Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan - June 2025

Semester : 6th Sem — Session start date as per university calender: 06/01/25

Subject: Entrepreneurship Development and Management — Course code : 2000673(037)

Theory lecture & theory per week (L+T) : 2+1 = 3 — Tr ESE : 70 — Tr TA : 30 — CT: 20 — Total:120

Name of subject tearcher : T. Sonkeshri

LESSION PLAN

SESSION: JAN - JUNE 2025

Sem-6th		Discipline : Electrical Engineering	Class room instruction start date: 08/01/25				
S.No.	Chapter/ Unit No.	Topic name	No. of periods planned (Syllabus periods) = (a+b)	Actual no. of period taken (a)	Date of class conduction	No. Of Tut. Periods(b) / Date	Remarks if any
1	UNIT-I	Concept of entrepreneur and intrapreneur	11(9+2)	1	08/01/2025	(1)/20-01-25	
2		Benefits of becoming an entrepreneur and intrapreneur		2	09/01/2025		
3		Scope of entrepreneurship in local and global market.		1	15/01/2025		
4		Planning for establishment of an enterprise.		2	16/01/2025	(1)/27-01-25	
5		Traits of successful intrapreneur/entrepreneur and passion,initiative, independent decision making, team work, assertiveness,persuasion, persistence, information seeking,commitment to work contract etc SW analysis.Team work simulation.		1	22/01/2025		
6		Trait of successful entrepreneur: calculated risk taking. Risk taking simulation exercise .		2	23/01/2025		
7		Business opportunity Guidance		1	29/01/2025	(1)05-02-25	
8	UNIT-II	Motives, motivation and motivational cycle.	11(9+2)	2	30/01/2025		
9		Concept of need for Achievment		1	03/02/2025		
10		Need for Achievement assessment through various tools. 1) Ring toss game 2) Boat making exercise 3) Building block exercise 4) TAT stories 5) Who am I?		2	06/02/2025	(1)13-02-25	
11		Interpretation and action plan for self development.		1	10/02/2025		
12	UNIT-III	Creativity: Divergent thinking, creativity techniques.	8(16)	1	12/02/2025		
13		Innovation, types and applications		1	13/02/2025		
14		Product life cycle, New product development process. Product development and innovation through creativity and innovation		1	17/02/2025	(1)24-02-25	
15		Forms of business organization: Proprietorship, Partnership, Cooperative, Private, Public Ltd Company, Section 8 company, LLP		1	19/02/2025		
				2	20/02/2025		
				2	27/02/2025		
				1	03/03/2025	(1)10-03-25	
				1	05/03/2025		
				2	06/03/2025		
				1	12/03/2025	(1)17-03-25	

16	UNIT-IV	Institutional Support for entrepreneurship: MSMESI, CED, DTIC,CITCON, CSIDC, LUN, NSIC, KVIC, NABARD, Banks,SIDBI	09(11)	2	13/03/2025	(1)24-03-25
17		Entrepreneurship promotion schemes of centre and state		1	19/03/2025	
18		Marketing Mix, Market survey for project identification		2	20/03/2025	
19		Inventory control, vendor development, material movement, store management.		1	26/03/2025	(1)27-03-25
20		Manpower plan, hiring process, compensation, performance appraisal		1	27/03/2025	
21	UNIT-V	Format of business plan/techno-economic feasibility report.	8(12)	1	02/04/2025	(1)09-04-25
22		Demand and annual production target based on market survey.		2	03/04/2025	
23		Outline production/service process.		1	07/04/2025	
24		Land, building and machinery requirement		1	16/04/2025	
25		Power,utilities and raw material requirement		2	17/04/2025	
26		Fixed capital, Working capital, Subsidy and Cost of Project.		1	21/04/2025	
27		Means of finance,calculation of interest				
28		Profitability analysis, Break-even point				

Subject Teacher:
Name: Tanmoy Sankhari
Signature:

HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : July-December 2024

Semester : 5th

Subject: Electrical & Electronics simulation lab(LAB)

practical and tutorial per week (P+T) : 4+2 = 6

Session start date as per university calender: 20/08/2

Course code : 2024561 (025)

Tr ESE: Tr TA: CT:

Pr ESE: 40 Pr TA: 50 Total:9

Name of subject teacher : C.K.Rahangdale

LESSION PLAN

SESSION: 2024-2025

Discipline: Semester: 5TH Class room instruction start date: 20-08-2024

S.No.	Chapter/ Unit No.	Topic name	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remar if any
1	UNIT-I	Hardware and software requirements to install the specified free/ Licensed Simulation tool Introduction to: Scilab, or any other open source software	12	4	02-09-2024 07-09-2024	03-09-2024	
2		Open the basic interface of the Simulation tool and explore the various tabs and functions Open demo files, help files and new project/file/code		2	09-09-2024 10-09-2024		
3		Explore the following operations: file, Edit save, open, run, test, simulate, export and import.		2	13-09-2024		
4		Connect sources, test, and measuring instrument with analog and digital components and complete the circuit		2	14-09-2024		
5		Create program files andapply different operators to perform mathematical or logical operations and use plot command		3	17-09-2024	20-09-2024	
6	UNIT-II	Basic Components: Resistor, capacitor, inductor, diodes, transistors, relays, switches	12	4	21-09-2024 23-09-2024	24-09-2024	
7		Power sources, AC, DC, battery,		2	27-09-2024		
8		ground, virtual ground, current and voltage sources		2	28-09-2024		
9		Miscellaneous components and ICs: - buzzer, lamps, LEDs, probes, OPAMP IC, Timer IC, voltage regulator IC		4	30-09-2024 01-10-2024	04-10-2024	
10		Functions of Logic of Gates : AND, OR, NOR, NAND, XOR, XNOR, NOT		3	05-10-2024	07-10-2024	
11		Testing of Flip-Flop(FF) : RS, JK, D, T, Master slave FF operation		3	08-10-2024 14-10-2024	15-10-2024	

12	UNIT-III	Truth table vérification, digital circuit design base on truth table,simplification of Boolean equations	12	4	18-10-2024 19-10-2024	
13		Testing of following circuits: Adder, Subtractor, Multiplier, coder and decoder, Multiplexer and demultiplexers, counters, clocks, shift register		2	21-10-2024 22-10-2024	
14	UNIT-IV	Effect of core permeability on flux linkage and Inductance for a magnetic circuit Effect of load current and power factor on the voltage regulation and efficiency of a transformer	12	4	25-10-2024 26-10-2024	
15		Speed control of a DC motor under varying armature terminal voltage and varying field current		2	04-11-2024 05-11-2024	
16		Conventional speed control techniques for three phase IM. Synchronous motor as synchronous condenser		2	08-11-2024	
17		Different types of fault occurrence in power system network and calculation of fault current		2	09-11-2024	
18		Transmission line parameters and classification of transmission lines		2	22-11-2024	
19	UNIT-V	Introduction to Arduino hardware I. Functions of each Pin For Arduino	12	3	23-11-2024	25-11-2024
20		Basic Circuit For Arduino , Introduction to Arduino software I. Programming of an Arduino (Arduino ISP)		3	26-11-2024 29-11-2024	
21		ii. Arduino Boot loader iii. Initialization of Serial Port using Functions		3	30-11-2024 02-12-2024	
22		Interfacing of sensors with Arduino Serial Communication between Arduino and SciLab		3	03-12-2024 06-12-2024	
Total Periods			60	61		

Class room instruction date: 20/08/2024

Subject Teacher:
Name: C.K. Rahangdale
Signature:

HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Humanities & science

Session : January-june 2025

Semester : 2nd	Session start as per Csvtu calender :- 15/03/2025	
Subject : Communication skills-II	Course : 2000271(046)	
Name of subject tearcher : Pushpa jhadi	Tr ESE : 70	Tr TA : 30
Lecture and Tutorial per week(L+T) : 2+1 =3	CT -20	Total- 120

LESSION PLAN

Discipline	Semester: 2nd	Class room instruction start date:- 15/03/2025				

S.N	Chapter/ Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	**English grammer**	10	1	17/03/2025		
2		1.1 Auxilary verbs		1	19/03/2025		
3		1.2 Modifiers & adverbial phrases		1	21/03/2025		
4		1.3 Degree		1	24/03/2025	26/03/2025	
5		Use different degree in sentences		1	28/03/2025		
6		1.4 Narration		1	2/4/2025		
7		One word substitution		1	4/4/2025		
8		correct use of adverbial pharses.		1	7/4/2025	9/4/2025	
9	UNIT-II	**Unit-2.0 Non- verbal communication**	6	1		11/4/2025	
10		2.1 static feature of non- verbal communication.		1	14/04/2025		
11		Non - verbal communication- Distance , posture,physical contact etc.		1	16/04/2025	18/04/2025	
12		2.2 Dynamic features of non- verbal communication.		1	21/04/2025		
13		Mannerism , head & hand movement,					
14		Eye to eye contact, facial expreesions, gestures.		1	23/04/2025		
15	UNIT- III	**Unit-3.0 Paragraphs & Letter writing**	12	1	25/04/2025		
16		3.1 Paragraph writing.		1	28/4/2025	30/04/2025	
17		3.2 Letter writing		1	2/5/2025		
18		Purposes of letters		1	5/5/2025		
19		Characteristics of a letter		1	7/5/2025		
20		types of business letters		1	9/5/2025	12/5/2025	
21		Application for job & resume writing		1	14/05/2025		
22		Letter of enquiry		1	16/05/2025		

23		Letter for order placement		1	19/05/2025	
24		Letters of complaints		1	21/5/2025	
25	UNIT-IV	**Unit-4.0 Technical Report writing**	8	1		23/05/2025
26		4.1 Report writing		1	26/05/2025	
27		Characteristicsof a good report.		1	28/05/2025	
28		Types of technical report.		1	30/05/2025	
29		General outline of project report.		1	30/05/2025	
30		Progress report of any assumed work		1	2/6/2025	
31		Purposes of notices, qualities & foramte of notices		1	4/6/2025	
32		Mail , Purposes & formate of mails		1	4/6/2025	

Class room instruction date:

HOD(Humanities & science)

Subject Teacher:
Name: Pushpa jhadi
Signature:

Principal

Government Polytechnic Bijapur

Department : Humanities & science

Session : January- june 2025

Semester : 2nd	Session start asper Csvtu calender :- 15/03/2025	
Subject : Computer fundamentals &Applications Computer fundamentals & Applications Lab	Course : 2000176(022) : 2000193(022)	
Name of subject tearcher : Pushpa jhadi	Tr ESE : 70	Tr TA : 30
Lecture and Tutorial per week(L+T) : 2	Pr ESE : 30	Pr TA : 50
Practical per Week : 4	CT - 20	Total : 200

LESSION PLAN

Discipline	Semester: 2 nd			Class room instruction start date:- 15/03/2025			
S.N	Chapter/ Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	**Unit-1.0 Basics of computer system**	12				
2		1.1 Computer block diagram CPU,CU,MU,ALU		2	18/03/2025		
3		1.2 Data representation Bit, Byte, Nibble , word, ASCII , BCD,EBCDIC , UNICODE		2	18/03/2025		Lab Class 17/03/2025 19/03/2025 22/03/2025 24/03/2025 26/03/2025 29/03/2025
4		1.3 Concept of Hardware & Software System software & Application software		2	25/03/2025		
5		1.4 Operating system Concepts , purposes & its functions		2	25/03/2025		
6		1.5 Oprations of Windows OS(Create , copy file rename,Install application)		2	1/4/2024		
7		1.7 Green IT Concepts: Ergonomics , power plants to maximize computers managements & recycling.		2	1/4/2025		
8	UNIT-II	**Unit-2.0 Word processing**	10				
9		2.1 Overview of word processor (basics of font-type, size ,color, bold, italic)		2	0804/2025		Lab Class 02/04/2025 05/04/2025 07/04/2025 09/04/2025 12/04/2025 16/04/2025 23/04/2025 26/04/2025
10		2.2 Working with text (Inserting & deleting , Undo,,redo)		2	8/4/2025		
11		2.3 Formatting paragraphs		2	15/04/2025		
12		2.5 Spelling and grammatical checks		2	15/04/2025		
13		2.6 Table & its options					
14		2.7 Working with pictures		2	22/04/2025		
15		2.8Using Drawing 7 objects(wordart , lines& shapes)					
16	UNIT- III	**Unit-3.0 Spread sheet/ data analysis & chart presentation**	12				
17		3.1 Introduction to spread sheet/ data analysis &graphical presentation		2	22/04/2025		
18		3.3 Introduction to formatting formatting numbers,text, formatting date & time		2	29/04/2025		Lab Class 28/04/2025 30/04/2025 03/05/2025 05/05/2025 07/05/2025 14/05/2025
19		3.4 Understand formulas (Operators in spread sheet, Operators precedence)		2	29/04/2024		
20		3.5 Understanding functions (common excel function, date& time)		2	6/5/2025		

21		3.6 Types of graphics (Word art, auto shapes , images)		2	6/5/2025		
22		3.7 Introduction to charts Overview of different types of cahrts, Using different types of charts as bar chart		2	13/05/2025		
23	UNIT-IV	**Unit-4.0 Multimedia / graphic presentation**	12				Lab class 17/05/2025 19/05/2025 21/05/2025 24/05/2025
24		4.1 Introduction to multimedia / graphical presentaion pakage		2	13/05/2025		
25		4.5 Work with fonts ,slides		2	20/05/2025		
26		4.6 Use drawings & Objects, clip art ,chart picture		2	20/05/2025		
27		4.8 Find and replace text correcting your spelling		2	20/05/2025		
28		4.9 Use tables (creating a new table , editing a tables structure)		2	21/05/2025		
29		4.11 Use animation , sound & effects		2	21/05/2025		
30	UNIT-V	**Unit-5.0 Basics of internet & cloud computing**	12				Lab Class 26/05/2025 28/05/2025 31/05/2025 02/06/2025
31		5.1 Types of networks (LAN, WAN, MAN)		2	27/05/2025		
32		5.2 Intranet , internet, vpn, Wi-Fi bluetoot, switches		2	27/05/2025		
33		5.3 Brief of Internet connectivity		2	27/05/2025		
34		5.4 Devices and services , internet service		2	3/6/2025		
35		5.5 Web browsers URL, Web site, http		2	3/6/2025		
36		5.7 Introduction to virus & Antivirus , firewall ,cloud computing		2	3/6/2025		
Total Periods							

Class room instruction date:

HOD(Humanities & science.)

Subject Teacher:
Name: Pushpa jhadi
Signature:

Principal

Government Polytechnic Bijapur

Department : Humanities & science

Session : January-june 2025

Semester : 2nd		Session start as per Csvtu calender :- 15/03/2025	
Subject : Applied chemistry Applied chemistry Lab		Course : 2000278(011) : 2000291(011)	
Name of subject tearcher : Pushpa jhadi		Tr ESE : 70	Tr TA : 30
Lecture and Tutorial per week(L+T) : 2+1 =3		Pr ESE : 30	Pr TA : 50
Practical per Week : 2		CT - 20	Total : 200

LESSION PLAN

Discipline	Semester: 2nd	Class room instruction start date:- 15/03/2025

S.N	Chapter/ Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	**Unit-1.0 Atomic structure & chemical bonding**	10		18/03/2025		Lab class 20/03/2025 27/03/2025 03/04/2025
2		1.1 Atomic structure		1	19/03/2025		
3		2. Discovery of electrons, protons, & neutrons.		1	20/03/2025		
4		3. Rutherford model & bohr's burry scheme of distributions of electrons		1	26/03/2025	25/03/2025	
5		1.5 Oprations of Windows OS(Create , copy file rename,Install application)		1	27/03/2025		
6		4. Heisenber's uncertinity principal,		1	1/4/2025		
7		5. Quantum numbers , sub energy level		1	2/4/2025		
8		6. Distribution of electrons in sub shells and concept of electronic configuration of atom		1	3/4/2025		
9		7. Auffbaus's rule, pauli's exclusion principle.		1	8/4/2025		
10		8. Hund's rule of maximum multiplicity		1	9/4/2025		
11		1.2 Chemical bonding Theory ofchemical bonding		1	15/04/2025		
12	UNIT-II	**Unit-2.0 (A)Water treatment**	12				Lab Class 10/04/2025 17/04/2025 24/04/2025
13		2.1 Hardness (types of hardness, Determination of hardness using EDTA method		1	16/04/2025		
14		2.2 Hard water		1	17/04/2025		
15		2.5 Municipal water . BOD & COD		1	22/04/2025		
16		2.0 (B) Polymer					
17		2.2 properties & application of buna -n , thiokol, neoprene.		1	23/04/2025	22/04/2025	
18	UNIT- III	**Unit-3.0 (A) Electrochemistry & batteries**	10				Lab Class 01/05/2025 08/05/2025 15/05/2025
19		3.1 Conductance		1	24/4/2025		
20		3.2 Electronic conductance in metals and electrolytes		1	29/04/2025		
21		3.3 Electrodes(hydrogen , calomel, glass electode)		1	30/04/2025		
22		3.4 Conductrometric titration ,batteries		1	1/5/2025		

23		3.0(B) Electrical Insulator & thermocouple alloy		1	6/5/2025	5/5/2025	
24		3.2 Thermocouple alloy: composition & characteristics		1	7/5/2025		
25	UNIT-IV	**Unit-4.0 (A) Metallurgy**	12		8/5/2025		Lab Class 22/05/2025 29/05/2025
26		4.1 Metallurgy		1	13/05/2025		
27		4.2 Metallurgical process of iron & copper		1	14/05/2025		
28		4.1 properties of metals like copper, aluminum , tungsten, platinum , nickel.		1	15/05/2025		
29		4.2 ferrous alloys , non ferrus alloy		1	20/05/2025	19/05/2025	
30		4.1 Portland cement(consitituent, setting & hardening)		1	21/05/2025		
31	UNIT-V	**Unit-5.0 (A) Fuel and combustion**	10				Lab Class 05/06/2025
32		5.1 Fuel: calorific value & ignition tempreture , classification.		1	22/05/2025		
33		5.2 Solid fules: Coal, classification & composition		1	27/05/2025	26/05/2025	
34		5.4 Liquid fuels, Gaseous fules (Biogas ,LPG, & CNG)		1	28/05/2025		
35		5.0 (B) Lubricants , paints & varnishes		1	29/05/2025		
36		5.2 Paints and varnish (consituents, prpperties and uses.)		1	3/6/2025		

Class room instruction date:

HOD(Humanities & science)

Subject Teacher:
Name: Pushpa jhadi
Signature:

Principal

Government Polytechnic Bijapur

Department : Humanities & science

Session : January-june 2025

Semester : 2nd	Session start as per Csvtu calender :- 15/03/2025	
Subject :Environmental engg.& Sustainable development	Course code : 2000273(020)	
Name of subject tearcher : Pushpa jhadi	Tr ESE : 70	Tr TA : 30
Lecture and Tutorial per week(L+T) : 2+1 =3	CT - 50	Total- 150

LESSION PLAN

Discipline	Semester: 2nd	Class room instruction start date:- 15/03/2025				

S.N	Chapter/ Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	**Unit-1.0 water pollution & air pollution**	10				
2		1.0 Introduction to environment and environment pollution		1	18/03/2025		
3		Water pollution: Introduction , sources of water pollution		1	20/03/2025		
4		Classification of water pollution		1	22/03/2025		
5		Adverse effect of water pollution		1	25/03/2025	27/03/2025	
6		Control of water pollution		1	29/03/2025		
7		Air pollution: Introduction , sources of water pollution		1	1/4/2025		
8		Classification of air pollution		1	3/4/2025		
9		Effect of air pollution on human , plant, animal.		1	5/4/2025		
10	UNIT-II	**Unit-2.0 Soil, noise, thermal, and nuclear pollution**	8				
11		Soil pollution: Introduction, sources of soil pollution		1	8/4/2025		
12		adverse effect & control measer of soil pollution		1	10/4/2025	12/4/2025	
13		Noise pollution:I ntroduction, sources of noise pollution		1	15/04/2025		
14		Effect & control of noise pollution					
15		Thermal pollution: Introduction, Effects of thermal pollution		1	17/04/2025		
16		Causes & control of noise pollution		1	19/04/2025		
17		Radioactive pollution: Introduction, sources of pollution		1	22/04/2025		
18		Adverse effect & control of radioactive pollution.		1	24/04/2025		
19		**Unit-3.0 Sustainable development & clean technology**					
20		Concept of sustainable development		1	26/04/2025		
21		Natural resources , a - biotic & biotic resources		1	29/04/2025		
22		Concept of waste management and recycling		1	1/5/2025		

23	UNIT- III	Introduction: clean technology, conventional & non-conventional energy sources	10	1	3/5/2025	6/5/2025
24		Solar power: features & types of solar cookers & solar water heaters		1	8/5/2025	
25		Hydel energyand its advantages		1	10/5/2025	
26		Wind energy- advantages & limitations		1	13/05/2025	
27		Biomass energy : types of biomas conversion processes		1	15/05/2025	
28		Biogas production		1	17/05/2025	
29	UNIT-IV	**Unit -4 Envi. Impact assessment(EIA)**	6			
30		4.1 Public participation in EIA		1	20/05/2025	
31		EIA documentation		1	22/05/2025	
32		case studies on EIA ,EIA scopes & steps		1	24/05/2025	
33		EIA PROCESS: REPORT, gazette notification, action plan		1	27/05/2025	27/05/2025
34		EIA Implementaion: directives , follow ups		1	29/05/2025	
35	UNIT-V	**Unit-5.0 Social issues and the environment**	8			
36		Water conservation,Solid waste manegement		1	31/05/2025	
37		Rain water harvesting, watershed management		1	31/05/2025	
38		Acid rain & its effect, greenhouse effect		1	3/6/2025	3/6/2025
39		Depletion of ozon layer and effect of ozon layer depletion		1	5/6/2025	
40		Global warming and measures against global warming		1	5/6/2025	
41		Environment protechtion act 1986: importance and objectives		1	7/6/2025	

Class room instruction date:

Subject Teacher:
Name: Pushpa jhadi
Signature:

HOD(Humanities & science)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering
Session : July-December 2024

Semester : 3rd — **Session start date as per uneversity calender:02/09/24**
Subject: Basic Electronics — **Course code : 2000355(024)**
:Basic electronics Lab — **Course code : 2000365(024)**
Theory lecture & theory per week (L+T) : 2+1 = 3 — **Tr ESE : 70** — **Tr TA : 30** — **CT: 20**
Practical per week : 2 — **Pr ESE : 40** — **Pr TA : 30** — **Total:210**
Name of subject teacher : Tanvi Sonkeshri

LESSION PLAN

SESSION: JULY - DEC 2024

Discipline:E **Semester: 3rd** — **Class room instruction start date: 02/09/24**

S.No.	Chapter/ Unit No.	Topic name	No. of periods planned (Syllabus Periods)	Actual no. of period taken (a)	Date of class conduction	No. Of Tut. Periods(b) / Date	Remarks if any[No of Practical classess(c)/date etc]
1	UNIT-I	pn- Junction diode: working, formation of depletion layer,	17	2	2/9/2024	3/9/2024	C.R.O Datasheet Lab Application
2		construction, symbol and equivalent circuits of pn- Junction diode		2	4/9/2024	7/9/2024	
3		Barrier potential voltage, forward and reverse biasing, V-I characteristics of diode		2	9/9/2024	10/9/2024	Lab Class 03/09/2024 10/09/2024 17/09/2024
4		Diode current equation, Static and Dynamic resistance, Diode capacitance		2	11/9/2024	14/9/2024	function generator
5		Symbol, working and characteristic of other diodes like: LED, Photodiode,		2	17/9/2024		
6	UNIT-II	Need for rectification, rectifier Parameters, PIV, Ripple factor, Efficiency,	13	2	18/9/2024	21/9/2024	Lab Class 24/09/2024 01/10/2024
7		Peak Inverse Voltage(PIV), Transformer utilization actor(TUF) of rectifiers		2	23/9/2024	24/9/2024	
8		Types of rectifier: Half Wave Rectifier,Full Wave rectifier, Center taped and Bridge type full wave rectifier		2	25/9/2024	28/9/2024	
9		Filter Circuits: L –filter, C –filter,		2	30/9/2024	1/10/2024	
10		LC- filter, CLC- filter.		1	3/10/2024		
11		Zener diode: working, construction and equivalent circuits of Zener diode		2	5/10/2024	7/10/2024	
12		Zener and avalanche breakdown phenomenon,		1	8/10/2024		

Hoish.

