	<b>34</b>	<b>19</b>	<b>200</b>	<b>205</b>	<b>405</b>	<b>300</b>	<b>15</b>	<b>120</b>	<b>6</b>	<b>420</b>	<b>825</b>

- \* Guidelines for Open Electives attached as Annexure-A and the list of Open Elective Courses alongwith the curriculum is attached as Annexure-B
- ## Subjects common with all Branches

**Government Polytechnic Kullu at Seobagh ,Distt. Kullu H.P-175138**

**Department of Electrical Engineering**

**Lesson Plan**

Name of Faculty	Er. Lalit Kumar
Discipline	Electrical Engineering
Semester	6th
Subject	Building Electrification (L-4,DCS-2) Hrs./Week)
Lesson Plan Duration	Jan-May 2025

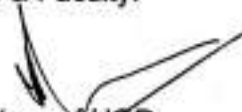
Week	Topic	Theory
1 <sup>st</sup> (27 Jan. -02 Feb.)	Unit – I Wiring Accessories	<b>Switch</b> – Their types according to construction such as surface switch, flush switch, and pull switch, rotary switch, knife switch, pendent switch, Main-switch (ICDP, ICTP).
2 <sup>nd</sup> (03Feb. – 10 Feb.)	Unit – I Wiring Accessories	<b>Holders-</b> Their types such as bayonet cap lamp holder, pendent holder, batten lamp holder, angle holder, bracket holder, tube light holder, screw type Edison and goliath Edison lamp holder, swivel lamp holder.
3 <sup>rd</sup> (11 Feb-18 Feb.)	Unit – I Wiring Accessories  Unit – II Electrical Wires and Underground Cables	<b>Socket outlets and plugs-</b> two pin, three-pin, multi pin sockets, two-pin and three-pin plug.  Conductors: - (Definitions only) wire, cable, bus bar, stranded conductor, cable, armoured cable, flexible cable, solid conductor, PVC wires,.
4 <sup>th</sup> (19 Feb. –25 Feb.)	Unit – II Electrical Wires and Underground Cables	CTS wire, LC wire, FR (Fire retardant) wire, Size of wire according to BIS. Tools used for measurement of wire size  Classification of cables (brief introduction) - low tension, high tension, and extra high-tension cables, solid, oil filled and gas filled type.
5 <sup>th</sup> (26 Feb - 05 Mar.)	Unit – II Electrical Wires and Underground Cables	Cable insulation materials (brief introduction) - vulcanized rubber (VIR), polyvinyl chloride (PVC), cross linked polythene (XLPE), impregnated paper.
6 <sup>th</sup> (06 Mar. – 13 Mar.)	Unit– III Wiring Methods and wiring layout	Factors determining the selection of wiring methods. Conduit wiring- Types of conduit, comparison between Metal and PVC conduit, types of conduit wiring (Surface/Concealed).
<b>CLASS TEST -1</b>		<b>3<sup>rd</sup> week of March 2025</b>
7 <sup>th</sup> (14 Mar. –21 Mar.)	Unit– III Wiring Methods and wiring layout	Comparison of various wiring system. Design, working and drawing of following electrical circuit
8 <sup>th</sup> (22 Mar –28 Mar.)	Unit– III Wiring Methods and wiring layout	Simple light and fan circuits, Stair case wiring, Bedroom lighting circuit, Corridor lighting circuit.
9 <sup>th</sup> (29 Mar. –.05 April)	Unit– IV Residential Building Electrification	Difference between residential and industrial load. Lighting and power circuits: Light and fan circuit, Power circuit