13	UNIT-III	Zener diode as voltage regulator	14	1	9/10/2024	
14		Clipper: Function of clipper circuit, types of clipper :positive and		1	14/10/2024	
15		negative clipper circuits		1	15/10/2024	
16		Clamper: Function of clamper, types of clamper, positive and negative clamper circuits		2	16/10/2024	19/10/2024
17	UNIT-IV	BJT: Working, types of BJT ; NPN and PNP, construction and operation of NPN and PNP transistor.	16	2	21/10/2024	22/10/2024
18		Modes of operation : active, saturation and cutoff, current amplification factor β and α		2	23/10/2024	26/10/2024
19		Transistor biasing: need for biasing, types of biasing, thermal runaway		2	2/11/2024	4/11/2024
20		Transistor configurations: Common Emitter(CE), Common Base(CB) and Common collector configuration circuit ,		2	5/11/2024	6/11/2024
21		working and input and output characteristics.		2	9/11/2024	11/11/2024
22		Field Effect Transistor(FET): Working, construction, input and output characteristics, drain current, pinch-off voltage		2	12/11/2024	13/11/2024
23	UNIT-V	Basics of differential amplifier, Working principle, input and output characteristics.	18	2	16/11/2024	18/11/2024
24		Basics of Op-Amp:OP-AMPIC-741, functional block diagram, virtual ground,		2	19/11/2024	20/11/2024
25		configurations of working: inverting and non inverting,		2	23/11/2024	25/11/2024
26		parameters : I/O resistance, gain, slew rate, bandwidth, power.		2	26/11/2024	27/11/2024
27		Applications op-amp : Summing, multiplier,		2	30/11/2024	2/12/2024
28		and divider amplifier, integrator and differentiator, Log and Anti-Log amplifier.		2	3/12/2024	4/12/2024
Total Periods						

Lab Class
08/10/2024
15/10/2024
22/10/2024

Lab Class
05/11/2024
12/11/2024

Lab Class
19/11/2024
26/11/2024
03/12/2024

Signature:

Subject Teacher Name : Tanvi Sonkeshri

I/c HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering
Session : July-December 2024

Semester : 3rd **Session start date as per uneversity calender:02/09/24**
Subject: Electrical Workshop Practice-1 LAB **Course code : 2024365(024)**

Practical per week : 2 **Pr ESE : 40** **Pr TA : 50** **Total:90**
Name of subject tearcher : T. Sonkeshri

LESSION PLAN					
SESSION: JULY - DEC 2024					
Discipline: Elec.		Semester: 3rd	Class room instruction start date: 02-09-2024		
S.No.	Laboratory Instruction Number.	Short Laboratory Experiment Titles	Actual no. of period taken	Date of class conduction	Remarks
1	LE 1.1	Identify different type of measuring tools.	2	04-09-2024	
2	LE 1.2	Use hand tools	2	11-09-2024	
3	LE 1.3	Measure the wire gauge size	2	18-09-2024	
4	LE 1.4	Identify different type of meters used for measurement	2	25-09-2024	
5	LE 2.1	Identify cables of different current and voltage ratings	2	09-10-2024	
6	LE 2.2	Identify the accessories /materials used for house wiring	2	16-10-2024	
7	LE 2.3	Identify the different types of illumination sources	2	23-10-2024	
8	LE 2.4	Identify the different types of switches and circuit breakers			
9	LE 3.1	Perform wiring connection on a switch board	2	06-11-2024	
10	LE 3.2	PVC conduit wiring			
11	LE 3.3	Prepare switch board			
12	LE 3.4	Connect a given load from the main supply using Circuit breakers.	2	13-11-2024	
13	LE 3.5	Prepare series testing board.			
14	L.E 4.1	Control of one lamp, one fan and one socket from one switch board	2	20-11-2024	
15	L.E 4.2	control of two Lamps by Series - Parallel connection using one 1-way switch &2-way switches	2	27-11-2024	
16	L.E 4.3	Control and practice of a given lighting load.	2	27-11-2024	
17	L.E 4.4	Control using sub circuits for a given heating and illumination load			
18	L.E 4.5	Using multimeter and clip on meter..			
19	L.E 4.6	Continuity and polarity test of given electrical wiring component	2	04-12-2024	
20	L.E 4.7	Test wiring installation using megger			
21	L.E 5.1	Identify Safety Signs and symbols.	2	11-12-2024	
22	L.E 5.2	Artificial respiration and first aid kit			

23	L.E 5.3	Mock drill session for extinguishing fire	2	01-01-2025
24	L.E 5.4	Different types of fire extinguishers		

Subject Teacher Name: Tanvi Sonkeshri

Signature:

HOD(Electrical Engg.)

Department : Humanities & science

Session : July- Dec. 2024

Semester : 1st	Session start asper Csvtu calender :- .....
Subject : Applied Mathematics - I (M-I)	Course : 2000172(014)
Name of subject tearcher : Chitranjan Lal	Theory ESE : 70 / Theory TA : 30
Lecture and Tutorial per week(L+T) : 3	CT - 20 / Total marks : 120

LESSION PLAN

Discipline: | Semester: 1 st | Class room instruction start date:- 15/09/24

S.No.	Chapter/ Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT - I	1.1 Determinant - Introduction.	10	01	18/09/24		
2		1.11 Cocept & Properties of Determinants.		01	20/09/24		
3		1.12 Solution of Simultaneous equations in three unknowns by Cramers rule.		02	23/09/24 25/09/24		
4		1.13 Calculate the Area of the given Triangle by Determinant method.		01	27/09/24		
5		1.2 Matrices - Introduction		02	30/09/24 04/10/24		
6		1.21 Algebra of Matrices.		01	07/10/24		
7		1.22 Multiplication of two Matrices.		01	09/10/24		
8		1.23 Solution of Simultaneous equations by Matrix inversion method of order 3*3.		01	14/10/24		
9		2.1 Basic Trigonometry		01	16/10/24		
10		2.11 Multiple & Sub multiple angles.		01	18/10/24		
11		2.2 Functions & Limits.		01	21/10/24		

12	UNIT-II	2.21 Independent & Dependent Variables.	10	01	23/10/24		
13		2.22 Different type of funtions.		01	25/10/24		
14		2.23 Concept of Limit & its evaluation.		01	04/11/24		
15		2.3 Differentiation of elementary functions.		01	06/11/24		
16		2.31 Differentiation of Algebraic, Trigonometric, Exponential & Logarithmic Functions.		01	08/11/24		
17		2.32 Differentiation of sum, product & quotient of two functions.		01	11/11/24		
18		2.33 Differentiation of function of function.		01	13/11/24		
19	UNIT- III	3.1 Second order derivatives (without exaples).	8	01	18/11/24		
20		3.2 Equation of Tangent & Normal for functions of one variable only.		01	20/11/24		
21		3.3 Maxima & Minima		01	22/11/24		
22		3.31 Maxima and Minima for functions of one variable only.		01	25/11/24 27/11/24		
23	UNIT-IV	4.1 Varous forms of straight lines.	10	01	29/11/24		
24		4.11 Co-ordinate systems, slope point form, two point form.		01	02/12/24		
25		4.12 Distance between two points, division of a line segment.		02	04/12/24 06/12/24		
26		4.13 Two points intercepts form, General form.		01	09/12/24		
27		4.14 Perpendicular distance from a point on the line, Perpendicular distance between two parallel lines.		02	11/12/24 13/12/24		

28		4.21 Conic sections - Definition, standard forms.		01	16/12/24		
29		4.22 General equation.		01	20/12/24		
30		4.23 Centre & radius of a circle.		02	23/12/24 30/12/24		
31		4.24 Focus, Axis , directrix, latus rectum & vertex of Parabola & Ellipse.		01	01/01/25		
32	UNIT-V	5.1 Frequency distribution & central tendency.	10	02	03/01/25 06/01/25		
33		5.11 Introduction, graphical representation of frequency distribution.		01	08/01/25		
34		5.12 Central tendency, mean, median, frequency, distribution and mode.		02	10/01/25 15/01/25		
35		5.2 Dispersion and deviation.		01	17/01/25		
36		5.21 Measure of dispersion.		02	20/01/25 22/01/25		
37		5.22 Range, Quartile deviation.		01	24/01/25		
38		5.23 Standard deviation, root mean square deviation.		02	27/01/25 31/01/25		
39		5.3 Variance and Coefficient of variance.		01	03/02/25		
40		5.31 Variance and coefficient of variance.		01	05/02/25		
Total Periods			48				

Subject Teacher:
Name: Chitranjan Lal
Signature:

HOD(Humanities & science.)

Principal

GOVERNMENT POLYTECHNIC BIJAPUR(C.G.)

Department : Humanities & science

Session : Jan- June 2025

Semester : 2nd		Session start asper Csvtu calender :-	
Subject : Applied Mathematics - II (M-II)		Course : 2000272(014)	
Name of subject tearcher : Chitranjan Lal		Theory ESE : 70	Theory TA : 30
Lecture and Tutorial per week(L+T) : 3		CT - 20	Total marks : 120

LESSION PLAN

Discipline: | **Semester: 2nd** | **Class room instruction start date:-**.....15/03/2025

S.No.	Chapter / Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT - I	1.1 Simple Integration : Rules of integration and integration of standard functions.	10	02	17/03/25 19/03/25		
2		1.21 Integration by substitution.		02	21/03/25 24/03/25		
3		1.22 Integration by parts.		02	26/03/25 28/03/25		
4		1.23 Integration by partial fraction.		02	02/04/25 04/04/25		
9	UNIT-II	2.1 Definite Integration.	10	01	07/04/25		
10		2.11 Simple examples.		02	09/04/25 11/04/25		
11		2.12 Properties of definite integral without proof and simple examples.		02	16/04/25 21/04/25		
12		2.2 Application of Integration.		01	23/04/25		
13		2.21 Area under the curve.		02	25/04/25 28/04/25		
14		2.22 Area between two curves.		02	30/04/25 02/05/25		
19		3.1 Concept of differential equation.		01	05/05/25		

20	UNIT- III	3.2 Order, degree and formation of differential equation.	10	02	07/05/25 09/05/25		
21		3.3 Solution of differential equation.		01	14/05/25		
		3.31 Variable Seperable form.		02	16/05/25 19/05/25		
		3.32 Homogeneous differential equations.		02	21/05/25 23/05/25		
22		3.33 Linear differential equation.		02	26/05/25 28/05/25		
23	UNIT-IV	4.1 Bisection method.	9	02	30/05/25 02/06/25		
24		4.2 Regula Falsi method.		02	04/06/25 06/06/25		
25		4.3 Newton Raphson method.		02	09/06/25 11/06/25		
32	UNIT-V	5.1 Trapezoidal rule	9	03	13/06/25 16/06/25 18/06/25		
33		5.2 Simpson's 1/3 rule.		02	20/06/25 23/06/25		
34		5.3 Simpson's 3/8 rule.		02	25/06/25 30/06/25		
Total Periods			48				

HOD(Humanities & science.)

Subject Teacher:
Name: Chitranjan Lal
Signature:

Principal

Government Polytechnic Bijapur

Department : Mechanical

Session : July- Dec. 2024

Semester : 1st	Session start asper Csvtu calender :- 14/08/2024
Subject : Workshop Practice	Course :
Name of subject tearcher : Gouri Shankar Khanday	Tr ESE : 0
Lecture and Tutorial per week(L+T) : 8	Pr ESE : 50
Practical per Week : 6	CT - 0

LESSION PLAN

Discipline:		Semester: 1 st		Class room instruction start date:- 14/08/2024	
S.No.	Chapter/ Unit No.	Topics/Subtopics to be covered under this unit	No. of periods planned	Actual no. of period taken	Remarks if any
1	UNIT-I	**Unit- 1.0 Measurement, Hand tools and workshop safety.**	8	1	
2		1.1 Engineering Measurement: definition,importance and Types of measurements.		1	
3		1.2 Measuringinstruments:linear measurement and angular measurement instruments.		1	
4		1.3 Measuring devices: Linear measurement andangular measurement devices		2	
5		1.4 Workshop hand tools: Listthe various hand tools used in workshops.		2	
6		1.5 WorkshopSafety –SafetyPractices,Causes of accidents, Generalsafety rules, Safety signs and symbols. Firefighting equipment, fire extinguishers, and their types and First Aid		1	
8	UNIT-II	**Unit- 2.0 Wood Working Shop**	8	1	
9		2.1 Types of woods and artificial woods and their applications.		2	
10		2.2 wood working tools –bench vice, hammers, chisel, files, hacksaw, wood saw, surface planer, punch, v block, try square , steel rule , twist drill, markingblock,reamers, tap set, mallet and theirspecification.		1	
11		2.3 Wood working operations – Marking ,Cutting , reaming ,filing, drilling, joining,		1	
12		2.4 Types of wood working joint – Butt joint , lap joint, Bridle joint , Dowel joint, Mitre joint , finger joint , dovetail joint , Dado joint, Groove joint, Cross lap, splice joint.		2	
13		2.5 Applications of variousjoints		1	
14		**Unit- 3.0 Joining Methods :**		2	
15		3.1 Joining methods- Various types of Joining Methods and their field application and types of weldingjoint		1	
16		3.2 Arc welding 3.2.1 Arc weldingprocess, equipment with		1	

17	UNIT- III	3.3 Personal protective equipment like safety glasses, welding gloves etc and safe practices in welding shop.	8	1	
18		3.4 Gas welding 3.4.1 Gas weldingprocess, Equipment with necessary accessories, Types like Carburizing, oxidizing andneutral flame.		1	
19		3.5 Soldering and brazing: specification, filler material, flux, heating methods, temperature range, advantages, and comparison.		2	
20	UNIT-IV	**Unit- 4.0 Fitting and Sheet metal Shop**	10	2	
21		4.1 Fitting tools – Hand toolsused in fitting shop,holding tools, Marking and measuring tools, cutting tools.		2	
22		4.2 FittingOperation –Sawing, Chipping, Filling, Taping, Reaming and Drilling		2	
23		4.3 Sheet metal tools-listof sheet metal toolsused.		2	
24		4.4 Sheet metal operationShearing, Bending, Drawing, Squeezing,Snipping,riveting, Grooving		2	
26	UNIT-V	**Unit- 5.0 Lathe Machine**	8	2	
27		5.1 Concept,Workingprinciple, constructional details and major components of lathe machine with their functions.		1	
28		5.2 Job and tool holding devices and lathe attachments – head stock , tail stock, tool post, Lathe tools, chucks(3 and 4 Jaw), name and advantages of lathe attachment.		2	
29		5.3 Lathe operations – Plain turning, Facing, taper turning , Knurling,Threading etc.		3	
Total Periods					

Class room instruction date:

Subject Teacher:
Name: Gouri Shankar Khanday
Signature:

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 6th
Subject: Utilization of Electric Energy & Traction
: Utilization of Electric Energy & Traction (LAB)
Theory lecture and tutorial per week (L+T) : 4+1 = 5
Practical per week : 2
Name of subject teacher : C.K. Rahangdale

Session start date as per university calender: 06/01/2
Course code : 2024671 (024)
Course code : 2024661 (024)
Tr ESE: 70 **Tr TA: 30** **CT: 20**
Pr ESE: 40 **Pr TA: 60** **Total: 220**

LESSION PLAN

SESSION: 2024-2025

Discipline: **Semester: 6TH** **Class room instruction start date: 06-01-2025**

S.No.	Chapter/ Unit No.	Topic name	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Types of electrical drives	16	1	09-01-2025		
2		Motors used for electrical drives;DC series, shunt and separately excited motors, Induction Motor		2	10-01-2025 11-01-2025		
3		Selection of Electrical motors.		1	14-01-2025		
4		Torque / speed and torque / current characteristics of DC series, shunt and separately excitedmotors		2	16-01-2025 17-01-2025		
5		characteristics of threephase induction motors.		2	18-01-2025	20-01-2025	
6		Heating and Cooling of electrical motors Heating and cooling curves, insulating materials		2	21-01-2025 23-01-2025		
7		Size and rating of motorsstandard ratings of motors, classes of duty, ambient temperature ratings, ambient temperature and ratings, motors used for different types of applications, temperature rise with short time ratings.		2	24-01-2025 25-01-2025		
8		Types of load: Classification of loads with respect to time		2	27-01-2025	28-01-2025	
9		classification of loads with respect to duty cycles. Enclosures for rotating electrical machines.		2	30-01-2025 31-01-2025		
10	UNIT-II	Advantages of Electrical heating	16	2	01-02-2025 02-02-2025		
11		Essential Requirements of a good heating element, materials of heating		2	03-02-2025	04-02-2025	
12		Methods of electric heating – resistance heating, arc heating, high frequency heating		2	06-02-2025 08-02-2025		
13		induction heating, dielectric heating.		2	10-02-2025	11-02-2025	

14		Types of resistance welding, choice of welding time, electric arc welding, Types of welding electrodes,		2	12-02-2025 14-02-2025	
15		Welding transformers and rectifiers		1	15-02-2025	
16	UNIT-III	Introduction: Terms used in illumination, laws of illumination	19	2	17-02-2025 18-02-2025	
17		Types of sources of illumination - Electric arc,		1	20-02-2025	
18		incandescent, gaseous discharge, fluorescent		1	21-02-2025	
19		Arc lamps, incandescent lamps, laser		2	22-02-2025	24-02-2025
20		LED, neon		1	25-02-2025	
21		Tungsten-Halogen and Sodium Vapour lamps, Fluorescent lamps		2	27-02-2025	28-02-2025
22		Types of lighting schemes: direct, semi direct, Semi-indirect,		1	01-03-2025	
23		Indirect lighting and general lighting schemes		2	03-03-2025 04-03-2024	
24		General ideas about street lighting,		1	06-03-2025	
25		factory lighting and flood lighting.		2	08-03-2025	
26	UNIT-IV	Requirements of ideal traction system, advantages and disadvantages of electric traction	22	2	10-03-2025	11-03-2025
27		System of track electrification – DC system,		2	17-03-2025	18-03-2025
28		single phase AC system		1	20-03-2025	
29		three phase AC system		1	21-03-2025	
30		Composite system		1	22-03-2025	
31		Special mechanical and electrical features of traction motors, current collectors		2	24-03-2025 27-03-2025	
32		Traction motors: DC series,		2	28-03-2025	29-03-2025
33		Three phase induction motors		1	01-04-2025	
34		Types of electric braking: Plugging,		1	03-04-2025	
35		Rheostat or Dynamic braking		1	04-04-2025	
36		Regenerative braking		1	05-04-2025	
37	UNIT-V	Types of service- Main line services, Urban services, suburban services	22	2	07-04-2025	08-04-2025
38		Speed-time and speed distance curves for main line service		2	11-04-2025 12-04-2025	
39		Speed-time curve suburban service and urban and city service		2	15-04-2025 17-04-2025	
40		Basic definitions: Crest speed, average speed, schedule speed, schedule time, Factors affecting the schedule speed of a train		2	21-04-2025 22-04-2024	

41		Factors affecting the schedule speed of a train, Simplified trapezoidal and quadrilateral speed time curves, Tractive effort	2	24-04-2025 25-04-2025	
42		Specific energy consumption, dead weight, accelerating weight, adhesive weight	2	26-04-2024 28-04-2025	
43		coefficient of adhesion, advantages and disadvantge of regenerative braking	2	02-05-2025 03-05-2025	
Total Periods					

Class room instruction date: 06/01/2025

Subject Teacher:

Name: C.K. Rahangdale

Signature:

HOD(Electrical Engg.)

Principal

Government polytechnic Bijapur (C.G.)

Name of Course	Quantity Surveying and Costing-I
Course Code	2020561(020)
Name of Teachers	Durgavati Wasam
Branch /Semester	Civil/ 5th sem.
Sesson	JUNE.- DEC -2024

Course Outcomes	CO-1 Recognize specifications and demonstrate the purpose of estimate and types of approximate	Session start as per Csvtu calender :- 6/01/2025	
	CO-2 Calculate the quantities of various items in a building work by using different methods		
	CO-3 Prepare detailed estimate of buildings/structure.	Tr ESE : 70	Tr TA : 30
	CO-4 Use SOR and analyze rates of different items in building works as per prevailing market rates.	Pr ESE : 40	Pr TA : 60
	CO-5 Calculate quantities of earth work in embankments and cutting and estimate quantity of	CT - 20	Total : =220

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
9/09/024	Monday	Unit -1 Prepare estimate of R.C.C. structures i.e. slab, beam, column and column footing, staircase.	General Specification, Detailed Specification. Defination and classification of estimate . Puprose and importance of estimate .		6		
10/09/024	Tuesday		1.2Describe approximate method of estimate. 1.2.2 Approximate estimate for building Service unit method , Plinth area method , Cubic content method.				
11/09/024	Wednesday		Detailed Specification of a First Class Building. numerical problems on approximate estimates by service unit method .				
12/09/024	Thursday			Prepare approximate estimate of a building by different methods on the basis prevailing market rate.			
16/09/024	Monday		numerical problems on approximate estimates by plith area method .				
17/09/024	Tuesday	Unit -2 Taking Out Quantities	2.1Units of measurements or detailed lists main items of work in estimating building works. 2.2 Rules and methods of measurement of work, general rules, measurement of different work.		2		
18/09/024	Wednesday		2.3 Calculating quantities of Long and short wall method centerline method. 2.4 Standard conversion used in measurements.				

N	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
19/09/024	Thursday	Unit -2 Taking Out Quantities		From a given detailed drawing and specification of a building take out the quantities of different items of works.	9		
23/09/024	Monday		Solve numerical problems on method of APPRO. Estimate by centerline method.				
24/09/024	Tuesday		Solve numerical problems on method of APPRO. Estimate by centerline method.				
25/09/024	Wednesday		Solve numerical problems on method of APPRO. Estimate by centerline method.				
26/09/024	Thursday			Workout the quantities of all items of work for a single storied residential building with flat roof			
30/09/024	Monday		Solve numerical problems on method of APPRO. Estimate by long wall & short wall method.				
1/10/024	Tuesday		Solve numerical problems on method of APPRO. Estimate by long wall & short wall method.				
7/10/024	Monday	Unit -3 Detailed Estimate Of Buildings	3.1Pre-requisite for stage II estimates or detailed estimate. 3.2 Preparation of abstract from quantity sheets		12		
8/10/024	Tuesday		Clasification of diff. types of estimate and percentages provisions .				
9/10/024	Wednesday		Preparation of Detailed estimate for single storied building.				
10/10/024	Thursday			Workout the quantities of all items of work for a single storied residential building with pitched roof.			
14/10/024	Monday		3.4Preparation of detailed estimate Small building- Small building with pitched roof				
15/10/024	Tuesday		Rules fo deduction of opening in mesonary and plastering.				
16/10/024	Wednesday		Solved numerical problem of Detailed estimate				
17/10/024	Thursday			Prepare abstract for detailed estimate.			
21/10/024	Monday		Solved numerical problem of Detailed estimate				
22/10/024	Tuesday		Solved numerical problem of Detailed estimate				

Name Cou N	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
23/10/024	Wednesday	UNIT -4 Schedule of Rates and Analysis of Rates	Schedule Of Rates Information available in schedule of rates with specialization of particular item such as: Labour		17		
24/10/024	Thursday			Workout the quantities of all items of work for a shop cum residential double storied building.			
28/10/024	Monday		4.2.2 Task artisan per day 4.2.3Materials required for major items. 4.2.4Labour required for major items				
29/10/024	Tuesday		Numerical problem of Rate Analysis of diff. grade of PCC work .				
30/10/024	Wednesday		Numerical problem of Rate Analysis of diff. grade of RCC work .				
31/10/024	Thursday			Rate analysis for: a. Brick masonry b. Excavation in foundation			
4/11/024	Monday		Numerical problem of Rate Analysis of diff. grade of RCC and PCC work				
5/11/024	Tuesday		Solved numerical problems of First class brick work.				
6/11/024	Wednesday		Solved numerical problems of stone mesnory work.				
11/11/024	Monday		Solved numerical problems of Rubbel mesonary work.				
12/11/024	Tuesday		Solved numerical problems of Flooring work work.				
13/11/024	Wednesday		Solve numerical problems relted rate analysis of 6 mm plastering .				
14/11/024	Thursday			Rate analysis for: f.Woodwork. g. special work			
18/11/024	Monday		Solve numerical problems relted rate analysis of 12mm plastering . Solve numerical problems relted rate analysis of tiles work .				
19/11/024	Tuesday		Solve numerical problems relted rate analysis of wood work .				
20/11/024	Wednesday	UNIT-5 Earthwork and Road Estimate	5.1.1Calculation of area of cross section for Fully cutting section Partly cutting and partly.		4		
21/11/024	Thursday			Estimate of earth work for different sections.			
25/11/024	Monday		5.1.3Calculation of area of cross section for given cross sections:				

Nar C	pay	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
26/11/024	Tuesd	UNIT-5 Earthwork and Road Estimate	Mid sectional area method and mean sectional area method Calculation of earth work by using Prismoidal formula		9		
27/11/024	Wednesd		Calculation of earth work by using And Trapezoidal formula, Lead and Lift.				
28/11/024	Thursd			Estimate of road of 1 K.M. length for pavement surface. W.B.M., Bitumen.			
2/12/024	Mond		Solve numerical problems on Road work.				
3/12/024	Tuesd		Solve numerical problems on method of ROAD ESTIMATE				
4/12/024	Wedne		Prepare a detailed estimate for the construction of a new state highway for 1 km length.				
5/12/024	Thursd			Estimate of road of 1 K.M. length for pavement surface. W.B.M. Bitumen			

Teacher's Sign.

Hod Sign.

Government polytechnic Bijapur (C.G.)

Name of Course: Advance Construction Technology
Course Code: 2020581(020)
Name of Teachers: Durgavati Wasam
Branch /Semester: Civil/ 5th sem.
Sesson: JUNE.- DEC -2024

Course Outcomes	CO-1 Recognize Advance Construction Material. CO-2 Explain relevent method of Concreting and equipments according to types of Construction. CO-3 Identify Advance technology in Construction. CO-4 Describe Hoisting and Conveying Equipments. CO-5 Identify Miscellaneous machineries and equipments.	Calender :-20/08/024	
		Tr. ESE : 70	Tr TA : 30
		Pr. ESE : 00	Pr. TA : 00
		CT-20	Toatal=

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
4/19/024	Wednesday	UNIT-1 Advance Construc-tion Material	1.1 Fibres: Use and properties of steel, polypropylene.		8		
5/09/024	Thursday		Use and properties of carbon and glass fibers.				
6/09/024	Friday		1.2 Use and properties of PVC, RPVC and HDPE.				
11/09/024	Wednesday		Use and properties of GRP and FRP.				
12/09/024	Thursday		1.3 Use and properties of Acoustics materials, Wall Cladding and plaster board.				
13/09/024	Friday		Use and properties of Micro - silica,Waterproofing material, and Adhesives.				
18/09/024	Wednesday		Use and properties of Micro - silica,Waterproofing material, and Adhesives.				
19/09/024	Thursday		Use of waste product and industrial products by Bricks ,blocks and concrete.				
20/09/024	Friday	Unit-2 Advance Concre-ting methods and equipm-ents.	2.1 Necessity and use of Ready mix Concrete.		6		
25/09/024	Wednesday		2.2 Products and equipments for ready mix concrete.				
26/09/024	Thursday		2.3 Vibrators for Concrete consolidation.				
27/09/024	Friday		2.4 Under water Concreting: Procedure and equipments required				
2/10/024	Wednesday		Drop Bucket method.				
3/10/024	Thursday		Properties ,workability and water cement ratio of concrete.				

.e	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
4/10/024	Friday	Unit-2.0	**2.5** Special Concrete: Procedure and uses of Special Concrete.		3		
9/10/024	Wednesday		Roller compacted Concrete and SCC.				
10/10/024	Thursday		Foam and Shotcreting.				
11/10/024	Friday	Unit-3 Advance techno-logy in Construc-tion	**3.1** Construction of solid Foundation and pile Foundation, Launching of Grider.		9		
16/10/024	Wednesday		**3.3** Pre - fabricated Construction method.				
17/10/024	Thursday		Equipments and machineries used for pre-fabricated construction.				
18/10/024	Friday		**3.4** Concept of Reinforced soil.				
23/10/024	Wednesday		Stengthning of embankments by soil Reinforced techniquesusing Geo Synthetics.				
24/10/024	Thursday		Types and Function of Geo -synthetic material.				
25/10/024	Friday		Components of reinforced soils and construction procedure.				
30/10/024	Wednesday		Advantages of Reinforced soil.				
31/11/024	Thursday		**3.2** Construction of Multy-storied building.				
1/11/024	Friday	Unit-4 Equipm-ents for Constrcutio n of flyover.	**4.1**Equipments and machineries required for foundation and superstucture of flyover and Bridges.		6		
6/11/024	Wednesday		Pile Driving equipments and hammers.				
27/11/024	Thursday		**4.2** Hoisting Equipments: Principle and Working of Derrick -pole,Gin pole Crane.				
28/11/024	Friday		Types of Crane and their uses.				
13/11/024	Wednesday		**4.3** Conveying Equipments Working of belt conveyer and Types of belt.				
14/11/024	Thursday		Cpacity and uses of Dumpers,tractorand Truck.				

Name of Course / Nam / Br / S	Day	Course		Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
15/11/024	Friday	unit -5 Miscella-neous machine-ries and equipm-ents	**5.1** Excavation equipments: Uses and working operation of following- Bull Dozers, Scrapers, clam shel and Tenching and Grader.		7		
20/11/024	Wednesday		Excavation equipments: Uses and working operation of following :Grader and JCB.				
21/11/024	Thursday		Uses and working operation of following:JCB ,power shovels, Drag line,Wheel mounted belt loader.... etc.				
22/11/024	Friday		**5.2** Compacted equipments: types and outputs of different types of Rollers.				
27/11/024	Wednesday		**5.3** Hot-Mix Bitumen plant ,Bitumen paver, Grouting equipments.				
28/11/024	Thursday		5.4 Selection for Drilling pattern for blasting				
29/11/024	Friday		Explosives for blasting and process of using .				

Teacher's Sign.

Hod Sign.

Government polytechnic Bijapur (C.G.)

Name of Course: Water Resource Engineering
Course Code: 2020573(020)
Name of Teachers: Durgavati Wasam
Branch /Semester: Civil/ 5th sem.
Sesson: JUNE.- DEC -2024

Course Outcomes	CO-1 Comprehends the basic aspects of hydrology and apply it. CO-2 Describes basic terminology related with water requirement of crops and computes frequency of irrigation and discharges at the outlets. CO-3 Recognize the data required for planning of irrigation project and select suitable dam based on site condition. CO-4 Explain the components and construction of earthen and gravity dam. CO-5 Recognize diversion headwork's and canal irrigation system.	Session Start as Per CSVTU Calender :-20/08/024	
		Tr. ESE : 70	Tr TA : 30
		Pr. ESE : 00	Pr. TA : 00
		CT-20	Toatal=

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
5/09/024	Thursday	UNIT-1 Hydro-logy	1.1 Definition, Hydrologic cycle, the water budget equation, catchment area.		6		
6/09/024	Friday		1.2 Precipitation, forms of precipitation , measurement of rainfall, rain gauge and types, rain gauge density as per IS.				
7/09/024	Saturday		computation of average rainfall over a basin, mean annual rainfall.				
12/09/024	Thursday		1.4 Runoff, factor affecting run off, computation of runoff 1.5 Hydrograph, unit hydrograph.				
13/09/024	Friday		peak flow determination, 1.6 Stream flow measurement – area velocity method, weir method, stage discharge curve.				
14/09/024	Saturday		1.6 Stream flow measurement – weir method, stage discharge curve.				
19/09/024	Thursday	Unit-2 Water requirements of crops	2.1 Definition, necessity, advantages, disadvantages, types of irrigation.		7		
20/09/024	Friday		2.2 methods of irrigation – surface, sub surface, sprinkler and drip irrigation.				
21/09/024	Saturday		Defination of water logging, causes and control.				
26/09/024	Thursday		functions and quality of irrigation water, crop period/ base period,duty and delta.				
27/09/024	Friday		Importance of duty, factors on which duty depends, relationship between duty and delta.				
28/09/024	Saturday		2.3 Functions of irrigation water, classes and soil moisture constants,limiting soil moisture.				
3/10/024	Thursday		2.4 Water logging: cause and control. Solve numerical problems on duty, delta and frequency of irrigation.				

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
4/10/024	Friday	Unit-3.0 Reservoir Planning	3.1Purposes of reservoir. classification of reservoir based on purpose.		6		
5/10/024	Saturday		investigation for reservoir planning. factors affecting selection of site for a reservoir.				
10/10/024	Thursday		3.2 Zones of storages and various water levels, storage capacity and yield of reservoir. 3.3 Types of Dam.				
11/10/024	Friday		3.3 Types of Dam.				
12/10/024	Saturday		3.3 Dams: factors governing the selection of type of dam, factors for selection of site for a dam.				
17/10/024	Thursday		Comparison of earthen and gravity dams with respect to foundation, seepage, construction and maintenance.				
18/10/024	Friday	Unit-4. Dam and spillway	4.1 Earthen Dams – Types of earth dam, causes of failure of earthen dams, criteria for safe design of earth dam .		10		
19/10/024	Saturday		seepage control of seepage through embankment and foundation, construction of earth dam.				
24/10/024	Thursday		4.2 Identification and componenet of Gravity Dam .Definatipon of force acting on a Gravity dam.				
25/10/024	Friday		Modes of failure and safe creteria for stability of Gravity dam.				
26/10/024	Saturday		Elementry Profile of Gravity Dam.				
31/10/024	Thursday		Practical Profile and Typical Cross Section of gravity Dam .				
1/11/024	Friday		Drainagr Gallery and Joints in Gravity Dam.				
2/11/024	Saturday		Construction of Gravity Dam 4.3Defination and function of spillway.				
7/11/024	Thursday		Types of spillway -straightdrop spillway, ogee spillway, side channel spillway .				
8/11/024	Friday		Trough spillway Conduit spillway, shaft spillway etc.				

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
9/11/024	Saturday	unit -5 Diversion Headworks and Canal Irrigation System	5.1 Diversion Headworks – diversion headwork, weir, barrage, component parts of a diversion headworks.		11		
14/11/024	Thursday		Causes of failure of weirs and its Remedy.				
15/11/024	Friday		Types of regulation at head regulator, silt control at headworks.				
16/11/024	Saturday		5.2.1 Canals-classification of canals, alignment of canal.				
21/11/024	Thursday		General considerations for alignment, schedule of area statistics, cross section of canal.				
22/11/024	Friday		ill effects and remedial measure, canal losses, canal linining –necessity and advantages.				
23/11/024	Saturday		5.2.2 Canal Outlets – requirements of canal outlets, types of outlets, non-modular pipe outlet, flexible pipe outlet, Gibb's rigid module.				
28/11/024	Thursday		5.2.3 Canal Regulation Works - canal regulation works, canal falls-necessity and location,				
29/11/024	Friday		head regulators and cross regulators, canal escapes.				
30/11/024	Saturday		5.2.4 Cross Drainage Works- Types of cross drainage works.				
5/12/024	Thursday		Aqueduct and siphon aqueduct.				

Teacher's Sign.

Hod Sign.

GOVERNMENT POLYTECHNIC Bijapur(C.G.)

NAME OF COUESE:- Quantity Surveying & Costing -II

Course Code:- 2020671(020)

NAME OF TEACHER :- DURGAVATI WASAM

Branch / Semester :- Civil /6th Sem

Sesson:- Apr.-May-2025

Course Code	CO-1 Prepare estimate of R.C.C. structures i.e. slab, beam, column and column footing, staircase.	Session start as per CSVTU Calender : 6/01/025	
	CO-2 Prepare estimate of steel structures i.e. beam, column and column footing, and roof trusses.		
	CO-3 Prepare estimates of culvert and bridges.		
	CO-4 Prepare estimates of water supply and sanitary engineering works.	Tr. ESE :70	Tr. TA :30
	CO-5 a. Do the valuation and rent fixation of different type of buildings.	Pr. ESE : 40	Pr. TA :60
	b. Prepare estimates for repairing works for dismantling, demolishing and repair works in buildings.	CT: 20	Total =220

Date	Day	Course	Class Room Instruction	Leboratory Instruction (LI)	No. of period Per planned	Actual no. of period	REMARKS
6/01/025	Monday	Unit-1 Estimate of R.C.C. struct-ures	1.1 Items of work in RCC structures, bar bending schedule. 1.2 Estimate of slab		11		
7/01/025	Tuesday			LE 1.1 Estimate the quantities and prepare abstract of cost for RCC slab from given working drawing. LE 1.2 Estimate the quantities and prepare abstract of cost for RCC beam from given working drawing.			
8/01/025	Wednesday		1.2 Estimate of slab 1.3 Estimate of beam				
13/01/025	Monday		1.4 Estimate of T-beam				
14/01/025	Tuesday			LE 1.3 Estimate the quantities and prepare abstract of cost for RCC staircase from given working drawing. LE 1.4 Estimate the quantities and prepare abstract of cost for RCC column and footing from given working drawing.			
15/01/025	Wednesday		1.5 Estimate of RCC column with footing. 1.6 Preparation of abstract of cost above estimates.				
20/01/025	Monday		1.5 Estimate of RCC column with footing. 1.6 Preparation of abstract of cost above estimates.				

/025	Tuesday			LE 2.1 Estimate the quantities and prepare abstract of cost for steel beam and column with base from given working drawing.			
22/01/025	Wednesday	Unit-2 Estimate of Steel Struct-ures	2.1 Items of work in steel structure. 2.1Estimate of steel beam and column (Stanchion) with base. 2.2 Estimate of steel truss.		12		
27/01/025	Monday		2.3 Estimate of roof covering materials 2.4 Estimate of GIC roof and AC roof.				
28/01/025	Tuesday			LE 2.2 Estimate the quantities and prepare abstract of cost for steel truss from given working drawing.			
29/01/025	Wednesday		2.5 Estimate of steel frames for doors and windows.				
3/02/025	Monday		2.6 Preparation of abstract of cost above estimates.				
4/02/025	Tuesday			LE 2.3 Estimate the quantities and prepare abstract of cost for GIC roof and AC roof from given working drawing.			
5/02/025	Wednesday	Unit-3 Estimate of Culverts and Bridges	3.1Items of work in culverts and bridges, method of estimating culverts and bridges.		10		
10/02/025	Monday		3.2 Estimate of hume pipe culvert with splayed type of wing wall, turn wall, face wall				
11/02/025	Tuesday			LI 3.1 Estimate the quantities and prepare abstract of cost of hume pipe culvert from given working drawing.			
12/02/025	Wednesday		3.3Estimate of R.C.C. slab culvert, straight / return type wing walls. 3.4 Estimate of single span R.C.C.T beam bridge, splayed wing walls.				
17/02/025	Monday		3.5 Preparation of abstract of cost above estimates.				
18/02/025	Tuesday			LE 3.2 Estimate the quantities and prepare abstract of cost of slab culvert from given working drawing.			
19/02/025	Wednesday	UNIT-4	4.1 Items of work in Water Supply and Sanitary Engineering Works for Buildings.		3		
24/02/025	Monday		4.2 Detailed estimate of water supply for building work.				