10 <sup>th</sup> (06 April. - 16 April.)	Unit- IV Residential Building Electrification	Wiring and circuit Schematic diagrams: multiline and single line representation Load assessment: Selection of size of conductor, Selection of rating of main switch and protective switch gear
<b>CLASS TEST -2</b>		<b>3<sup>rd</sup> week of April 2025</b>
11 <sup>th</sup> (17 April.- 24 April.)	Unit- IV Residential Building Electrification	Design and drawing, estimation and costing of a residential installation having maximum 5 KW load; Sequence to be followed for preparing estimate. Calculation of length of wire and other materials, labour cost. Calculation of Material required for service connection
12 <sup>th</sup> (25 April -02 May)	Unit- V Illumination in Residential Installation	Definition: Luminous flux, Luminous intensity, Lumen, illumination or illuminance, Lux, Space-height ratio, utilization factor
13 <sup>th</sup> (03 May-09 May.)	Unit- V Illumination in Residential Installation	depreciation factor, luminous efficiency Laws of Illumination- Inverse Square Law, Cosine Law.
<b>House Test</b>		<b>2<sup>ND</sup> week of May 2025</b>
14 <sup>th</sup> (10 May-19 May.)	Unit- V Illumination in Residential Installation	Factors affecting the illumination, Luminous flux of different types of light sources, Lux level required for different places
15 <sup>th</sup> (20 May-26 May)	Revision & Doubt Clearance	Revision & Doubt Clearance
16 <sup>th</sup> (27 May-29 May)	Revision & Doubt Clearance	Revision & Doubt Clearance

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



Signature of Teacher  
(Er. Lalit Kumar)



Signature of HOD  
(Er. Aman Anand)

**Government Polytechnic Kullu at Seobagh ,Distt. Kullu H.P-175138**


**Department of Electrical Engineering**


**Lesson Plan**

Name of Faculty	Er. Lalit Kumar
Discipline	Electrical Engineering
Semester	6th
Subject	B.E (P-2 Hrs./Week)
Lesson Plan Duration	Jan-May 2025

Week	Practical No.	Practical Name
1 <sup>st</sup> (27 Jan. -02 Feb.)	Practical-1	Prepare seriesting board.
2 <sup>nd</sup> (03Feb. - 10 Feb.)		
3 <sup>rd</sup> (11 Feb-18 Feb.)	Practical-2	Select the electric wire using measuring and testing instruments for particular applications
4 <sup>th</sup> (19 Feb. -25 Feb.)		
5 <sup>th</sup> (26 Feb - 05 Mar.)	Practical-3	Identify cables of different current ratings.
6 <sup>th</sup> (06 Mar. - 13 Mar.)		
7 <sup>th</sup> (14 Mar. -21 Mar.)	Practical-4	Identify different Cable insulation materials (brief introduction) - vulcanized rubber (VIR), polyvinyl chloride (PVC), cross linked polythene (XLPE),impregnated paper used in various applications.
8 <sup>th</sup> (22 Mar -28 Mar.)		
9 <sup>th</sup> (29 Mar. -.05 April)	Practical-5	Control one lamp from two different places using PVC surface conduit wiring system
10 <sup>th</sup> (06 April. - 16 April.)		
11 <sup>th</sup> (17 April- 24 April.)	Practical-6	Design 2 BHK residential installation scheme and estimate the material required. And draw the details required for installation on A4 size sheet.
12 <sup>th</sup> (25 April -02 May)		
13 <sup>th</sup> (03 May-09 May.)	Practical-7	Identify and study different types of light sources and their Luminous flux.
14 <sup>th</sup> (10 May-19 May.)		
15 <sup>th</sup> (20 May-26 May)	Revision	-----
16 <sup>th</sup> (27 May-29 May)		

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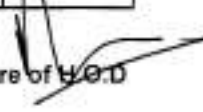
**Government Polytechnic Kullu at Seobagh Distt Kullu H.P. 175138**