02/025	Tuesday			LE 3.3 Estimate the quantities and prepare abstract of cost of single span R.C.C.T beam bridge from given working drawing.			
26/02/025	Wednesday		4.3Detailed estimate of sanitary works for building work.				
3/03/025	Monday	UNIT-4 Estim-ates of Water supply and sanitary Engin-eering	4.4Estimate of S.W., R.C.C. and H.D.P.E pipe line.				
4/03/025	Tuesday			LE 4.1 Estimate the quantities and prepare abstract of cost for water supply works in buildings from given working drawing.	12		
5/03/025	Wednesday		4.5Estimate of septic tank 4.6Estimate of manhole.				
10/03/025	Monday		4.7 Preparation of abstract of cost above estimates.				
11/03/025	Tuesday			LE 4.2 Estimate the quantities and prepare abstract of cost for sanitary works in buildings from given working drawing.			
12/03/025	Wednesday		5.1.1Definition, purpose of valuation				
17/03/025	Monday		5.1.2 Gross income/Net income, Out goings.				
18/03/025	Tuesday			LE 4.2 Estimate the quantities and prepare abstract of cost for sanitary works in buildings from given working drawing.			
19/03/025	Wednesday	UNIT-5 Valua-tion and Rent Fixation	5.1.3 Scrap value, Salvage value, Market value, Book value, Rateable value, Obsolescence, Annuity, Capital Cost, Capitalized value, Year's purchase, and Sinking fund.				
24/03/025	Monday		5.1.4 Depreciation, Methods of calculating depreciation.		12		
25/03/025	Tuesday			LE 4.3 Estimate the quantities and prepare abstract of cost for septic tank with soak pit from given working drawing.			
26/03/025	Wednesday		5.1.5 Methods of valuation 5.1.6 free hold Property and leashole property.				
31/03/025	Monday		5.1.7 Rent fixation of building.				
1/04/025	Tuesday			LE 4.3 Estimate the quantities and prepare abstract of cost for septic tank with soak pit from given working drawing.			

/025	Wednesday	UNIT-5 Valua-tion and Rent Fixation	5.2.1Dismantling and Demolishing work and their estimate.		10		
7/04/025	Monday		5.2.2Repair works and their estimate.				
8/04/025	Tuesday			LE 4.4 Estimate the quantities and prepare abstract of cost for manhole from given working drawing.			
9/04/025	Wednesday		Solve numerical problems on valuation and rent fixation.				
14/04/025	Monday		Solve numerical problems on dismantling, demolishing and repair works in buildings.				
15/04/025	Tuesday			LE 4.5 Estimate the quantities and prepare abstract of cost for HDPE drainage pipe from given working drawing.			
16/04/025	Wednesday		Solve numerical problems on dismantling, demolishing and repair works in buildings.				

Teachers Sign

HOD Sign

Government polytechnic Bijapur (C.G.)

Name of Course: Construction Management
Course Code: 2020674(020)
Name of Teachers: Durgavati Wasam
Branch /Semester: Civil/ 6th sem.
Sesson: Apr.-May.-2025

Course Outcomes	CO-1 Recognize of execution of Civil Engineering works by Govt. Departments	Session start as per Csvtu calender :- 6/01/2025	
	CO-2 Describe execution of work by contract.	Tr ESE : 70	Tr TA : 00
	CO-3 Explain and interpret tender process.	Pr ESE : 30	Pr TA : 00
	CO-4 Explain construction planning and scheduling	CT - 20	Total : 120
	CO-5 (a) Explain material management methods. (b) Recognize safety in construction and labour welfare.		

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
11/01/025	Saturday	UNIT-1 Recognize of execution of Civil Engineering works by Govt. Departments	1.1Organization-Major departments executing civil works, Structure of departments.		7		
14/01/025	Tuesday		1.3Methods used in for carrying out works- contract method and departmental method. 1.2 Procedure of initiating the work				
18/01/025	Saturday		1.2 Procedure of initiating the work- Detailed Project Report (DPR),budget provision, land equisition.				
21/01/025	Tuesday		1.4 Different types of accounting papers - Measurement Books, Nominal Muster Roll,Imprest Cash,				
25/01/025	Saturday		Details of indent, Invoice, Bills, Vouchers, Cash Book, Temporary advance.				
28/01/025	Tuesday	UNIT-2 Describe execution of work by contract.	2.1Definition of contract objects of contract,requirements of valid contract, Class of contractor.		9		
1/02/025	Saturday		Registration Procedure of contractor.				
4/02/025	Tuesday		2.2 Classification of civil engineering contract- 2.2.1Separated Contract-Lump sum contract,Measurement contract - item rate				
8/02/025	Saturday		percentage rate contract, cost plus percentage contract				
11/02/025	Tuesday		2.2.2 Management Contract:- constr. management contractand its Design,Management and construction Contract				
15/02/025	Saturday		2.2.3 Integrated Contract – DesignBuild, Turnkey, BOT and BOOT contract.				

	day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
18/02/025	Tuesday	UNIT-2 Describe execution of work by contract	2.3Mode of payment to the contractor - Interim payment and its necessity,Advance payment, secured advance, ccount payment, first and final		3		
22/02/025	Saturday		retention money, reduced rate payment, petty advance, mobilization advance.				
25/02/025	Tuesday	UNIT-3 Explain and interpret tender process.	3.1 Definition of Tender, necessity of Tender,Types of tenders, Tender Notice,		8		
1/03/025	Saturday		3.2 Meaning of terms: Earnest money, security deposit, validity period, corrigendum to tender notice and its necessary.				
4/03/025	Tuesday		3.3Tender documents – Contract drawings, specifications, General Conditions of contract, Special conditions of contract, bill of quantities.				
8/03/025	Saturday		3.4Bidding Process-Pre-qualification process, Notice inviting tender, Submission of bids, Analysis of submitted tenders.				
11/03/025	Tuesday		3.4Bidding Process- basis for evaluation and acceptance, Letter of agreement, PWD contract conditions Intent, Work Order,				
15/03/025	Saturday	UNIT-4 Explain construction planning and scheduling	4.1Identifying broad activities in construction work & allotting time to it, Methods of Scheduling.		6		
18/03/025	Tuesday		4.2Development of bar charts, Merits & limitations of bar chart. 4.3CPM networks, activity time estimate,Event Times by forward & backward pass calculation. start and finish time of activity, project duration.				
22/03/025	Saturday		**Floats**: Types of FloatsFree, independent and total floats, critical activities and critical path, Purpose of crashing a network, Normal Time and Cost, Crash Time and Cost, Cost slope,Optimization of cost and duration.				
25/03/025	Tuesday		4.4 PERT-Introduction to PERT 4.5Project Monitoring and Control System- Updating bar chart and CPM/PERT, Monthly progress report, stage wise completion cost.				

ate	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
29/03/025	Saturday	UNIT-5 (a) Explain material management methods. safety in construction and labour welfare.	**5.1.1 Material Management**- Ordering cost, inventory carrying cost, Economic Order Quantity		7		
1/04/025	Tuesday		Store management, various records related to store management, inventory control by ABC technique,				
5/04/025	Saturday		Introduction to material procurement through portals				
8/04/025	Tuesday		**Safety and Labour Welfare** 5.2.1Safety in Construction Industry— Causes of Accidents, Remedial and Preventive Measures.				
12/04/025	Saturday		5.2.2 Labour welfare and Laws ,Acts pertaining to Civil construction activities- Building and other Construction Workers				

Teacher's Sign.

Hod Sign.

Government polytechnic Bijapur (C.G.)

Name of Course : Green Building and Energy Conservation
Course Code : 2020683(020)
Name of Teachers : Durgavati Wasam
Branch /Semester : Civil/ 6th sem.
Sesson : APR.-MAY -2025

Course Outcomes			
	CO-1 Explain various Design Criteria for green buildings.	Session start as per Csvtu calender :- 6/01/2025	
	CO-2 Explain Energy Audit and Environmental Impact Assessment (EIA).	Tr ESE : 70	Tr TA : 00
	CO-3 Describe Energy resource and Energy conservation	Pr ESE : 30	Pr TA : 00
	CO-4 Explain design and construction of green building.	CT - 20	Total : 120
	CO-5 Explain different rating systems and their criteria.		

Date	Day	Unit No.	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual no. of period taken	REMARKS
7/01/025	Tuesday	UNIT-1 Green Building Design Feartures	1.1.Definition of Green building, benefits of green building, components/ features of green building.		10	1	
8/01/025	Wednesday		components/features of green building.			1	
9/01/025	Thursday		1.2. Energy Efficiency, Energy benchmark,Water efficiency, rain water use,			1	
14/01/025	Tuesday		Details of grey water use, Material Efficiency, Indoor Air Quality, tempreture.			1	
15/01/025	Wednesday		Details of visual comfort, acoustics.			1	
16/01/025	Thursday		1.3 Site selection strategies- Landscaping, building form, orientation, building envelope .			1	
21/01/025	Tuesday		1.3 Site selection strategies- fenestration, Materials, land use and consumption.			1	
22/01/025	Wednesday		1.4 Construction Techniques- roofs, walls, fenestration and shaded finishes.			1	
23/01/025	Thursday		1.5 Advanced passive heating and cooling techniques.			1	
28/01/025	Tuesday		waste reduction during construction			1	
29/01/025	Wednesday	UNIT-2	2.1 Energy Audit: Defination, Necessity and Procedures.		1	1	

30/01/025	Tuesday	UNIT-2 Energy Audit And EIA	Types of Energy Audit and Energy Management Programs.		6	1	
04/02/025	Tuesday		2.2 Types of energy audit .			1	
5/02/025	Wednesday		selection of suitable energy audit.			1	
6/02/025	Thursday		2.3 Envi. Impact Assessment(EIA):- Introduction, EIA regulations.			1	
11/02/025	Tuesday		Details of Steps in environmental impact assessment process, Benefits of EIA,			1	
12/02/025	Wednesday		2.3Environmental clearance for the civil engineering projects.			1	
13/02/025	Thursday	UNIT-3	3.1 Defination of Renewable Energy and its Resource: Solar Energy, Wind Energy.		6	1	
18/02/025	Tuesday		3.1 Renewable Energy Resources:- Ocean Energy, Hydro Energy, Biomass Energy			1	
19/02/025	Wednesday		Resources: Coal, Petroleum, Natural Gas, Nuclear Energy, Chemical.			1	
20/02/025	Thursday		3.2 Non-renewable Energy Resources: - Sources of Energy, Fuel Cells, Hydrogen, Biofuels.			1	
25/02/025	Tuesday		Introduction, Specific objectives,present scenario, Need of energy Conservation.			1	
27/02/025	Thursday		3.4 Details of Indoor climate control system.			1	
4/03/025	Tuesday	UNIT -4 Design and Construction of Green Building	4.1 Defination and Benefit of Green Building.		5	1	
05/03/025	Wednesday		4.2.1 Principles and planning of Green building			1	
6/03/025	Thursday		4.2.2Construction Features: Salient features of Green building, building envelop.			1	
11/03/025	Tuesday		Details of heat insulationand solar protection,			1	
12/03/025	Wednesday		Details of glare protectionand noise protection.			1	

18/03/025	Tuesday	UNIT -4 Design and Construction of Green Building	4.3Materials: Green building materials and products- Bamboo, Rice husk ash concrete and plastic.		5	1
19/03/025	Wednesday		4.3Materials: Green building materials and products- bricks, Bagasse particle and board.			1
20/03/025	Thursday		Details of insulated concrete forms, smart materials uses in Green Building.			1
25/03/025	Tuesday		Façade Construction Quality management details.			1
26/03/025	Wednesday		Uses of Natural Resources for Green Building Construction.			1
27/03/024	Thursday	UNIT-5 Rating System for Green Building	5.1 Ratings system for sustainable building,		9	1
1/04/025	Tuesday		Brief Details of Indian Green Building Council (IGBC)rating system .			1
2/04/025	Wednesday		Green Rating for Integrated Habitat Assessment (GRIHA) criteria.			1
3/04/025	Thursday		Brief Details of key aspect in assessment and levels of certification.			1
8/04/025	Tuesday		5.2 Heating Ventilation Air Conditioning (HVAC) unit in green building.			1
9/04/025	Wednesday		5.3 Functions of Government organization working for Energy conservation and Audit(ECA)-			1
15/04/025	Tuesday		Ministry of New and Renewable Energy (MNRE),			1
16/04/025	Wednesday		Bureau of Energy efficiency (BEE)			1
17/04/025	Thursday		Importance of National Productivity council(NPC).			1

Teacher's Sign.

Hod Sign.

GOVT POLYTECHNIC BIJAPUR (C.G.)

(Civil Engineering Department)

Lession Plan

Course Name: **HYDRAULICS**
Course code : **2020375(020)**
Semester: **3rd**
Session: **July to Dec 2024** Prepared by : **Mr. Gurudutt**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
02-09-2024	Mon	UNIT I Introduction	Defination of liquid, IdealliquidandRealliquid	Measure the pressure of water in pipe using Piezometer.
03-09-2024	Tue		Properties of liquid - Mass density, Specific weight, Specific Gravity, Compressibility, Viscosity, Surface Tension, Capillarity,	Measure the pressure of water in pipe using Piezometer.
06-09-2024	Fri		Branches of hydraulics-HydroStatics, Hydro Kinematics and Hydro Dynamics.	
09-09-2024	Mon		Pressure, Pressure intensity, Variation of pressure with depth of liquid, Pressure head, Effectofshapeandsizeof container on pressure, PASCAL's law.	Measure the pressure of water in pipe using simple manometer.
10-09-2024	Tue		AtmosphericPressure, Gauge Pressure, AbsolutePressure,Vacuum Pressure.	Measure the pressure of water in pipe using simple manometer.
13-09-2024	Fri		Measurement of pressures by different methods – Piezometer, Manometer, Differential Manometer and Inverted Differential Manometer, Bourdonspressuregauge.	
14-09-2024	Sat		Totalpressureand centre of pressure and pressure distribution diagram	
16-09-2024	Mon		ComputationofTotal pressure and centre of pressure on plane horizontal surface, vertical surfaceandinclined surface.	3Measure the pressure of water in pipe using differential manometer.
17-09-2024	Tue		ComputationofTotal pressure and centre of pressure on plane horizontal surface, vertical surfaceandinclined surface.	3Measure the pressure of water in pipe using differential manometer.
20-09-2024	Fri			
21-09-2024	Sat		ComputationofTotal pressure and centre of pressure on plane horizontal surface, vertical surfaceandinclined surface.	
23-09-2024	Mon			
24-09-2024	Tue		Typesofliquidflow Laminar, Turbulent, Uniform-Non uniform, Steady, Unsteady, and Compressible, Incompressible flow	VerificationofBernoulli'stheorem.

27-09-2024	Fri		~~Compressible flow~~	
28-09-2024	Sat		Rateofflow,Lawof conservation of mass, Continuity Equation	
30-09-2024	Mon			VerificationofBernoulli'stheorem.
01-10-2024	Tue		Streamline,Path line, Streak Line	VerificationofBernoulli'stheorem.
04-10-2024	Fri			
05-10-2024	Sat	UNIT 2 Hydrokinematics	Various forms of energiespresentinliquid flow - potential energy, kinetic energy, pressure energy, total energy, potential head, kinetic head,pressurehead,total head	
07-10-2024	Mon			
08-10-2024	Tue		Bernoulli's EquationandLimitations of Bernoulli's theorem.	
14-10-2024	Mon			
15-10-2024	Tue		Simple Application ofEquationofContinuity and Bernoulli's theorem. PitotTube	
18-10-2024	Fri			
19-10-2024	Sat		Components of venturimeter,discharge through venturimeter.	
21-10-2024	Mon		Orificemeter- Discharge through orifice meter	Determination of HydraulicecoefficientsCc, Cv and Cd of orifice and verifytherelationbetween them.
22-10-2024	Tue		Flowthrough orifice Definitionand types of orifice	Determination of HydraulicecoefficientsCc, Cv and Cd of orifice and verifytherelationbetween them.
25-10-2024	Fri		Vena Contracta, Various Hydraulic CoefficientsCc,Cvand Cd and relationship between them.	
26-10-2024	Sat		Timerequiredfor emptying tank through orificeat thebottomof tank.(No Derivation)	
28-10-2024	Mon	UNIT 3 FLOW MEASUREMENT	Flowthrough Notches Definitionand Description	Determinedischarge through venturimeter.
04-11-2024	Mon		Computation of discharge through notches – Rectangular Notch, V – Notch andTrapezoidalNotch.	Determinedischarge through orifice meter.
05-11-2024	Tue		Flowthrough Weirs Definitionand Description	Determinedischarge through orifice meter.
08-11-2024	Fri		Computation of dischargethroughweirs	
09-11-2024	Sat		Dischargethrough narrow crested and broad Crested weir (No Derivation)	

11-11-2024	Mon		Discharge throughCipollettiweir.	To determine coefficient of discharge of a rectangular notch/triangular notch.
12-11-2024	Tue			To determine coefficient of discharge of a rectangular notch/triangular notch.
15-11-2024	Fri	UNIT 4 FLOW TRHOUGH PIPES	Characteristics of flow through pipes	
16-11-2024	Sat			
18-11-2024	Mon		Major Energy (Head) losses in pipe Flow- Expression for head loss in pipes due to friction and Computation of major head by Darcy WeisbachEquation.	Studyofpitottube and current meter
19-11-2024	Tue			Studyofpitottube and current meter
22-11-2024	Fri		Minor Energy (Head) losses in pipe Flow loss of head at Sudden enlargement, contraction, entry, exit and at bend.	
23-11-2024	Sat			
25-11-2024	Mon		Hydraulic Gradient Line (HGL) and Total EnergyLine (TEL) in various cases.	To determine coefficient of discharge of a weir.
26-11-2024	Tue			To determine coefficient of discharge of a weir.
29-11-2024	Fri		Flow of water from one tank to another by long pipe.	
30-11-2024	Sat			
02-12-2024	Mon		Flow through pipes in series and parallel	To determine coefficient of discharge of a weir.
03-12-2024	Tue			To determine coefficient of discharge of a weir.
06-12-2024	Fri	UNIT 5 FLOW THROUGH OPEN CHANNEL	Open channel flow	
07-12-2024	Sat		Comparison of pipe flow and open channel flow.	
09-12-2024	Mon		Wetted perimeter, Hydraulic mean depth, Hydraulicgradient,Froude number, uniform and non uniform flow	Study the working of a. Reciprocating pump
10-12-2024	Tue		UseofChezy'sand Manning'sformulae(No Derivation).	Study the working of a. Reciprocating pump
13-12-2024	Fri		Most economical sections of channel Rectangular,Trapezoidal.	
14-12-2024	Sat		Specific Energy Diagram, Critical Depth, CriticalVelocity,Streaming Flow, Critical Flow ,ShootingFlow,Hydraulic Jump	
16-12-2024	Mon		Pumps (No numerical and derivations) 5.2 1Definition description of	Study the working of a. Reciprocating pump b. Centrifugalpump

17-12-2024	Tue		Centrifugal pump , Reciprocating pump and Submersible Pump.	Study the working of a. Reciprocating pump b. Centrifugalpump
20-12-2024	Fri			
21-12-2024	Sat		Componentsand working principles of centrifugal pump and Reciprocating pump	
23-12-2024	Mon			Measure the pressure of water in pipe using Piezometer.
24-12-2024	Tue		Priming,Selection criteria for pumps.	Measure the pressure of water in pipe using Piezometer.

Teachers Name and Sign
Name- Gurudutt

HOD (Civil)

PRINCIPAL
(Govt. Poly. Bijapur)

GOVT POLYTECHNIC BIJAPUR

(Civil Engineering Department)

Lession Plan

Course Name: **Construction Material**
Course code : **2020371(020)**
Semester: **3rd**
Session: **July to Dec 2024**

Prepared by : **Mr. Gurudutt**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
02-09-2024	Mon	Unit-1.0 Stone, aggregate and brick	1.1Properties of construction materials 1.1.1Importance of Building materials in civil engineering 1.1.2Basic properties of construction materials- Physical properties- bulk density, durability, porosity, water absorption, specific gravity, permeability, frost resistance.	
03-09-2024	Tue		1.1.3Criteria for Selection of construction material based on prescribed load, serviceability, aesthetics, economy and environment.	
06-09-2024	Fri			Determine Grading of Aggregate and fineness modulus a.Fine aggregate
09-09-2024	Mon		1.2 STONE AND AGGREGATE 1.2.1 Geological , Physical and Chemical Classification of rocks.	
10-09-2024	Tue		1.2.4 Common building stones of INDIA: characteristics and uses. 1.2.5 Definition, types of aggregate coarse and fine aggregate	
13-09-2024	Fri			Determine Grading of Aggregate and fineness modulus b.Coarse aggregate
17-09-2024	Tue		1.2.6 Grading of aggregates , fineness modulus, Bulking of sand.	
23-09-2024	Mon		1.3 BRICKS 1.3.1 Clay Bricks: definition, shape and size , Ingredients of good brick earth, harmful substances in brick earth. 1.3.2 Properties of good building bricks	
24-09-2024	Tue		2.1Cement, Chemical composition of cement, Composition of cement clinker : Bogues compounds , Hydration of cement and heat of hydration.	
27-09-2024	Fri			Determine Bulking of sand.
30-09-2024	Mon		2.2Ingredients used for manufacturing of cement, Methods of manufacture of cement by (i)wet process (ii) dry process(flow chart)	

01-10-2024	Tue	2. BINDING MATERIAL	2.3Laboratory test of cement as per IS consistency, setting time, fineness, soundness, compressive strength, tensile strength.	
04-10-2024	Fri			Determine Grading of Aggregate and fineness modulus b.Coarse aggregate
11-10-2024	Fri			Determine Water absorption of bricks
14-10-2024	Mon		2.5Types and grades of cement and suitability- Ordinary Portland cement, rapid hardening cement, low heat cement, high	
15-10-2024	Tue		2.7Cement admixtures and their applications as per requirements	
18-10-2024	Fri	Unit- 3 Flooring Materials, Roofing Materials ,False Ceiling and		Determine Compressive strength of bricks.
21-10-2024	Mon		3.1 Flooring Materials- Flag stone floor, Cement concrete floor ,Mosaic flooring , Tile floors, Ceramic tile floor, vitrified tile floors Granite Flooring, PVC tiles, Linoleum floor, Paver blocks, Wooden floor, Glass floor.	
22-10-2024	Tue		3.2Roofing Materials- 3.2.1Roof covering materials- bamboo mats, galvanized iron sheets, asbestos cement sheet, profiled steel and aluminum sheets, polycarbonate roofing material.	
25-10-2024	Fri			Determine fineness of cement
28-10-2024	Mon		3.2.2Clay tiles- Allahabad tiles, flat tiles, Mangalore tiles, half round tiles, local country tiles.3.3 Materials used for false ceiling- Gypsum Board Ceiling, Plaster of Paris Ceiling, Fiber Ceiling, Wooden Ceiling, Synthetic Leather Ceiling, Glass Ceiling, Metal Ceiling	
29-10-2024	Tue		3.4Cladding materials-Clay Tiles Claddings, Stone Claddings, Timber Claddings, Fiber Cement Claddings, Clay	
01-11-2024	Fri			Perform consistency test of cement.
04-11-2024	Mon		Tiles Claddings, Steel Claddings, Aluminum Claddings, Aluminum Composite Panel (ACP) Claddings	
05-11-2024	Tue		4.1.1Timber, Properties of timber, requirement of timber to be used for building.	
08-11-2024	Fri			Determine initial and final setting time of cement
11-11-2024	Mon		4.1.2Seasoning of timber: Purpose, methods of seasoning and Preservation of timber and methods of treatment as per BIS 4.1.3Defects in timber 4.1.4Other wood based products, their uses: laminated board, block board, fiber board, hard board, sunmica, plywood, veneers, nu-wood., Moulded Door.	

12-11-2024	Tue	4. TIMBER,GLASS, STEEL,ALUMINIUM AND PLASTIC	4.2Glass-ingredients, commercial forms of glasses, Characteristics and performance of glass, glass wool.	
18-11-2024	Mon		4.3Frame/truss Steel- 4.3.1Properties and uses :Mild Steel, High Carbon Steel, High Tensile steel 4.3.2Rolled steel sections, Steel sections-L,T, I , PIPE section	
19-11-2024	Tue		4.4Aluminium- Advantages of Aluminum in construction, available forms of aluminum, use of aluminum material glass.	
22-11-2024	Fri			Determine Tensile strength of cement mortar
02-12-2024	Mon		4.5Plastics 4.5.1Plastic, Thermoplastic and Thermosetting Plastic, Common plastics used as construction material, Properties of plastics, Application of Plastics. 4.5.2 Rubber, use of rubber in building construction.	
03-12-2024	Tue	5. MISCELLNEOUS BUILDING MATERIALS	5.1Paints,Enamels and Varnishes - Composition of oil paint, Characteristics of ideal paints, Paints commonly used in building, factors affecting selection of paint. Enamel paint and Varnish and its type. Distemper, primers	
06-12-2024	Fri			Determine compressive strength of cement cube.
09-12-2024	Mon		5.2Water proofing materials 5.3Fire proofing materials	
10-12-2024	Tue		5.4Acoustic materials. 5.5Heat insulating materials.	
13-12-2024	Fri			Determine compressive strength of cement cube. Determine soundness of cement.
16-12-2024	Mon		5.6Adhesive materials.	
17-12-2024	Tue		5.7Water proofing resins and chemicals, coating materials.	
20-12-2024	Fri			Determine Grading of Aggregate and fineness modulus a.Fine aggregate
23-12-2024	Mon		5.8Termite proofing materials.	
24-12-2024	Tue		5.8Termite proofing materials.	

Teachers Name and Sign
Guruduttt

I/C HOD (Civil)

PRINCIPAL
(Govt. Poly. Bijapur)

GOVT POLYTECHNIC BIJAPUR (C.G.)

(Civil Engineering Department)

Lession Plan

Course Name: **Building Drawing and CAD**
Course code : **2020371(020)**
Semester: **3rd**
Session: **July to Dec 2024** Prepared by : **Mr. Gurudutt**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
04-09-2024	Wed	unit 1 Introduction to Building Drawing	1.1.1Size of Drawing, Layout of drawing, Title block, Scale, Dimensioning	
05-09-2024	Thu		1.1.2Symbols for Doors & Windows, Drains and Pipes, Sanitary and Plumbing, Electrical Fittings as per IS 962	
06-09-2024	Fri		1.2Building Bye-laws 1.2.1Building Bye-laws for Residential Building	
07-09-2024	Sat		2Building Byelaws for Commercial Building	
11-09-2024	Wed		3Plot area, built up area, plinth area, carpet area and Floor Area Ratio (FAR)	Draw line plan and section of any building,
12-09-2024	Thu			Draw line plan and section of any building,
13-09-2024	Fri		1.3Principles of Planning 1.3.1General principles of	
14-09-2024	Sat			
18-09-2024	Wed		1.3.2Basic elements of planning residential building: living area, sleeping area, service area, other areas. Principles of planning of residential building: Orientation, Privacy, Grouping, Circulation, Sanitation, Flexibility, Elegance, Landscaping	Draw line plan and section of any building,
19-09-2024	Thu			Draw line plan and section of any building, showing all AutoCAD features (Dimensions, layers, grouping of entities etc), in the drawing.
20-09-2024	Fri		1.3.3Dimensions for different types	
21-09-2024	Sat	unit 2 Computer aided Drawing (CAD)	AutoCAD Features Graphical input devices Drawing primitives, Text and editing (move, copy rotate, mirror) Scale, filters and round, Grouping of entities ,Layers ,Grid, Snap Ortho ,PEDIT, display and zoom, pan, fill redraw, region, QText, offset, Annotate ,Sectioning, hatching styles ,Block and its creation ,Extrude,	
25-09-2024	Wed			Draw line plan and section of any building, showing all AutoCAD features (Dimensions, layers, grouping of entities etc), in the drawing.
26-09-2024	Thu			Draw Plan Elevation In drawing sheet
27-09-2024	Fri			
04-10-2024	Fri		Application of AutoCAD Enquiry commands ,plotting of drawing ,Uses of plotters, changing plot specification ,Application of Civil Engineering	
05-10-2024	Sat			
09-10-2024	Wed			Draw Plan Elevation In drawing sheet
10-10-2024	Thu			Draw Plan Elevation In drawing sheet
16-10-2024	Wed		Editing and Changing Properties of Objects Filtering, Selecting, Accessing , Understand the property list ,Changing property list	Draw Plan Elevation In drawing sheet
17-10-2024	Thu			Draw Plan Elevation in Auto Cad
18-10-2024	Fri			
19-10-2024	Sat		Types of plan ,Site plan, location plan,	

Government polytechnic Bijapur (C.G.)

Name of Course	SURVEYING - I
Course Code	2020372(020)
Name of Teachers	Durgavati Wasam
Branch /Semester	Civil/ 3rd sem.
Sesson	July - Dec. 2024

Course Outcomes	CO-1 Conduct chain survey in the field.	Session Start as Per CSVTU Calender :-20/08/024	
	CO-2 Conduct field survey using prismatic compass.	Tr. ESE : 70	Tr TA : 30
	CO-3 Calculate the level with respect to fixed datum with the help of leveling instruments	Pr. ESE : 30	Pr. TA : 50
	CO-4 Plot and interpret contours.	CT-20	Toatal=200
	CO-5 Prepare map with the help of plane table and use minor instruments.		

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
2/9/024	Monday	UNIT-1 Conduct chain survey in the field.	**Introduction** to surveying, Plane and Geodetic surveying. Purpose of engineering surveys. Principles of surveying.		12		
3/9/024	Tuesday			**LE1.1** Chain surveying: a) Ranging a line b) Chaining a line and recording in the field book.			
4/9/024	Wednesday		(i)Type of chain and tapes. (ii)Study of 20m and 30m chain,Metric Chain, Tapes. (iii)Study of Arrow,Rangging rod offset rod ,Open cross staff, optical square, prism square.				
5/9/024	Thursday		(i)Ranging: Direct/indirect/ reciprocal, offsets and recording in field book. (II)Uses of line ranger on plain and sloping Ground. (ii)Offsets:-Types of offsets , Instruments used to take offsets.				
9/9/024	Monday			c) Taking offsets perpendicular and oblique (with a tapeonly) d) Setting out right angle with a tape. e) Chaining a line involving obstacles to ranging.			
10/9/024	Tuesday			**LE 1.2** To Fix station point and to measure length of a line by direct rangging with the help of chain and tape and plot it.			
11/9/024	Wednesday		(i)Obstacles in chaining. (i)Chain Triangulation- Principal of Chain Traingulation . Survey station ,surveying line arrangments and chain traversing.				
12/9/024	Thursday			**LE1.3** To perform a chain survey of closed traverse fixing the angle between two chain lines by tie lines and to plot them and adjusting the closing error by graphical method.			

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
16/9/024	Monday	UNIT-1 Conduct chain survey in the field.		LE1.4 To perform a chain survey of an area by chain triangulation and plot .	5		
17/9/024	Tuesday		ii) Errors in chain surveying and their corrections.				
18/9/024	Wednesday		Numerical problem solved of chain surveying.				
19/9/024	Thursday	Unit-2 COMP-ASS SURVEY	2.1 Traverse Survey –Traversing, Closed and Open Traverse. Name of instruments used form measu. of directions and angles.		18		
23/9/024	Monday			LE2.1Study the parts of prismatic copass and to measure the bearings of lines joining different station point			
24/9/24	Tuesday			LE2.2 To take the fore bearing and back bearing of sides of regular polygon and to calculate included angle and check them.			
25/9/24	Wednesday		2.2 Bearings and Angles – Bearing, Meridian. Types of meridian and bearing. Systems of bearing, Conversion of bearings from one system to other.				
26/9/24	Thursday		Systems of bearing, Conversion of bearings.				
30/9/24	Monday			LE2.3To perform a chain and compass survey of an area by open traverse and prepare a map.			
1/10/024	Tuesday			LE2.4 To perform a chain and compass survey of an area by close traverse and prepare a map.			
2/10/024	Wednesday		Solved Numerical problems of Bearing Conversion.				
3/10/024	Thursday		Fore and Back Bearing, Calculation of angles from bearings and bearings from angles.				
7/10/024	Monday		2.3 Magnetic Compass – Magnetic Compass ,Prismatic Compass, Surveyor's Compass,				
8/10/024	Tuesday		Magnetic dip and declination. Temporary adjustment of prismatic compass.				
9/10/024	Wednesday		2.4 Local attraction -causes, detection, errors and corrections, problems on local attraction, magnetic declination.				

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
10/10/024	Thursday	Unit-3 LEVELL - ING	3.1 Levelling- Levelling , Level surfaces,Level Line, Horizontal Plane, Horizontal Line		18		
14/10/24	Monday		3.1 Vertical Line, Datum, Bench Marks, Reduced Level, Mean Sea Level.				
15/10/24	Tuesday			**LE3.1** To learn temporary adjustment of levelling instrument and to find the R.L. of the given point			
16/10/24	Wednesday		3.2 Levelling Instruments –Dumpy Level, , Tilting Level, Auto Level, Digital Level Leveling Staff, Temporary adjustment of Dumpy				
17/10/24	Thursday		3.3 Terms used in leveling - Line of collimation, Axis of Telescope, Axis of bubble tube, Station, Height of instruments, Back sight, Fore sight, intermediate sight, Change point,				
21/10/24	Monday			**LE3.2** To find the difference of R.L. of two given point by shifting of instrument on change points and applying arithmetical checks.			
22/10/24	Tuesday			**LE3.3** To take the longitudinal and cross-section levels of an existing road.			
23/10/24	Wednesday		3.4 Classification of Levelling - Simple Levelling, Differential Levelling, Fly Levelling, Profile (SL) Levelling, Cross Sectioning				
24/10/24	Thursday		method of leveling . Details of correction of corvature.				
28/10/24	Monday		Examples & methods of finding out the R. L. in Level Book by H.I.				
29/10/24	Tuesday		Examples & methods of finding out the R. L. in Level Book by H.I. Methods .				
30/10/024	Wednesday		Examples & methods of finding out the R. L. in Level Book Rise & Fall Methods.				
4/11/024	Monday	Unit 4 CONTO- URING	4.1 Contour 4.2 Contour interval, horizontal equivalent		11		
5/11/024	Tuesday			**LE4.1** To take the block leveling of undulated site and to draw the contours			
6/11/024	Wednesday		4.2 Uses of contours with sketch.				
7/11/024	Thursday		4.3 Charac teristics of contours. 4.4 Methods of Contouring.				
11/11/024	Monday			**LE4.2** Preparing a contour map of a small area by			
12/11/024	Tuesday			**LE4.3** To draw contour map of a small pond and to calculate its capacity.			
13/11/024	Wednesday		Direct and Indirect method of contouring.				

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	Actual No. Of Periods Taken	REMARKS
14/11/24	Thursday		4.5 Interpolation of contours 4.6 Preparation of contour map.				
18/11/24	Monday			**LE4.4** To study a Topo sheet of certain area and to mark on it watershed line and find out catchments area of a stream at a place.	6		
19/11/24	Tuesday		calculation of capacity of reservoirs & related examples, Tracing of contour gradient and location of route, measurement of drainage areas ,				
20/11/24	Wednesday		calculation of capacity of reservoirs & related examples 4.8 Use of Topo sheet.				
21/11/24	Thursday	**5.1 PLANE TABLE SURVEY**	5.1.1 Principles of plane table surveying.Advantages and disadvantages of plane table survey.				
25/11/24	Monday			**LE5.1** To study the accessories of plane table			
26/11/24	Tuesday			**LE5.2** To perform the plan table survey of small area by intersection method.			
27/11/24	Wednesday		5.1.2 Plane table and its accessories/instruments.		13		
28/11/24	Thursday		5.1.3 Setting of a plane table:a) Centering (SL) (b) Levelling (c) Orientation.				
2/12/024	Monday			L.E.5.3 Study of minor instruments .			
3/12/024	Tuesday		5.1.4 Methods of plane table surveying.				
4/12/024	Wednesday		5.1.5 Errors in plane table survey a and precautions to control them.				
5/12/024	Thursday		5.2 Minor instruments:- Construction and use of Hand Level, Abney Level, Box Sextant, Pentagraph and Ceylon Ghat Tracer, Planimeter				

Teacher's Sign.

Hod Sign.

Government polytechnic Bijapur (C.G.)

Name of Course: Building Construction
Course Code: 2020374(020)
Name of Teachers: Durgavati Wasam
Branch /Semester: Civil/ 3RD sem.
Sesson: July -Dec. -2024

Course Outcomes	CO-1 Supervise foundation and masonry work as per working drawing and specifications and prevailing BOQ/SOR.
	and windows as per plan and drawings.
	CO-3 Demonstrate the types and construction methods of different floors, roofs, false ceiling and stairs.
	CO-4 Monitor the different type of Damp Proofing, Water Proofing, Plastering and Painting, Distempering and White-Washing.
	CO-5 Recognise Anti Termite Measures, Building Services, maintenance work, safety measures using suitable/appropriate Machinery & Equipments.

Date	Day	Course	Class room Instruction	Laboratory Instruction (LI)	No. Of Periods planned	REMARKS
6/09/024	Friday	UNIT-1	1.1 Classification of building as per NBC . (i)Components of abuilding . (ii)Comparison between Load bearing and framed structure.		12	
7/09/024	Saturday		()Function and requirement of good foundation. (ii)Types of foundation: Shallow and deep foundation.	Give Layout of a building: two rooms building with front verandah.		
13/09/024	Friday		**1.2 Deep foundation** :Pile foundation, cast in situ and pre cast concrete piles.			
14/09/024	Saturday		(i) under reamed pile foundation . 1.2.4 Setting out of foundation.	Give Layout of a building: two rooms building with front verandah.		
20/09/024	Friday		1.2.3 Selection of suitable foundation **1.3 Stone Masonry** (i)Classification of stone masonry:			
21/09/024	Saturday		1.3.2 Dressing of stone, size and placing of joint. **1.4 Brick masonry:** Defination and classification of bond . Comparision between brick and stone mesonary.	Construct brick bonds (English bond only) in one, one and half and two brick thick walls.		
27/09/024	Friday	UNIT-2	**2.1 Walls**:Classification of walls. **2.2 Scaffolding**: Purpose of scaffolding Different types of scaffolding.		8	
28/09/024	Saturday		**2.3. Arches:** Uses and Glossary of terms used in arches. Type of Arches.	Construct brick bonds for L, T and cross junction.		
4/10/024	Friday		**2.4 Lintels:** Purpose of lintel, Materials used for lintels. Classificaion of Door.			
5/10/024	Saturday		**2.5 Doors, Windows and Ventilators:** Classification of door with sketch. Classification of window and detailed specification of window.	2.2 Draw sketches of different types of Arches and Lintels.		
11/10/024	Friday	UNIT_3	**3.1 Floors:** Glossary of termsfloor finish, topping, under layer, base course and their purpose. (i)Construction method of different types of floor.		4	
12/10/024	Saturday		(i)Construction method of MRABLE GRANITE AND TILES of floor.	Draw sketches of different types of doors and windows.		

8/10/024	Friday	UNIT_3	(i)Construction method of CC, Timber ,Brick and Miscelleneouse floor.		8	
19/10/024	Saturday		**3.2 Roofs:** Types of Roof and Construction of rrofs.	Draw sketches of different types of Arches and Lintels.		
25/10/024	Friday		**3.4 Stairs:** Glossary of terms:Staircase, landing, riser, tread, nosing, width of staircase, hand-rail.			
26/10/024	Saturday		Types of Stairs and its uses. Details of Escalators and Elevators.	Draw sketches of different types of Arches and Lintels.		
1/11/024	Friday	UNIT-4	4.1 Damp Proofing and Water Proofing: 4.1.1 Causes of dampness& its ill effects 4.1.2 Methods of Damp proofing .		11	
2/11/024	Saturday		water proofing materials and their specifications, Rich concrete and mortar, bitumen, bitumen mastic, polymer coating.	Draw sketches of various types of floors.		
8/11/024	Friday		4.1.3 Damp Proof Course treatments in buildings and foundation.			
9/11/024	Saturday		treatment to floors, treatment to walls, and roofs.	Draw sketches of various types of floors.		
15/11/024	Friday		**4.2 Plastering:** objects of plastering and requirements of good plaster.			
16/11/024	Saturday		(i) method of plastering with cement mortar. (ii)types of plaster finishes, special materials used in plastering, defects in plastering.	Draw sketches of various types of roofs.		
22/11/024	Friday		**4.3Painting,Distempering and White-Washing:** (i)Painting method of painting. (ii) defects in painting. 4.3.2 Method of distempering, white washing, colour washing.			
23/11/024	Saturday	UNIT-5	**5.1 Anti Termite Measures:** Method of anti termite Treatments. chemicals used in anti-termite treatment.	Draw sketches of various types of stairs.	14	
29/11/024	Friday		**5.2 Fire Protection** – Fire safety requirements for building work. Water supply Connection in building.			
30/11/024	Saturday		5.3Ventilation and Air conditioning- Types of Ventilation and Air Condition Work.	Draw sketches of various types of stairs.		
6/12/024	Friday		(i) machine/equipments used in building construction. 5.5 **Building maintenance:** Causes and types of defects in buildings.			
7/12/024	Saturday		Safety precautions to be observed during the construction work.	Prepare sketches of cantering , shuttering and scaffoldings		
13/12/024	Friday		Remedial measures and execution procedure of buildings.			
14/12/024	Saturday			Prepare sketches of cantering , shuttering and scaffoldings		

Teacher's Sign.

Hod Sign.