**Department of Electrical Engineering**

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

Name of Subject:-		<b>Entrepreneurship and Start-ups</b>		Session:-	<b>Jan-May 2025</b>
Name of Teacher:-		<b>Neetu Thakur</b>		Semester:-	<b>6th Semester</b>
Designation:-		<b>Lecturer (English)</b>		Scheme:-	<b>N-2022</b>
Sr No	Month	Week	Contents	Remarks	
1	January	Week 5	<b>UNIT 1 – Introduction to Entrepreneurship and Start-Ups</b>		
2	February	Week 1	Definitions, Traits of an entrepreneur, Intrapreneurship, Motivation. Types of Business Structures, Similarities/differences between entrepreneurs and managers.		
		Week 2	Similarities/differences between entrepreneurs and managers. <b>UNIT 2 – Business Ideas and their implementation</b> Discovering ideas and visualizing the business		
		Week 3	Discovering ideas and visualizing the business, Activity map Business Plan		
		Week 4	<b>UNIT 3 –Idea to Start-up</b> Market Analysis–Identifying the target market,		
3	March	Week 1	Competition evaluation and Strategy Development, Marketing and accounting, Risk analysis		
		Week 2	Risk analysis <b>UNIT 4 –Management</b> Company's Organization Structure,		
		Week 3	<b>Class Test -I</b>		
		Week 4	Recruitment and management of talent. Financial organization and management		
4	April	Week 1	Recruitment and management of talent. Financial organization and management		
		Week 2	<b>UNIT 5-Financing and Protection of Ideas</b>		
		Week 3	<b>Class Test -II</b>		
		Week 4	Financing methods available for start-ups in India Communication of Ideas to potential investors–Investor Pitch		
		Week 5	Financing methods available for start-ups in India Communication of Ideas to potential investors–Investor Pitch		
5	May	Week 1	<b>UNIT 6 –Exit strategies for entrepreneurs, bankruptcy, and succession and harvesting strategy.</b>		
		Week 2	<b>House Test</b>		
		Week 3	bankruptcy, and succession and harvesting strategy.		
		Week 4	<b>Revision</b>		
		Week 5	<b>Revision</b>		

  
Signature of Teacher  
(Neetu Thakur)

  
Signature of H.O.D

**Government Polytechnic Kullu at Seobagh, Distt. Kullu H.P-175138**

**Department of Electrical Engineering**


**Lesson Plan**

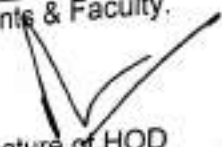
Name of Faculty	Er. Satish Kr. Malpa
Discipline	Electrical Engineering
Semester	6th
Subject	Energy Efficiency & Audit (L-4)DCS-1) Hrs./Week)
Lesson Plan Duration	Jan - May 2025

Week	Topic	Theory
1 <sup>st</sup> (27 Jan. -02 Feb.)	Unit - I Introduction to Energy Efficiency	Energy Scenario: Energy demand and supply, National scenario.
2 <sup>nd</sup> (03Feb. - 10 Feb.)	Unit - I Introduction to Energy Efficiency	Energy Efficiency and Energy Conservation concepts, Indian Electricity Act 2001 ..
3 <sup>rd</sup> (11 Feb-18 Feb.)	Unit - I Introduction to Energy Efficiency	Relevant clauses of energy conservation BEE and its Roles; Star Labelling: Need and its benefits
4 <sup>th</sup> (19 Feb. -25 Feb.)	Unit - II Pumping Systems, Fans and Blowers	Factors affecting pump performance; Efficient Pumping system operation;
5 <sup>th</sup> (26 Feb - 05 Mar.)	Unit - II Pumping Systems, Fans and Blowers	Energy conservation opportunities in Pumping systems;
6 <sup>th</sup> (06 Mar. - 13 Mar.)	Unit - II Pumping Systems, Fans and Blowers	Energy Conservation opportunities in Fan and blowers, Tips for energy saving in fans and blowers
<b>CLASS TEST -1</b>		<b>3<sup>rd</sup> week of March 2025</b>
7 <sup>th</sup> (14 Mar. -21 Mar.)	Unit -III Energy Conservation in Lighting System	Replacing Lamp sources; using energy efficient luminaries Using light controlled gears;
8 <sup>th</sup> (22 Mar-28 Mar.)	Unit -III Energy Conservation in Lighting System	Installation of separate transformer/servo stabilizer for lighting,
9 <sup>th</sup> (29 Mar. -.05 April)	Unit -III Energy Conservation in Lighting System	Innovative measures of energy savings in lighting
10 <sup>th</sup> (06 April. - 16 April.)	Unit- IV Energy Efficient Electrical Machines	Need for energy conservation in induction motor and transformer, Energy efficient motor; Significant features, advantages and Limitations.
<b>CLASS TEST -2</b>		<b>3<sup>rd</sup> week of April 2025</b>
11 <sup>th</sup> (17 April.- 24 April.)	Unit- IV Energy Efficient Electrical Machines	Energy efficient transformers, amorphous core transformers; epoxy Resin cast transformer/Dry type of transformer,
12 <sup>th</sup> (25 April -02 May)	Unit- IV Energy Efficient Electrical Machines	Technical losses; causes and measure to reduce losses, Commercial losses: pilferage, causes and remedies
13 <sup>th</sup> (03 May-09 May.)	Unit- V Energy Audit of Electrical Systems	Energy audit (definition as per Energy Conservation Act), Energy audit instruments and their use,