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : July-December 2024

Semester : 3rd
Subject: Electrical & Electronics Measurement
: Electrical & Electronics Measurement (LAB)
Theory lecture and tutorial per week (L+T) : 2+1 = 3
Practical per week : 02
Name of subject Teacher : Vikramaditya

Session start date as per university calender: 02/09/24
Course code : 2024372 (024)
Course code : 2024362 (024)
Tr ESE: 70 **Tr TA: 30** **CT: 20**
Pr ESE: 30 **Pr TA: 50** **Total: 200**

LESSION PLAN

SESSION : 2024-2025

Discipline: **Semester: 3rd** **Class room instruction start date: 02/09/24**

S.No.	Chapter/ Unit No.	Topics/Subtopics to be cocered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Basic of Measurements and measuring Instrument Block Diagram of measuring system, requrements	15	2	5/9/2024		Ammeter Voltmeter Multimeter clamp meter CRO Lab Class 02/09/2024 09/09/2024
2		Production of deflecting, controlling & damping torques		1	7/9/2024		
3		Accuracy, precision, Error, Resolution, Sensitivity & tolerance		2	12/9/2024		
4		Indicating & Recording Instrument		1	14/9/2024		
5		Integrating Instruments , Typical uses General description including working principle of PPMC		2	19/9/2024		
6		working principle & Construction of Moving Iron, Merits & Demerits		1	21/9/2024		
7		working principle & Construction of Induction Dynamometers type Instruments, Merits &		2	26/9/2024		
8	UNIT-II	Electromechanical measuring Instrument	18	1	28/9/2024		Lab Class 16/09/2024 23/09/2024
9		Principle of current & voltage measurement		2	3/10/2024		
10		Galvanometer, Ammeter, Voltmeter		1	5/10/2024		
11		range Extension of Ammeterand voltmeter		2	10/10/2024		
12		Principle of power and energy, Measurement , effect of power factor		2	17/10/2024		
13		Measurement of single and three phase power using wattmeter		1	19/10/2024		
14		measurement of single phase Energy using watt-hour meter		2	24/10/2024		
15		Calibration of ammeters, voltmeters, wattmeters, and enegy meters		1	26/10/2021		
16		Working of Digital Energy meter, Block diagram		1	2/11/2024		

17	UNIT-III	Classification of resistances- Low, Medium, High	17	1	9/11/2024		Lab Class 30/09/2024 07/10/2024 14/10/2024
18		Concept of bridge balancing , Low resistance Mesurement - Kelvin double bridge		2	14/11/2024		
19		Medium Resistance measurent - Wheatstone bridge		1	16/11/2024		
20		High Resistance measurent - Megger		2	21/11/2024		
21		Earth resistancemeasurent using Earth Tester		1	23/11/2024		
22		Inductance measurent using maxwells Bridge		2	28/11/2024		
23		Capacitance Measurement - Schering Bridge		1	30/11/2024		
24	UNIT-IV	True RMS reading voltmeter	15	2	5/12/2024		Lab Class 21/10/2024 28/10/2024 04/11/2024
25		Digital Voltmeter and types Digital multimeter		1	7/12/2024		
26		Digital LCR Meter block diagram		2	12/12/2024		
27		Analog/Digital recorders, Graphic recorder		1	14/12/2024		
28		Strip chart recorder, XY recorder		2	19/12/2024		
29	UNIT-V	CRO - block diagram, cathod ray tube	10	2	11/12/2024		Lab Class 02/12/2024 09/12/2024
30		Cotrol on CRO and their function, lissajous pattern		2	18/11/2024		
31		DSO- Block diagram and working		2	25/11/2024		
Total Periods							

Subject Teacher: Vikramaditya

Signature:

I/C HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : July-December 2024

Semester : 3rd
Subject: Electrical Drawing & CAD
Theory lecture and tutorial per week (L+T) : 2+1 = 3

Session start date as per university calender: 02/09/24
Course code : 2024374 (024)
Tr ESE: 70 **Tr TA: 30** **CT: 20**
Total: 120

Name of subject Teacher : Vikramaditya

LESSION PLAN

SESSION : 2024-2025

Discipline:		Semester: 3rd	Class room instruction start date:02-09-2024				
S.No.	Chapter/ Unit No.	Topics/Subtopics to be cocered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	**Unit-1.0 Symbols and Codes**	6	1	2-9-2024		
2		ISI Symbols in electrical engineering		1	4-9-2024		
3		Conventions for circuit		1	9-9-2024		
4		schematic representation of electrical and electronic components		1	11-9-2024		
5		schematic representation of electrical and electronic components		1	13-9-2024		
6		instruments and equipment		1	16-9-2024		
7	UNIT-II	**Unit-2.0 Installation, mounting and layout of power and safety equipment**	10	1	18-9-2024		
8		Different types of mountings for static (transformers):pole and ground mounted		1	20-9-2024		
9		Mountings for dynamic equipment (electrical rotating machines)		1	23-9-2024		
10		Substation layout with circuit breaker		1	25-9-2024		
11		Layout on-load and off-load isolators		1	27-9-2024		
12		Buchholz's relay and protective devices of transformers up 2MVA		1	30-9-2024		
13		Plate and Pipe earthing		1	4-10-2024		
14		Range Extension using shunt, multiplier		1	7-10-2024		
15		Range Extension using shunt, multiplier for CT		1	9-10-2024		
16		Range Extension using shunt, multiplier for PT		1	14-10-2024		
17	-	**Unit-3.0 Constructional Features of Electrical Machines**		1	16-10-2024		
18		Parts of a transformer up to 2 MVA		1	18-10-2024		

19	UNIT-II	DC Machines: pole, pole shoe, simplex lap and wave winding	6	1	21-10-2024	
20		Alternators: salient and cylindrical rotor Induction motors: squirrel cage and slip ring		1	23-10-2024	
21		AC Machine winding: full pitch winding and short pitch winding		1	25-10-2024	
22	UNIT-IV	**Unit-4.0 Domestic and Commercial wiring for LV Equipment**	10	1	4-11-2024	
23		Illumination fixtures: types and Internal circuit diagram		1	6-11-2024	
24		Control wiring of go down, staircase, street light and for houses		1	8-11-2024	
25		Wiring of energy meters for domestic and commercial loads		1	11-11-2024	
26		Internal Wiring of Refrigerators and Air conditioners		1	13-11-2024	
27		Starter, 4-point starter		1	18-11-2024	
28		Wiring diagram of submersible and centrifugal pumps		1	20-11-2024	
29	UNIT-V	**Unit-5.0Computer Aided Electrical Drawing (CAD)**	13	1	22-11-2024	
30		Computer Aided Drawing Introduction & Basic		1	25-11-2024	
31		Draw command, edit command, Coordinate entry		1	27-11-2024	
32		Coordinate entry, Osnap,		1	29-11-2024	
33		Layers, Dimensioning, Text in a drawing,		1	2-12-2024	
34		Ortho command, Zoom command and plotcommand		1	4-12-2024	
35		General electrical and electronic symbols, Layouts of domestic		1	6-12-2024	
36		commercial and industrial wiring (2D only)		1	9-12-2024	
37		Cross Sectional view of: i. Fuse and cables (2D) ii. D.C. Motor and their parts		1	11-12-2024	
38		iii. Single phase Transformer, Power transformer iv. Induction Motor		1	13-12-2024	
39		v. Insulators, Circuit Breakers, Lightning Arresters vi. 11 kV Pole Mounted Substation		1	16-12-2024	
40		Single line diagrams of 11kV/33 kV Substation		1	16-12-2024	
Total Periods						

Signature :

Subject Teacher Name : Vidyasagar Aditya

HOD (Electrical Engg.)

Principal

Government polytechnic Bijapur (C.G.)

Name of Course: Public Health Engg.
Course Code: 2020473(020)
Name of Teachers: Durgavati Wasam
Branch /Semester: Civil/ 4th sem.
Sesson: Jan.- June 2025

Course Outcomes			
CO-1 Calculate the demand of water as per the requirements and identify the sources of	Session start as per CSVTU CALENDER :20/01/025		
CO-2 Recognize water treatment method.	Tr.ESE :70	Tr. TA :30	
CO-3 Suggest conveyance and distribution system of water as per the requirement.			
CO-4 Supervise the laying of pipeline works for collection and conveyance of sewage and plan and plan house drainage, rural sanitation and solid waste disposal.	Pr.ESE:30	Pr. TA :50	
CO-5 Recognize the process of sewage treatment and disposal in urban areas.	CT :20	Total:200	

Date	DAY	Course	Class room Instruction	Laboratory Instruction (LI)	NO. Of Period Per planned	Actual no. of period taken	REMARKS
23/01/025	THURSDAY	UNIT-1 Quantity of water and Sources of water	1.1.1 Natural and manmade hydrological cycles 1.1.2 Duties of Public Health Engineer. 1.2 Quantity of Water		12		
24/01/025	FRIDAY		1.2.1 Population forecast by arithmetical increase, geometrical increase and incremental increase methods, graphical extension method, graphical comparison method 1.2.2 Criteria for method selection,	1.2.3 Water demand – per capita demand, domestic use, institutional use, public or civic use, fire demand, industrial use, water system losses.			
30/01/025	THURSDAY		1.2.4 Factors influencing demand rate, variations in demand, 1.2.5 Demand rates for various uses. 1.2.6 Design period, total water demand of a city.				
31/01/025	FRIDAY		1.3 Sources of Water 1.3.1 Surface sources – natural and artificial, intake, selection of site for intakes and types of intakes, river, intakes for reservoir, lake and canal	1.3.2 Ground water- aquifer, open well, tube well, types of tube well, methods for drilling tube well, selection of site for a tube well, section of a tube well, infiltration gallery.			
6/02/025	THURSDAY		1.3.3 Yield of well- yield of an open well, constant level pumping test and recuperation test, yield of tube well- confined and unconfined aquifer.				
7/02/025	FRIDAY	UNIT-2 Quantity of water and treat-ment of water.	2.1.2 Physical ,Chemical and Microbiological tests, standards of potable water as per I.S. & WHO, collection of water sample.	Unit 2 Quality of water and Treatment of water 2.1 Quality of water 2.1.1 Requirement of water for domestic use, impurities in water, impurities in water from different sources,	8		
/02/025	THURSDAY		Physical tests- colour, taste and odour, turbidity test. Chemical tests for total solids, chlorides, hardness, pH value, dissolve oxygen(DO),biochemical oxygen demand,common water borne disease				
/025	FRIDAY		2.2 Treatment of water 2.2.1 Objectives of water treatment, Location & Layout of treatment plant, Basic principles of working of treatment plant.	LE2.1 Determine turbidity of water sample. LE2.2 Determine dissolved oxygen of given sample. LE2.3 Determine pH value of water.			

20/02/025	THURSDAY	UNIT-2 Quantity of water and treat-ment of water.	2.2.2 Sedimentation - sedimentation, plain sedimentation and sedimentation with coagulation, quiescent and continuous flow type sedimentation tanks, plain sedimentation tanks, sedimentation tanks for coagulation.		10		
21/02/025	FRIDAY		2.2.3 Filtration- filtration, slow sand filters, rapid sand filter, comparison between slow and rapid sand filter, pressure filter.	LE2.4 Perform jar test for oagulation. LE2.5 Determine BOD of given sample			
27/02/025	THURSDAY		2.2.4 Water softeninghardness of water, temporary and permanent hardness, removal of temporary hardness, removal of permanent hardness-lime soda process, zeolite process, demineralization.				
28/02/025	FRIDAY		2.2.5 Disinfectionrequirements of disinfectant, methods of disinfection ,chlorination, forms of application of chlorine, method of application of chlorine, types of chlorination on the basis of its stage of application.	LE2.7 Determine total dissolved solids of water sample. LE2.6 determine residual chlorine in water.			
6/03/025	THURSDAY	UNIT-3 Pumping ,Distribu-tion of water and water supply for building	3.1Pumping -Necessity of pumping, types of water pumps.		12		
7/03/025	FRIDAY		Pump and their section reciprocating pump, centrifugal pump, submersible and air lift pumps, Efficiency of pump, WHP and BHP.	LE2.8 Determination of total hardness of water by EDTA method.			
13/03/025	THURSDAY		3.3 Distribution of Water- Requirements of a good distribution system, methods of distribution, pressure in distribution mains. systems of water supply.				
14/03/025	FRIDAY		Storage and distribution reservoir, layout of distribution system.	3.2 Conveyance of water - Type of pipes and their comparison, pipe joints, pipe laying, corrosion and its prevention in pipe.			
20/03/025	THURSDAY		3.4 Water Supply for Building – materials for service pipe, service connection, water meter, globe valve and gate valve.				
21/03/025	FRIDAY	UNIT-4 Collec-tion and Conve-yance of sewage House Drainage, Rural Sanita-tion and Solid Waste Disposal	dry weather flow, storm water flow, types of sewer, materials of sewer, shapes of sewer, laying of sewer, cleaning and maintenance of sewer, sewer.	4.1 Collection and Conveyance of Sewage -conservancy system, water carriage sewerage system, separate, combined and partially separate system.	13		
27/03/025	THURSDAY		appurtenances- inlets, clean outs, manholes, flushing tanks, grease and oil traps, ventilation of sewer, overflow weirs, leaping weir, siphon spillway.				
28/03/025	FRIDAY		4.3 Rural Sanitation- provision of safe and potable water for domestic purpose,ollection and disposal of dry refuse.	house drainage, pipes in house drainage, traps, classification of traps, sanitary fittings, and systems of plumbing.			
3/04/025	THURSDAY		collection and disposal of sullage, excretal waste disposal through privies,different types of privies.				
4/04/025	FRIDAY		disposal of refuse-controlled tipping, land filling, trenching, dumpinginto the sea, pulverization, incineration,composting.	characteristics of sewage, micro organisms found in waste water.			

10/04/025	THURSDAY	Unit 5 Waste Water Characteristics and Sewage Treat-ment	5.1 Waste Water Characteristics – Constituents of sewage, characteristics of waste water, aerobic and anaerobic decomposition of organic matter.		17		
11/04/025	FRIDAY		5.2 Sewage Treatment- 5.2.1 Objectives of sewage treatment, preliminary treatment, primary treatment,secondary treatment, final treatment, Layout of treatment plant.	classification of settling tanks, rectangular, circular and hopper bottom settling tanks.			
17/04/025	THURSDAY		5.2.2 Preliminary Treatment and Primary Treatment- screening, fixed bar type screen, disc type fine screen, grit chamber, detritus tanks, skimming tank, sedimentation and chemical clarification,				
18/04/025	FRIDAY		5.2.3 Secondary treatment – biological treatment process – aerobic and an aerobic processes, biological treatment techniques- attached growth,suspended growth and combined processes.	5.2.4 Treatment and disposal of sludge- flow chart for sludge treatment and disposal, sludge thickening or concentration, anaerobic digestion,			
24/04/025	THURSDAY		trickling filters, construction of trickling filters, activated sludge process, flow diagram of activated sludge process,c				
25/04/025	FRIDAY		conventional digester, methods of final disposal of sludge-, septic tank, design and	onventional activated sludge process, secondary settling tank for activated sludge process.			
1/05/025	THURSDAY		construction feature of septic tank, effluent disposal in septic tank.				

TEACHER SIGN.

HOD SIGN.

GOVT POLYTECHNIC BIJAPUR

Lession Plan

Course Name: **Concrete Technology**
Course code : **2020474(020)**
Semester: **4th**
Session: **Jan to June 2024**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
3/13/2024	Wed	unit 1 introduction to Concrete	Introduction 1.1.1 Concrete and its ingredients and their functions 1.1.2 Various mixes and grades 1.1.3 Various types of concrete and their uses 1.1.4 Advantages and disadvantages of concrete	
3/16/2024	Sat			Determines fine silt in aggregate by field method.
3/19/2024	Tue		(A) Water: Requirements of quality of water in concrete as per IS:456-2000 and its function. (B)Cement 1.3.1Function of cement in concrete 1.3.2Ingredients of ordinary	
3/20/2024	Wed		1.3.3 Bougue's compounds and functions 1.3.4 test on cement: fineness, standard consistency, initial & final setting times, compressive strength & soundness 1.3.4 Different types and Grades of cement as per IS Codes	
3/23/2024	Sat			Determine flakiness index and elongation index of coarse aggregate (IS 2386- Part I)
3/27/2024	Wed		1.4Aggregates 1.4.1 Classification: According to size, shape, texture and source.	
3/30/2024	Sat			Determine specific gravity and water absorption of aggregate (IS2386part III for aggregates of size 40 mm to 10 mm)
4/2/2024	Tue		1.4.2Characteristicsof aggregates: Particle size and shape, surface texture, specific gravity of aggregate; bulk density, water absorption, surface moisture, bulking of sand, deleterious materials soundness	
4/3/2024	Wed		1.4.3Grading of aggregates: coarse aggregate, fine aggregate; All-in-aggregate; finenessmodulus; interpretation of grading charts	
4/13/2024	Sat			Determine the compressive strength of Portland cement (IS-269) LE 1.6 Perform Field test of cement
4/16/2024	Tue		2.1Fresh concrete and its properties - water cement ratio, Workability, hardness, Segregation and bleeding 2.2Factors affecting workability	
4/20/2024	Sat			Determine of bulk density and voids of aggregates ((IS2386part III)

4/23/2024	Tue	unit 2 Fresh concrete	2.1.3Methodsof measurement of workability Slump Test & Compaction Factor Test Vee Bee consistometer, flow table test 2.1.4Recommended slumps for placement in various conditions as per IS:456- 2000/SP-23	
4/24/2024	Wed		2.1.5Relation between workability and strength of concrete 2.2Batching of materials, Methods of mixing of concrete – Hand & Machine Mixing, mixing time , Transportation and Placing of concrete.	
4/25/2024	Thu		2.3Ready mixed concrete ,proportioning ready mixed concrete, production of ready mixed concrete 2.4Methods of compaction of concrete and its suitability ,Factorsaffecting compaction 2.5Finishing of concrete	
4/27/2024	Sat			Determine particle size distribution of fine, coarse and all in aggregate by sieve analysis (grading of aggregate)
4/30/2024	Tue		2.6Curing and its importance , its methods and suitability ,Effect of curing on development of strength of concrete 2.7Admixtures and its benefits . Types of Admixtures - Accelerator and Retarder Plasticizer and Super Plasticizer and Air entraining admixture . Utility of Admixtures	
5/1/2024	Wed	unit 3 Hardened Concrete	3.1Hardened Concrete and its Properties 3.2Compressive Strength ,Tensile Strength, Bond Strength, Flexure Strength Durability, impermeability	
5/4/2024	Sat			7Determine Fineness modulus of fine and coarse aggregate by sieve analysis.
5/7/2024	Tue		3.3Factors affecting Compressive Strength 3.4IS Test Procedure to find Compressive & Tensile Strength of Concrete, Acceptance Criteria , Mean Strength & Standard Deviation	
5/8/2024	Wed		3.5Durability of Concrete & factors affecting it 3.6Economy of Concrete & factors affecting it 3.7Methods of Non Destructive Test of ConcreteRebound Hammer Test, Ultrasonic Pulse Velocity Test	
5/11/2024	Sat			Determine particle size distribution of fine, coarse and all in aggregate by sieve analysis (grading of aggregate)
5/14/2024	Tue		Introduction to Special concrete: Light weight concrete, Mass concrete, Fibre reinforced concrete, Polymer concrete, High	

5/15/2024	Wed		density concrete, No fines concrete, Ferro cement, Shorterete	
5/18/2024	Sat			Test for workability (slump test): (a)To verify the effect of water, fine aggregate/course aggregate ratio and aggregate/Cement ratio on slump (b) To test cube strength of concrete with varying water cement ratio
5/21/2024	Tue	unit 4 Concrete mix design	4.1Factors causing variation in quality of concrete, 4.2Field Control , Advantages of Quality control.	
5/22/2024	Wed		4.3Statistical Quality control. 4.4.1Concrete Mix Design and its importance.	
5/25/2024	Sat			Compaction factor test for workability (IS: 1199)
5/28/2024	Tue		4.4.2Nominal Mix and Design Mix. 4.4.3Factors affecting concrete mix design.	
5/29/2024	Wed		4.4.4Different methods of Mix Design and its suitability. 4.5I.S. method to design a Concrete Mix As per IS 10262- 2009.	
6/1/2024	Sat			Conduct Split Cylinder Test
6/4/2024	Tue		4.6Example of Mix design as per I.S. method 4.7safety precautions observed	
6/5/2024	Wed		5.1Deterioration of concrete, Types of deteriorations and its effects, Prevention of concrete deterioration	
6/8/2024	Sat			Determine the compressive strength of concrete cubes.
6/11/2024	Tue		5.2Corrosionof reinforcement, Effect of corrosion of reinforcement in concrete and remedial measures	
6/12/2024	Wed		5.3Types, causes and remedies of concrete cracks before hardening and after hardening 5.4Evaluation of cracks, methods of evaluation of cracks	
6/15/2024	Sat	unit 5 Defects and Repair of Concrete		conduct Non destructive test on concrete (a) Rebound hammer test (b) Ultrasonic pulse velocity test
6/18/2024	Tue		5.5Prevention of cracks , Materials for repair of cracks .Methods used for repair of cracked Concrete 5.6Repair and strengthening of column, repair of concrete floor slab system, overlays and surface treatments, underwater repairs.	
6/19/2024	Wed		5.7Strengthening of damaged structures,section enlargement, Strengthening of beams and slabs.	

Teacher's Name and Sign

Gurudutt

GOVT POLYTECHNIC BIJAPUR

Lession Plan

Course Name: **STRENGTH OF MATERIAL**
Course code : **2020472(020)**
Semester: **4th**
Session: **Jan to june 2024**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
3/11/2024	Mon	Unit I Simple Stresses and strain	1.1 Mechanical properties ofmaterial:strength, elasticity,plasticity, ductility,	
3/14/2024	Thu		brittleness, malleability, Modulus of Elasticity. Yield stress, breaking stress, working stress & ultimate stress and factor of Safety toughness,hardnessand rigidity & stiffness 1.2 Direct Stress, linear Strain, Hook's Law. Stress Strain curve of Mild Steel.	
3/19/2024	Tue		1.3Principle of superposition, Stresses in bars of different sections., Stresses in composite bars	Perform Compression test on cast iron on Universal Testing Machine .
3/21/2024	Thu		1.4Lateral Strain and Poission's ratio ,Volumetric strain due to uni-axial, biaxial and triaxial force and change in volume	
3/28/2024	Thu		Shear stress, Principle of shear stress, Shear Modulus, Bulk Modulus and Relationship among C, E and K	
4/1/2024	Mon		Strain energy, resilience, proof resilience, modulus of resilience for Gradual, Sudden and Impact Load.	
4/2/2024	Tue		Numerical Problems	Plot Stress-Strain Curve for ductile materials like Mild Steel, Aluminium under tensile loading as per IS 1608.
4/4/2024	Thu		Numerical Problems	
4/8/2024	Mon	unit 2 Shear Force and Bending Moment	2.1Types of beams - cantilever, simply supported, fixed, overhanging, continuous beams	
4/11/2024	Thu		2.2Types of loading- point load, uniformly distributed load,UVL, reactions	
4/15/2024	Mon		2.3Concept of shear force and bending moment, sign convention.	
4/16/2024	Tue		2.4Relation between bending moment, shear force and rate of loading	Determine Young's Modulus of Elasticity of different materials' beam simply supported at ends.
4/18/2024	Thu		Shear force and bending moment diagrams for simply supported beams, simply supported beams with overhangs and cantilever subjected to point loads, UDL., point of contraflexure.	
4/22/2024	Mon		Load and bending moment diagram from Shear Force Diagram.	

4/23/2024	Tue		Numerical Problems	Calculate Impact Value/toughness of Mild Steel using IZOD Impact Test Apparatus as per IS 1757.
4/25/2024	Thu		Numerical Problems	
4/29/2024	Mon	Unit 3 Bending stresses in Beams	3.1.1Concept of pure bending, theory of simple bending, assumptions in theory of bending, neutral axis.	
4/30/2024	Tue		3.1.2Bending Stresses and their nature, bending stress distribution diagram.	Determine energy absorption capacity of Ductile and Brittle materials such as MS, Al, Br and Cu, by conducting Charpy Impact test as per IS 1598
5/2/2024	Thu		3.1.3Moment of resistance.	
5/6/2024	Mon		3.1.4Application of theory of bending to symmetrical and unsymmetrical sections.	
5/7/2024	Tue		3.2.1Shear stress equation, meaning of terms in the equation, shear stress distribution for rectangular, hollow rectangular, circular sections and hollow circular sections. I section, T section channel section, diamond section, triangular section.	Estimate Maximum Bending moment and shear force for simply supported and cantilever beam under point load and UDL using Combined Shear Force and Bending Moment apparatus.
5/9/2024	Thu		3.2.2Relation between max. shear stress and average shear stress for rectangular section ,circularsection, triangular section.	
5/13/2024	Mon		Numerical Problems	
5/14/2024	Tue		Numerical Problems	Measure flexural rigidity (EI) for a given beam using 'Slope and Deflection' apparatus and compare it with theoretical value.
5/16/2024	Thu	Unit 4 Compound stresses and Slop and Deflection	4.1.1Stresses on inclined plane with different stress conditions,	
5/20/2024	Mon		Numerical Problems	
5/21/2024	Tue		4.1.2Principal planes and principal stresses, Analytical method and Graphical method using Mohr's stress circle method.	Measure principal stresses and strains in a beam made of aluminum and loaded as a cantilever, and compare them with theoretical values using 'Principal stress and strain. Apparatus.
5/23/2024	Thu		Numerical Problems	
5/27/2024	Mon		Slope and deflection and theirinterrelation, Macaulay's Method for determination slope and deflection.	
5/28/2024	Tue		Numerical Problems	Investigate the effect of beam length and width on deflection of beam and compare it with theoretical value using 'Slope and Deflection' apparatus.

5/30/2024	Thu		Maximum values slope and deflection for u.d.l. and point loads for Simply supported, cantilever and fixed beams	
6/3/2024	Mon		Numerical Problems	
6/4/2024	Tue	Unit 5 Fixed Beam and Column		Measure the buckling load of three different slenderness ratio long columns of same lengths using 'Behaviour of column and struts' apparatus.
6/6/2024	Thu		5.1.1Concept, Advantages& drawbacks	
6/10/2024	Mon		5.1.2Computation of fixed end moments for a fixed beam for following loading (i) Single point load central/eccentric	
6/11/2024	Tue		(ii) two point loads (iii) u.d.l. over entire span.	5.1.1 Drawing of B.M. diagrams indicating the maximum +ve and –ve values.
6/13/2024	Thu		5.2.1Column & Strut 5.2.2Short & Long Column	
6/17/2024	Mon		5.2.3End Condition of Column and effective Length of Column & Modes of Failure in column	
6/18/2024	Tue		5.2.4Radius of Gyration , Slenderness Ratio	Numerical Problems
6/20/2024	Thu		5.2.5Euler's Crippling Load Formula. 5.2.6Rankine's Formula for columns.	

IC HOD

Teacher Name and sign
Gurudatt

GOVT POLYTECHNIC BIJAPUR

Lession Plan

Course Name: **TRANSPORTATION ENGINEERING**
Course code : **2020475(020)**
Semester: 4th
Session: **Jan to June 2024**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
13/03/2024	Wed	Unit 1 Highway alignment, geometrics And Traffic Engineering	1.1Highway Alignment and Surveys- Classsification of roads as per IRC, Highway alignment, requirements of highway alignment, factors controlling alignment, map study, reconnaissance survey, preliminary survey, final location and detailed, surveys, drawings and reports.	
15/03/2024	Fri		1.2Highway Geometrics 1.2.1Cross Section Elements - pavements characteristics , camber, width of pavement, traffic separators, kerbs, road margins, formation width, right of way, typical cross section of roads as per IRC.	
16/03/2024	Sat			To conduct CBR test of sub base and sub-grade materials
20/03/2024	Wed		1.2.2Sight Distance- Sight distance, total reaction time, Stopping Distance ,Stopping Sight Distance, Overtaking Sight Distance, over taking zones, sight distance at intersections.	
22/03/2024	Fri		1.2.3Horizontal Alignment - Horizontal curves, super elevation ,necessity of superelevation, radius and degree of curve,	
23/03/2024	Sat			To determine Impact value of given aggregate
27/03/2024	Wed		Traffic Engineering- 1.3.1Traffic studies- traffic volume studies, origin and destination study, traffic capacity study, passenger car unit (PCU) and capacity of roads as per IRC.	
30/03/2024	Sat			To determine Crushing value of given aggregate
03/04/2024	Wed		2.1.1Significance of subgrade soil, California Bearing Ratio (CBR). 2.1.2Stone Aggregates-Desirable properties of road aggregate, Tests for road aggregate- crushing test, Abrasion test, impact test, soundness test, shape test, specific gravity and water absorption test. 2.1.3Bituminous Materials-Bitumen, requirements of bitumen, tests on bitumen – penetration test, ductility test, flash and fire point test,	

05/04/2024	Fri	Unit 2 Pavement Material and Highway Construction	Construction – 2.2.1Earthwork- Excavation, excavation equipments, embankment, construction of embankment, compacting equipments. 2.2.2Construction of earth roads, Gravel roads, WBM Roads 2.2.3Construction of Bituminous Pavements –	
06/04/2024	Sat			To determine Abrasion value of given aggregate
12/04/2024	Fri		Types of Bituminous construction, construction procedure with equipments for- surface dressing, penetration macadam, bituminous macadam, premixed bituminous carpet, bituminous concrete. 2.2.4Construction of Cement Concrete Pavements –Materials, plants and equipments, construction steps, joints in cement concrete pavements – expansion joint, contraction joint, construction joint, longitudinal joints.	
19/04/2024	Fri		2.3.1Importance of Road drainage. 2.3.2Requirements of road drainage system 2.3.2 Surface drainage	
20/04/2024	Sat			To determine Flakiness and Elongation index of given aggregate
24/04/2024	Wed		cross drainage and subsurface drainage 2.3.4 Drainage of slopes and erosion control.	
26/04/2024	Fri		3.1.1Permanent way, Requirements of ideal permanent way, gauges, selection of gauges, uniformity of gauges, railway track cross sections, coning of wheels. 3.1.2 Gradient, types of gradients, grade compensation.	
27/04/2024	Sat			To determine Penetration value of Bitumen/Tar
01/05/2024	Wed		superelevation or Cant, Object of providing superelevation, determination of superelevation , cant deficiency, limits of superelevation and Cant deficiency, transition curves and its necessity, curve indicators, purpose ,necessity of providing check rails on curves, Extra widening on curves, Extra Clearance on curves (b) Railway	

03/05/2024	Fri	Unit 3 Railway Track Geometry	3.2.1Ballast- functions, requirements of good ballast, types of ballast, ballast size and gradation, ballast section and profile, methods of packing ballasts 3.2.2Sleepers-Functions, types of sleeper, requirements of sleeper, prestressedconcrete sleeper, merits, demerits, limitations and service life ofprestressed concrete sleepers, 3.2.3Rails –Function of rail, requirement of rail section, Types of rails sections, Standardrailsection, Length of rails, Wear of rails, Cause and methods to reduce wear of rails, rail joints, requirements of an ideal joint, types of rail joints, Welding of rail joints, Length of welded rails, Creep of rails, its indication,.effect, measurement, preventions. 3.2.4Rail fixtures and fastening-Purpose, types of fastening, Fish plates, requirements of fish plates, section of fish	
				To determine Ductility test of Bitumen/Tar
04/05/2024	Sat		3.2.4Rail fixtures and fastening-Purpose, types of fastening, Fish plates, requirements of fish plates, section of fish	
08/05/2024	Wed		plates, slide chair, bearing plates, keys, elasticfastenings, functions of elastic fastenings, elastic rail pad, elastic rail clip.	
10/05/2024	Fri			To determine Flash and Fire point of Bitumen/Tar
11/05/2024	Sat		4.1.1Necessityof points and crossings, turnout, important terms used in pints and crossings, Points or Switches types of switches; Crossings, types of crossings. 4.1.2Turnouts, Symmetrical split, Three throw switch, doubleturnout, Diamond crossing, Cross over, Single and Double slip, Scissors cross over, Gathering lines, Triangle	
15/05/2024	Wed			To determine Softening point of Bitumen/Tar
18/05/2024	Sat		4.2Stationsand Yards – 4.2.1Requirements of arailwaystation, Classification,and description of railway stations.Passenger platforms-requirements,length and width, clearance ,height;Goods platform-	
22/05/2024	Wed	UNIT 4- Points and Crossings and Track Junctions; Layout of Stations and Yards and		

24/05/2024	Fri	Stations and Yards and Signaling and Control System	4.2.2Necessity of equipments in station yards, Cranes, Weigh Bridges,Loading Gauges, End Loading Ramps, Engine Sheds, Triangle, Turn Table, Traverser, Scotch Block,Derailing switch, Fouling Marks, Buffer Stops, Sand Hump	
25/05/2024	Sat			To determine Viscosity test of Bitumen/Tar
29/05/2024	Wed		3Signaling , Control Systemsand Interlocking – Objects ofsignaling, classificationof signals, Semaphore signal, warner signal,	
31/05/2024	Fri		shunting signal, colour light signals, reception and departure signals, control of train movements, Absolute BlockSystem, AutomaticBlock System, Necessity and functionsof interlocking.	
01/06/2024	Sat	UNIT 5- Bridge Classification ,Site Investigation and Bridge Substructure		5.1.1Classification-classification of bridge according to span, material, life, alignment, HFL, loading, level of bridge floor.
05/06/2024	Wed		5.1.2Site Selection & Investigation – factors affecting selection of site for bridge, bridge alignment-factors controlling alignment, bridge site investigation	
07/06/2024	Fri		5.1.3Waterway-Waterway, economic span, afflux, scouring, free board, Standard values of clearances and freeboard as per IRC.	
08/06/2024	Sat			5.1.4Bridge sub structure-components of bridge –pier, abutment, wing wall, foundation, bearings
12/06/2024	Wed		b) Bridge Super Structure 5.2.1Permanent Bridges-Types of RCC bridges- slab, slab and girder, prestressed concretebridges,advantagesof prestressed concrete bridges,	
14/06/2024	Fri		2Construction-steps involved bridge construction, erection of steel girder and truss bridges, erection of RCC bridges.	
15/06/2024	Sat			Numerical Problems
19/06/2024	Wed		Numerical Problems	

Techers Nameand Sign
Gundutt

HOD

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 4th
Subject:Elec. Power Gen. Trans. & Distribution
:Elec. Power Gen. Trans. & Distribution Lab

Session start date as per university calender: 20/01/25
Subject Course code : 2024474(024)
Subject Course code : 2024464(024)

Theory lecture and tutorial per week (L+T) : 2+1 = 3 **Tr ESE: 70** **Tr TA: 30** **CT: 20**
Practical per week : 2 **Pr ESE: 40** **Pr TA: 50** **Total: 210**
Name of subject tearcher : T. Sonkeshri

LESSION PLAN

SESSION: Jan - June 2024

Sem : 4th | **Discipline : Electrical Engineering** | **Class room instruction start date:20/01/25**

S. No.	Chapter / Unit No.	Topic name	No. of periods planned (Sylabus Period) =a+b+c	Actual no. of period taken = a	Date of class conduction	No. Of Tut. Periods(b) / Date	Remarks if any[No of Practical classess(c) etc]
1	UNIT-I	Various sources of Electrical Power Generation: Hydro, thermal, nuclear,solar,wind, bio-mass, geo thermal, OTEC, etc.	13(14)	1	20/01/2025	(1) 03-02-25	21-01-25(2) 28-01-25(2) 04-02-25(2)
2		Hydroelectric power station (HPS): Energy conversion process, plantlayout		1	21/01/2025		
3		Hydrograph and simple calculation of electrical power generation, choice of site and constituents of hydroelectric power plant		1	22/01/2025		
4		Classification of HPS- based on; - Head Storage and pondage - Plant layout, types of hydro turbines - Auxiliaries		1	27/01/2025		
				1	28/01/2025		
5		Synchronous Generators in HPS: Selection, number of poles, rotor speed and diameter		1	29/01/2025		
6	UNIT-II	Thermal power station: Energy conversion process, plant layout , site selection	13(14)	1	04/02/2025	(1) 10-02-25	11-02-25(2) 18-02-25(2) 25-02-25(2)
7		Major equipment and auxiliaries of TPS : Boiler, steam turbine, Turbo Generator, super heater, economizer and electrostatic precipitator, etc)		1	05/02/2025		
8		NPS: Energy conversion process, Constituents of NPS and Layout, Selection of site		1	11/02/2025	(1) 18-02-25	
9		Reactors: Main parts, Types and its Control		1	12/02/2025		
10		Nuclear Fuels.		1	17/02/2025		
11	UNIT-III	Structure of electrical power system Connected load, Maximum demand, average demand, Demand factor, load factor, diversity factor, plant capacity factor and plant use factor and related numerical	12(15)	1	19/02/2025	(1) 05-03-25	04-03-25(2) 11-03-25(2) 18 03-25(2)
12		Load curve and Load duration curve.		1	24/02/2025		
13		Base load and peak load on generating stations.		1	25/02/2025		

14		Relationship between units generated per year, maximum demand and Load factor.		1	03/03/2025		
15		Cost of electrical energy and related numerical problems		1	04/03/2025		
16	UNIT-IV	Transmission line parameters: Resistances, inductances and capacitances.	21(16)	2	10/03/2025 11/03/2025	(1) 24-03-25	01-04-25 (2) 08-04-25 (2) 15-04-25(2)
17		Skin effect and effect of proximity		1	12/03/2025		
18		Stranding and transposition of conductors.					
19		Classification of transmission lines –Short, medium and long.		1	17/03/2025		
20		Performance of transmission lines, voltage regulation and efficiency (Only lumped Short andMedium Transmission Line).		2	18/03/2025 19/03/2025		
21		Equivalent circuits, T and π networks, ABCD constants, Ferranti effect, line losses		3	26/03/2025 01/04/2025 02/04/2025		
22		Line insulators: requirements, types,Failure of insulators.		2	07/04/2025 08/04/2025	(1) 16-04-25	
23		String efficiency, methods of improving string efficiency (simple numerical)		2	09/04/2025 15/04/2025		
24	UNIT-V	Feeders, distributors and service mains	15(16)	2	21/04/2025 22/04/2025	(1) 07-05-25	22-04-25(2) 29-04-25 (2) 06-05-25 (2)
25		Selection of conductor size based on current for distribution systems					
26		Voltage drops in D.C. distributors		1	23/04/2025		
27		Voltages drop in A.C. distributors.					
28		Types of underground power cables		1	28/04/2025		
29		Construction of power cables		1	29/04/2025		
30		Selection of power Cables for LT and HT connections.		1	30/04/2025		
31		Laying of underground power cables.		1	05/05/2024		
32		Faults in Power cables		1	06/05/2025		

Subject Teacher:
Name: Tanvi Sankeshwari
Signature:

HOD (Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 4th
Subject: Electrical Estimating and Costing

Session start date as per university calender: 20/01/25
Course code : 2024475 (024)

Theory lecture and tutorial per week (L+T) : 3+0 = 3 **Tr ESE: 70** **Tr TA: 30** **CT: 20** **Total: 120**

Name of subject tearcher : T. Sonkeshri

LESSION PLAN

SESSION: JAN - JUNE 2023

Sem- 4th	Discipline: Electrical Engineering	Class room instruction start date:20/01/2025			

S. No.	Chapter/ Unit No.	Topic name	No. of periods planned (syllabus periods)	Actual no. of period taken	Date of class conduction	Remarks if any
1	UNIT-I	Wiring system, Types of wires,	4(8)	1	1/23/2025	
2		Specifications of Different types of wiring materials, Accessories				
3		Selection of material for wiring work.		1	1/25/2025	
4		Wiring tools. Wiring circuits.				
5		Point wiring system (Short, Medium and Long)		1		
6		Service line: single phase, three phase				
7		Domestic and industrial panel wiring.		1	1/30/2025	
8		IE Act-2003., I.E. rules for wiring,				
9	UNIT-II	Estimation and estimation tools	8(8)	2	2/1/2025	
10		Electrical Schedule of rates, catalogues, Survey and source selection, measurement book				
11		Quantity and cost of material required.		1	2/6/2025	
12		Purchase system including GeM, Purchase enquiry and selection of purchase mode, Comparative statement, Purchase orders, verification of bills		2	2/8/2025	
13		Contract system.		1	2/13/2025	
14		Tendering procedure and preparation of simple tender, Earnest Money, Security Deposit		1 1	2/15/2025	
15	UNIT-III	Residential wiring : 1) Layout	16(10)	1	2/20/2025	
16		Residential wiring : 2) Load calculation		2	2/22/2025	
17		Residential wiring : 3) Wire, switchgear, Cable and other accessories & fixture/fitting selection		3	2/27/2025 3/1/2025	
18		Residential wiring : 4) Earthing system		1	3/6/2025	
19		Residential wiring : 5) Overall Estimating and costing		2	3/8/2025	
20		Commercial and industrial wiring : 1) Layout		1	3/13/2025	
		Commercial and industrial wiring : 2) Load calculation		2	3/15/2025	

21		Commercial and industrial wiring : 3) Wire, switchgear, Cable and other accessories & fixture/fitting selection		1	3/20/2025
22		Commercial and industrial wiring : 4) Earthing system		2	3/22/2025
23		Commercial and industrial wiring : 5) Overall Estimating and costing		1	3/27/2025
24	UNIT-IV	Overhead distribution system.	11(9)	2	3/29/2025
25		Materials and accessories required for the overhead distribution system.			
26		Distribution lines, Line supports, Factors governing height of pole.			
27		Conductor materials, size of conductor for overhead line, conductor's configuration, spacing and clearances, span lengths		1	4/3/2025
28		Cross arms, pole brackets, clamps, guys and stays, setting of stays,		1	4/5/2025
29		Overhead line insulators, insulator material, lightning arrestors, erection of supports.		1	4/5/2025
30		Earthing of lines, Guarding of overhead lines, Clearances of conductor from ground, Spacing between supports conductors.		1	4/12/2025
31		I.E. rules pertaining to LV distribution lines			
32		Estimate for 440 V, 3-phase,4 wires or 3 wires overhead distribution systemnd accessories required for underground distribution system		1	4/12/2025
33		Types of service connections.		1	4/17/2025
34		Method of installation of service connection (1-phase and 3-phase).			
35		Underground distribution system.		1	4/19/2025
37		Materials and accessories required for underground distribution system.			
38		Estimate for 440 V, 3-phase, 4 wires or 3 wires underground distribution system.		1	4/19/2025
39		I.E. rules pertaining to underground system and service connection		1	4/24/2025
40	UNIT-V	D.O.L. starter, small motor, mono block pump,automatic electric iron,table/ceiling fan, ICDP/ICTP Switch, etc.	8(8)	1	4/26/2025
41		Operating Manuals, service manuals and drawing work of the product/equipment.		1	4/26/2025
42		Storage of consumables/spare parts of the equipment.		1	5/1/2025
43		Estimation of repairing cost and overall cost.		1	5/3/2025
44		Tools used for repairs & maintenance work		1	5/3/2025
45		Preparation of cost schedule for repair and maintenance of:- Electric fan. - Automatic electric iron. - Single phase transformer. - FHP motors. - Mixer grinder, D.O.L. Starter.		1	5/8/2025
46				1	5/10/2025
47					

Subject Teacher Name: Tanvi Sonkeshi
Signature:

HOD (Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 4th

Session start date as per university calender: 20/01/25

Subject: Electrical Workshop practice-II

Course code : 2024465 (024)

:

Practical per week : 02

Pr ESE: 30 Pr TA: 50 Total: 80

Name of subject Teacher : Vikramaditya

LESSION PLAN

SESSION : 2024-2025

Discipline:		Semester: 4th	Class room instruction start date: 20-01-2025				
S.No.	Chapter/ Unit No.	Topics/Subtopics to be cocered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Identify the different types of resistors and measure the resistor values		2	15/02/25		
2		Identify different types of inductors. Specifications and measure the values using LCR meter		2	22/02/25		
3		Identify different types of capacitors, specifications and measure the values using LCR meter		2	01/03/25		
4		Identify different type of control transformers and measure their primary and secondary voltage		2	08/03/25		
5		Identify different type of diodes and transistors used in consumer electronics		2	22/03/25		
6		Construct and test a half wave rectifier circuit		2	29/03/25		
7		Construct and test a switching circuit using transistor		2	05/04/25		
8	UNIT-II	Identify various digital IC's and test it using digital IC tester.		2	12/04/25		
9		Dismantle, identify the various parts and trace the control circuit of a given Electrical		2	19/04/25		
10		Dismantle a home emergency light and identify its major parts		2	26/04/25		
11		Identify the internal and external components of a given washing machine and operate it.		2	03/05/25		
12		Identify the internal and external components of a given home UPS, install and operate it.		2	10/05/25		
13		Diagnose the fault of a given faulty Emergency lamp and repair it		2	17/05/25		