House Test		2 <sup>nd</sup> week of May 2025
14 <sup>th</sup> (10 May-19 May.)	Unit- V Energy Audit of Electrical Systems	Questionnaire for energy audit projects, Energy flow diagram (Sankey diagram), Simple payback period,
15 <sup>th</sup> (20 May-26 May)	Unit- V Energy Audit of Electrical Systems	Energy Audit procedure (walk through audit and detailed audit). Energy Audit report format.
16 <sup>th</sup> (27 May-29 May)	Revision & Doubt Clearance	Revision & Doubt Clearance

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**Government Polytechnic Kullu at Seobagh ,Distt. Kullu H.P-175138**

**Department of Electrical Engineering**

**Lesson Plan**


Name of Faculty	Er. Lalit Kumar
Discipline	Electrical Engineering
Semester	6th
Subject	Electric Traction (L-3,DCS-1) Hrs./Week)
Lesson Plan Duration	Jan-May 2025


Week	Topic	Theory
1 <sup>st</sup> (27 Jan. -02 Feb.)	Unit – I Basics of Traction	General description of Electrical Traction system in India.
2 <sup>nd</sup> (03Feb. – 10 Feb.)	Unit – I Basics of Traction	Advantages and Disadvantages of Electric Drive, Diesel Electric Drive, Battery Drive
3 <sup>rd</sup> (11 Feb-18 Feb.)	Unit – I Basics of Traction Unit – II Power Supply Arrangements	Problems associated with AC traction System and remedies for it. Constituents of supply system: - Substation: layout, list of equipment and their functions
4 <sup>th</sup> (19 Feb. –25 Feb.)	Unit – II Power Supply Arrangements	Feeding post: list of equipment and their functions
5 <sup>th</sup> (26 Feb - 05 Mar.)	Unit – II Power Supply Arrangements	Brief introduction to - Feeding and sectioning Arrangements, Sectioning and paralleling post, Sub sectioning and Paralleling post, Sub sectioning post, Elementary section.
6 <sup>th</sup> (06 Mar. – 13 Mar.)	Unit– III Overhead Equipment	Different types of overhead equipments Different types of OHE Centenary Construction.
<b>CLASS TEST -1</b>		<b>3<sup>rd</sup> week of March 2025</b>
7 <sup>th</sup> (14 Mar. –21 Mar.)	Unit– III Overhead Equipment	OHE Supporting Structure, Cantilever assembly diagram
8 <sup>th</sup> (22 Mar –28 Mar.)	Unit– III Overhead Equipment	Brief introduction to - Trolley collector, Bow collector, Pantograph Collector Brief introduction to pantograph.
9 <sup>th</sup> (29 Mar. –.05 April)	Unit– IV Electric Locomotive	Classification and Nomenclature of Electric Locomotive
10 <sup>th</sup> (06 April. – 16 April.)	Unit– IV Electric Locomotive	Block diagram of AC locomotive
<b>CLASS TEST -2</b>		<b>3<sup>rd</sup> week of April 2025</b>
11 <sup>th</sup> (17 April.- 24 April.)	Unit– IV Electric Locomotive	Power Circuit of AC Locomotive



12 <sup>th</sup> (25 April -02 May)	Unit- V Traction Motors and Train Lighting	Desirable characteristics of traction motor.
13 <sup>th</sup> (03 May-09 May.)	Unit- V Traction Motors and Train Lighting	Types of motors used for traction with their characteristics and features
House Test		2 <sup>ND</sup> week of May 2025
14 <sup>th</sup> (10 May-19 May.)	Unit- V Traction Motors and Train Lighting	Control of motors used for traction and methods to control Requirements of braking, brief introduction to different types of braking
15 <sup>th</sup> (20 May-26 May)	Revision & Doubt Clearance	Revision & Doubt Clearance
16 <sup>th</sup> (27 May-29 May)	Revision & Doubt Clearance	Revision & Doubt Clearance

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(Er. Aman Anand)

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

Name of Faculty	Lekh Raj Sharma
Discipline	Civil, Electrical & Automobile Engg. 6 <sup>th</sup> Semester
Semester	6 <sup>th</sup>
Subject	Indian Constitution
Lesson Plan Duration	Jan. - May 2025

Week	Chapter	Topic to be covered
1 <sup>st</sup> (27Jan. - 01Feb.)	Unit 1 Introduction to Constitution:	History of making of the Indian Constitution.
2 <sup>nd</sup> (02Feb. - 08Feb.)	Unit 1 Introduction to Constitution:	Meaning and importance of the Constitution. Salient features and Preamble of Indian Constitution.
3 <sup>rd</sup> (09Feb. - 15Feb.)	Unit 1 Introduction to Constitution:	Fundamental rights- meaning and limitations. Directive principles of state policy and Fundamental duties -their enforcement and their relevance.
4 <sup>th</sup> (16Feb. - 22Feb.)	Unit 1: Indian Knowledge System (IKS):	4. Itihasa (इतिहास) (Ramayana and Mahabharata महाभारत) and Purana (Vishnupurana लक्ष्मणपुराण, Bhagavata Purana (भागवत) etc.)
5 <sup>th</sup> (23Feb. - 01Mar.)	Unit 2 Union Government:	Structure of Union Government
6 <sup>th</sup> (02 Mar. - 08Mar.)	Unit 2 Union Government:	Union Executive- President, Vice-president, Prime Minister, Council of Ministers.
7 <sup>th</sup> (09Mar. - 15Mar.)	Unit 2 Union Government:	Union Legislature- Parliament and Parliamentary proceedings. Union Judiciary-Supreme Court of India - composition and powers and function.
<b>Class Test - 1</b>		<b>In Third Week of March 2025.</b>
8 <sup>th</sup> (23Mar. - 29Mar.)	Unit 3 State and Local Governments:	Structure of State Government. State Executive- Governor, Chief Minister, Council of Ministers.
9 <sup>th</sup> (01Apr. - 05Apr.)	Unit 3 State and Local Governments:	State Legislature-State Legislative Assembly and State Legislative Council. State Judiciary-High court.
10 <sup>th</sup> (06Apr. - 12Apr.)	Unit 3 State and Local Governments:	Local Government-Panchayat raj system with special reference to 73rd and Urban Local Self Govt. with special reference to 74th Amendment
11 <sup>th</sup> (03Apr. - 19Apr.)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitutio	Election Commission of India-composition, powers and functions and electoral process.
<b>Class Test - 2</b>		<b>In Third Week of April 2025.</b>



12 <sup>th</sup> (29 Apr. - 05 May)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitutio	Types of emergency grounds, procedure, duration and effects. •
13 <sup>th</sup> (29 Apr. - 05 May)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitutio	Traditional sports & Regional Games for promoting wellness. Leadership through Physical Activity and Sports; Introduction to First Aid. •
House Test		In Second Week of May 2025.
14 <sup>th</sup> (11 May. - 17 May.)	Unit 4 Election provisions, Emergency provisions, Amendment of the constitutio	Amendment of the constitution- meaning, procedure and limitations.
15 <sup>th</sup> (18 May- 29 May)		Revision

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Prepared by  
(Lekh Raj Sharma)

Signature of HOD AS&H  
(Mr. LR Sharma)

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

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. Devender Kumar
Discipline	Electrical Engineering
Semester	6 <sup>th</sup> sem
Subject	SCA
Lesson Plan Duration	Jan- May 2025

S.No	Description of Activity	Week	Topics
1	Group Discussion	2 <sup>nd</sup> & 3 <sup>rd</sup> week of February	The impact of Social Media On Our Lives
2	Technical Quiz	4 <sup>th</sup> week of February & 1 <sup>st</sup> week of March	IOT
3	Expert lecture	2 <sup>nd</sup> & 3 <sup>rd</sup> week of March	Bad Effects of mobile on human behavior
4	Campus beautification	4 <sup>th</sup> week of March & 1 <sup>st</sup> week of April	Cleanliness Drive for all Electrical Labs
5	Yoga activity	2 <sup>nd</sup> & 3 <sup>rd</sup> week of april , 1 <sup>st</sup> Week May	Yoga activity
6	Essay Writing	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> week of May	Topic on Drug abuse

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Signature of Teacher  
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Signature of HOD/OIC  
(Er. Aman Anand)