14	UNIT-III	Use tools and Instrument for diagnosing the fault of a given geyser		2	24/05/25		
15		Diagnose the fault of a given faulty water purifier and replace the faulty component		2	24/05/25		
16		Diagnose the fault of a mixer grinder,replace the faulty component and operate it		2	31/05/25		
17	UNIT-IV	Identify the various components of a starter panel for a given single phase submersible pump		2	21/05/25		
18		Construct the DOL starter with Main Switch and indication lamps for starting a given three-phase motor		2	31/05/25		
19		Identify the faulty component of a given DOL starter panel and repair it		2	07/06/25		
20		Identify the various components of a starter panel for starting a given three phase		2	07/06/25		
21		Identify the faulty component of a given faulty synchronous motor starter panel		2	14/06/25		
22		Construct the Star/Delta starter with Main Switch and indication lamps for starting a given three-phase motor		2	21/06/25		
23	UNIT-V	Identify terminals, parts and connections of a given DC machine		2	14/06/25		
24		Practice maintenance of carbon brushes, brush holders, commutator and sliprings		2	21/06/25		
25		Practice dismantling and assembling of a given DC machine		2	21/06/25		
26		Identify parts and terminals of three phase AC motors		2	28/06/25		
27		Practice dismantling and assembling of a given three phase Induction motor		2	28/06/25		
28		Practice maintenance service and repair of AC single phase motor		2	28/06/25		
Total Periods							

Class room instruction date: 20/01/25

Subject Teacher:
Name: Vikramaditya
Signature: Aditya

HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 4th
Session start date as per university calender: 20/01/25
Subject: Computer Programming & Basic networking
Course code : 2025473 (022)
: Computer Progr & Basic networking (LAB)
Course code : 2025463 (022)
Theory lecture and tutorial per week (L+T) : 2+1 = 3
Tr ESE: 70 **Tr TA: 30** **CT: 20**
Practical per week : 02
Pr ESE: 30 **Pr TA: 50** **Total: 200**
Name of subject Teacher : Vikramaditya

LESSION PLAN

SESSION : 2024-2025

Discipline: **Semester: 4th** **Class room instruction start date: 20-01-2025**

S.No.	Chapter/ Unit No.	Topics/Subtopics to be cocered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Program logic development using Algorithm and Flowchart	17	1	20-01-2025		Lab Class 24-01-2025 31-01-2025 07-02-2025
2		Algorithm-Developing and writing algorithm using pseudo Codes		1	21-01-2025		
3		Flowchart- Definition and Importance of flowchart, Symbols of Flowchart		1	23-01-2025		
4		Flow lines, Terminals,		1	27-01-2025		
5		Input/output, Processing, Decision, Connection off page connectors, Limitation of flowchart		1	28-01-2025		
6		Basic structure of 'C' Program		1	30-01-2025		
7		Data Concepts- Character set, C Tokens, Keywordsand Identifiers, Constants, variables and its Declaration		1	03-02-2025		
8		Data Types- data type conversion		1	04-02-2025		
9		Operators and its types- Arithmetic, Relational, Logical, Assignment,		1	06-02-2025		
10		Increment and Decrement, Conditional , Bitwise, Special operators		1		08-02-2025	
11		Input/Output Functions printf(), scanf(), getch(), putch(), getchar()		1	10-02-2025		
12		Introduc. of decision making statements in 'C'		1	11-02-2025		
13		Decision making with IF statement, Simple IF statement		1	13-02-2025		
14		The IF.... EISE statement, Nesting of IF.... EISE statement, The ELSE IF ladder		2	17-02-2025	15-02-2025	

15	UNIT-II	The Switch statement	13	1	18-02-2025		Lab Class 14-02-2025 21-02-2025
16		The? : operator		1	20-02-2025		
17		GOTO statement		1		22-01-2025	
18		Introduction, The WHILE Statement, The DO...WHILE Statement		1	24-01-2025		
19		The FOR statement, The BREAK and CONTINUE statement		1	25-01-2025		
20	UNIT-III	Concept and need of functions	12	1	27-02-2025		Lab Class 28-02-2025 07-03-2025
21		Library functions		1	03-03-2025		
22		Math functions		1	04-03-2025		
23		String handling functions		1	06-03-2025		
24		other miscellaneous functions.		1	10-03-2025		
25		coding Practice		1	11-03-2025		
26	UNIT-IV	Introduction of Array	15	1	13-03-2025		Lab Class 21-03-2025 28-03-2025
27		Declaring and initializing One-Dimensional Array.		1	17-03-2025		
28		Array Operations		1	18-03-2025		
29		Insertion		1	20-03-2025		
30		Searching,		1		22-03-2025	
31		deletion,		1	24-03-2025		
32		string operation,		1	27-03-2025		
33		Concatenation of two strings.		1		29-03-2025	
34	UNIT-V	Definition & history of networks	18	1	31-03-2025		Lab Class 04-04-2025 11-04-2025 25-04-2025
35		Application of Computer Networks		1	01-04-2025		
36		Standard Organizations and Protocols		1	03-04-2025		
37		Line Configuration Point to Point connection		1	07-04-2025		
38		Multipoint connection		1	08-04-2025		
39		Network Topology -Bus Topology, Ring Topology, Star Topology, Hybrid Topology		1		12-04-2025	
40		Categories of network- 1 LAN .2 WAN		1	15-04-2025		
41		OSI model and its main function, feature of each layer		1	17-04-2025		
42		TCP/IP model and its main function, feature and protocol of each layer		1	21-04-2025		
43		Types of Transmission Media -Twisted Pair, Coaxial Cable, Optical Fiber,		1	22-04-2025		

44		Introduction to Network communication devices- Repeater, Hub	1	24-04-2025	
45		Switch, Bridge, Router	1	28-04-2025	
46		Access Point, Gateway, RS 232,	1	29-04-2025	
47		RJ 45 &RJ11, Client Server Architecture.	1	01-05-2025	
Total Periods					

Class room instruction date: 20/01/2025

Subject Teacher:
Name: Vikramaditya
Signature:

HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 4th

Session start date as per university calender: 20/01/25

Subject: Electrical Workshop practice-II

Course code : 2024465 (024)

:

Practical per week : 02

Pr ESE: 30 Pr TA: 50 Total: 80

Name of subject Teacher : Vikramaditya

LESSION PLAN

SESSION : 2024-2025

Discipline:		Semester: 4th	Class room instruction start date: 20-01-2025				
S.No.	Chapter/ Unit No.	Topics/Subtopics to be cocered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Identify the different types of resistors and measure the resistor values		2	15/02/25		
2		Identify different types of inductors. Specifications and measure the values using LCR meter		2	22/02/25		
3		Identify different types of capacitors, specifications and measure the values using LCR meter		2	01/03/25		
4		Identify different type of control transformers and measure their primary and secondary voltage		2	08/03/25		
5		Identify different type of diodes and transistors used in consumer electronics		2	22/03/25		
6		Construct and test a half wave rectifier circuit		2	29/03/25		
7		Construct and test a switching circuit using transistor		2	05/04/25		
8	UNIT-II	Identify various digital IC's and test it using digital IC tester.		2	12/04/25		
9		Dismantle, identify the various parts and trace the control circuit of a given Electrical		2	19/04/25		
10		Dismantle a home emergency light and identify its major parts		2	26/04/25		
11		Identify the internal and external components of a given washing machine and operate it.		2	03/05/25		
12		Identify the internal and external components of a given home UPS, install and operate it.		2	10/05/25		
13		Diagnose the fault of a given faulty Emergency lamp and repair it		2	17/05/25		

14	UNIT-III	Use tools and Instrument for diagnosing the fault of a given geyser		2	24/05/25		
15		Diagnose the fault of a given faulty water purifier and replace the faulty component		2	24/05/25		
16		Diagnose the fault of a mixer grinder,replace the faulty component and operate it		2	31/05/25		
17	UNIT-IV	Identify the various components of a starter panel for a given single phase submersible pump		2	21/05/25		
18		Construct the DOL starter with Main Switch and indication lamps for starting a given three-phase motor		2	31/05/25		
19		Identify the faulty component of a given DOL starter panel and repair it		2	07/06/25		
20		Identify the various components of a starter panel for starting a given three phase		2	07/06/25		
21		Identify the faulty component of a given faulty synchronous motor starter panel		2	14/06/25		
22		Construct the Star/Delta starter with Main Switch and indication lamps for starting a given three-phase motor		2	21/06/25		
23	UNIT-V	Identify terminals, parts and connections of a given DC machine		2	14/06/25		
24		Practice maintenance of carbon brushes, brush holders, commutator and sliprings		2	21/06/25		
25		Practice dismantling and assembling of a given DC machine		2	21/06/25		
26		Identify parts and terminals of three phase AC motors		2	28/06/25		
27		Practice dismantling and assembling of a given three phase Induction motor		2	28/06/25		
28		Practice maintenance service and repair of AC single phase motor		2	28/06/25		
Total Periods							

Class room instruction date: 20/01/25

Subject Teacher:
Name: Vikramaditya
Signature: Aditya

HOD(Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : Jan-June 2025

Semester : 4th
Session start date as per university calender: 20/01/25
Subject: Computer Programming & Basic networking
Course code : 2025473 (022)
: Computer Progr & Basic networking (LAB)
Course code : 2025463 (022)
Theory lecture and tutorial per week (L+T) : 2+1 = 3
Tr ESE: 70 **Tr TA: 30** **CT: 20**
Practical per week : 02
Pr ESE: 30 **Pr TA: 50** **Total: 200**
Name of subject Teacher : Vikramaditya

LESSION PLAN

SESSION : 2024-2025

Discipline: **Semester: 4th** **Class room instruction start date: 20-01-2025**

S.No.	Chapter/ Unit No.	Topics/Subtopics to be cocered under this unit	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Program logic development using Algorithm and Flowchart	17	1	20-01-2025		Lab Class 24-01-2025 31-01-2025 07-02-2025
2		Algorithm-Developing and writing algorithm using pseudo Codes		1	21-01-2025		
3		Flowchart- Definition and Importance of flowchart, Symbols of Flowchart		1	23-01-2025		
4		Flow lines, Terminals,		1	27-01-2025		
5		Input/output, Processing, Decision, Connection off page connectors, Limitation of flowchart		1	28-01-2025		
6		Basic structure of 'C' Program		1	30-01-2025		
7		Data Concepts- Character set, C Tokens, Keywordsand Identifiers, Constants, variables and its Declaration		1	03-02-2025		
8		Data Types- data type conversion		1	04-02-2025		
9		Operators and its types- Arithmetic, Relational, Logical, Assignment,		1	06-02-2025		
10		Increment and Decrement, Conditional , Bitwise, Special operators		1		08-02-2025	
11		Input/Output Functions printf(), scanf(), getch(), putch(), getchar()		1	10-02-2025		
12		Introduc. of decision making statements in 'C'		1	11-02-2025		
13		Decision making with IF statement, Simple IF statement		1	13-02-2025		
14		The IF.... EISE statement, Nesting of IF.... EISE statement, The ELSE IF ladder		2	17-02-2025	15-02-2025	

15	UNIT-II	The Switch statement	13	1	18-02-2025		Lab Class 14-02-2025 21-02-2025
16		The? : operator		1	20-02-2025		
17		GOTO statement		1		22-01-2025	
18		Introduction, The WHILE Statement, The DO...WHILE Statement		1	24-01-2025		
19		The FOR statement, The BREAK and CONTINUE statement		1	25-01-2025		
20	UNIT-III	Concept and need of functions	12	1	27-02-2025		Lab Class 28-02-2025 07-03-2025
21		Library functions		1	03-03-2025		
22		Math functions		1	04-03-2025		
23		String handling functions		1	06-03-2025		
24		other miscellaneous functions.		1	10-03-2025		
25		coding Practice		1	11-03-2025		
26	UNIT-IV	Introduction of Array	15	1	13-03-2025		Lab Class 21-03-2025 28-03-2025
27		Declaring and initializing One-Dimensional Array.		1	17-03-2025		
28		Array Operations		1	18-03-2025		
29		Insertion		1	20-03-2025		
30		Searching,		1		22-03-2025	
31		deletion,		1	24-03-2025		
32		string operation,		1	27-03-2025		
33		Concatenation of two strings.		1		29-03-2025	
34	UNIT-V	Definition & history of networks	18	1	31-03-2025		Lab Class 04-04-2025 11-04-2025 25-04-2025
35		Application of Computer Networks		1	01-04-2025		
36		Standard Organizations and Protocols		1	03-04-2025		
37		Line Configuration Point to Point connection		1	07-04-2025		
38		Multipoint connection		1	08-04-2025		
39		Network Topology -Bus Topology, Ring Topology, Star Topology, Hybrid Topology		1		12-04-2025	
40		Categories of network- 1 LAN .2 WAN		1	15-04-2025		
41		OSI model and its main function, feature of each layer		1	17-04-2025		
42		TCP/IP model and its main function, feature and protocol of each layer		1	21-04-2025		
43		Types of Transmission Media -Twisted Pair, Coaxial Cable, Optical Fiber,		1	22-04-2025		

44		Introduction to Network communication devices- Repeater, Hub	1	24-04-2025	
45		Switch, Bridge, Router	1	28-04-2025	
46		Access Point, Gateway, RS 232,	1	29-04-2025	
47		RJ 45 &RJ11, Client Server Architecture.	1	01-05-2025	
Total Periods					

Class room instruction date: 20/01/2025

Subject Teacher:
Name: Vikramaditya
Signature:

HOD(Electrical Engg.)

Principal

GOVT POLYTECHNIC BIJAPUR (C.G.)

(Civil Engineering Department)

Lession Plan

Course Name: **Structural Design an Drafting I**
Course code : **2020572(020)**
Semester: **5th**
Session: **July to Dec 2024**
Prepared by : **Mr. Gurudutt**

Date	Day	Unit	Class Room Instruction	Laboratory Experiment
05-09-2024	Thu	UNIT 1- Reinforced Cement Concrete, IS Code 456-2000 and Working Stress Method of Design	Reinforced Cement Concrete	
06-09-2024	Fri		S.I. Units, structural components, meaning of R.C.C., purpose of reinforcement,	
07-09-2024	Sat		Materials of reinforcement, Steel as a reinforcing material,	Preparation ofstructural plan for framing of a building showing position of columns and beams.
12-09-2024	Thu		1.2IS Code 456-2000-Effective span, Control of defection,	
13-09-2024	Fri		Vertical and horizontal, Spacing of reinforcement , Max and min reinforcement . Development length	
14-09-2024	Sat		Curtailment and bending of bars, Min. positive and negative reinforcement at support, Min length of reinforcement inside support Live load and dead load.	Draw Longitudinal section, cross section of singly reinforced beam with bar bending schedule
19-09-2024	Thu		1.3 Working Stress Method: Permissible stresses in steel and concrete	
20-09-2024	Fri		assumption for design in flexure, under reinforced,	
21-09-2024	Sat		over reinforced and balanced section, design constants for balanced sections	Draw Longitudinal section, cross section of doubly reinforced beam
26-09-2024	Thu		analysis of singly and doubly reinforced beams.	
27-09-2024	Fri	Unit 2- Limit State Method of Design & Design of Rectangular Beams	2.1Limit State Method of Design - Concept of limit state method,	
28-09-2024	Sat		limit state of collapse ,limit state of serviceability, characteristic strength of materials	Draw R.C.C chajja with lintel
03-10-2024	Thu		partial safety factors ,design values, stress-strain curve for concrete and steel	
04-10-2024	Fri		2.2Design and drafting of rectangular beams 2.2.1Limit state of collapse for flexure , assumptions,	
05-10-2024	Sat		assumptions, stress block parameters, neutral axis, analysis	Draw one way slab
10-10-2024	Thu		design of singly and doubly reinforced section	
11-10-2024	Fri		2.2.2Limit state of collapse for shear	
12-10-2024	Sat		nominal shear stress, design shear strength of concrete with and without reinforcement	Draw continuous slab and flanged beam
17-10-2024	Thu		2.2.3Development length & anchorage length:	

18-10-2024	Fri		2.2.4Design singly and doubly reinforced beam and check for deflection, cracking and anchorage length.	
19-10-2024	Sat	Unit-3 Design of flanged beams, slabs ,continuous slab and flanged beams	3.1 Flanged beam- Properties of flanged beams	Draw square column with pad footing
24-10-2024	Thu		moment of resistance	
25-10-2024	Fri		design of singly reinforced Flanged beam.	
26-10-2024	Sat		Design of slabs : Dead loads, imposed loads, thickness of slabs, modification factors,	
31-10-2024	Thu		effective span, reinforcement in slab, design of one way slab and two way slabs, check for cracking, check for development length.	Draw square column with sloped footing
01-11-2024	Fri		a.Design and drafting of one way simply supported slab	
02-11-2024	Sat		b.One way continuous slab – effective span, bending moment and shear force coefficient,	
07-11-2024	Thu		design and drafting of three span continuous slab.	
08-11-2024	Fri		Two way slab – design and drafting simply supported slab on for sides.	Draw doglegged stair case.
09-11-2024	Sat		Two way slab – design and drafting simply supported slab on for sides.	
14-11-2024	Thu	UNIT -4 Column & Column footing	4.1Column-Types of column- short and long column.	
15-11-2024	Fri		axially loaded column, columns subjected to bending,	Preparation ofstructural plan for framing of a building showing position of columns and beams.
16-11-2024	Sat		effective length, slenderness limit, minimum eccentricity, IS code provisions for longitudinal and lateral	
21-11-2024	Thu		ultimate load for axially loaded columns, columns with helical reinforcement, assumptions made for	
22-11-2024	Fri		limit state design of column, axial ultimate on a column,	Draw Longitudinal section, cross section of singly reinforced beam with bar bending schedule
23-11-2024	Sat		design and drafting of axially loaded square, rectangular and circular columns.	
28-11-2024	Thu		4.2Column Footing -Isolated footing, square and rectangular , sloped footing.	
29-11-2024	Fri		design principles for column footing, thickness of footing	Draw Longitudinal section, cross section of doubly reinforced beam
30-11-2024	Sat		design for one way shear, design for two way shear or punching shear, design for flexure,	
05-12-2024	Thu		design for load transfer at column base, design of square, rectangular, circular pad and sloped footing.	
06-12-2024	Fri	UNIT-5 Design of	Design of Stair Case – Components of stairs,	Draw R.C.C chajja with lintel
07-12-2024	Sat		IS code provisions for design of staircase ,geometrical	

12-12-2024	Thu	Design of Stair Case and Prestressed Concrete	classification of stair case, structural classification of star	
13-12-2024	Fri		effective span and loading for stairs, design and drafting straight .	Draw one way slab
14-12-2024	Sat		cantilever stair, doglegged stair case and open newel staircase.	

Teachers Name and Sign

Name - Gurudutt

I/c HOD

PRINCIPAL
(Govt. Poly. Bijapur)

GOVT POLYTECHNIC BIJAPUR (C.G.)

(Civil Engineering Department)

Lession Plan

Course Name: **Geotech Engineering**
Course code : 2020574(020)
Semester : **5th**
Session: **July to Dec 2024**
Prepared by : **Mr. Gurudutt**

Date	Day	Unite	Class room Instruction	Laboratory Experiment
02-09-2024	Mon	Unit1- Weight and Volume Relationships, Index Properties and Classification Of Soil	Definition of soil and soil mechanics or Geotechnical Engineering, field application of Geotechnical Engineering	
03-09-2024	Tue		Definition of soil and soil mechanics or Geotechnical Engineering, field application of Geotechnical Engineering	
04-09-2024	Wed			Determine water content by oven drying method
06-09-2024	Fri		Soil as a three phase system, types of soil water, water content, Void ratio, porosity and degree of saturation.	
09-09-2024	Mon		1.1.1 water content, density and unit weights, specific gravity ,density index and relative compaction and functional relationship among them .	
10-09-2024	Tue		Determination of water content, specific gravity and bulk density	
11-09-2024	Wed			Determine Specific Gravity of soil by Pycnometer
13-09-2024	Fri		Particle size analysis, mechanical sieve analysis, sedimentation analysis, Stoke's law,	
16-09-2024	Mon		pipette method and hydrometer method , particle size distribution curve and its interpretation	
17-09-2024	Tue		Consistency of soil, stages of consistency, Atterberg's limits of consistency,	
18-09-2024	Wed			Determine bulk unit weight and dry unit weight of soil in field by core cutter method as per IS Code.
20-09-2024	Fri		Consistency of soil, stages of consistency, Atterberg's limits of consistency,	
23-09-2024	Mon		limits. Determination of liquid limit, plastic limit and shrinkage limit.	
24-09-2024	Tue		3Particle size classification of soils & IS classification of soil.	
25-09-2024	Wed			Determination of bulk unit weight dry and unit weight of soil in field by sand replacement method as per IS Code
27-09-2024	Fri		1Definition of permeability, Darcy's law of permeability, coefficient of permeability,	
30-09-2024	Mon		2Determinationof coefficient of permeability byconstanthead	
01-10-2024	Tue		2Determinationof coefficient of permeability byconstantheadand falling head permeability tests.	
04-10-2024	Fri		1Aquifer,aquiclude, aquifuge, coefficient of transmissibility	

				Determination of Liqu limit of given soil sample per IS Code
07-10-2024	Mon			
08-10-2024	Tue	Unit2- Permeability,Wel l Hydraulics and Seepage		Determination of Plastic limit of given soil sample as per IS Code.
09-10-2024	Wed		**2.1 2Formulae for dischargethrough unconfined and confined aquifer for steady radial**	
14-10-2024	Mon		flow by Dupuit's Theory (no derivation), field determination of coefficient of permeability and coefficient of transmissibility	
15-10-2024	Tue			Determination of Shrinkage limit of given soil sample as per IS Code.
16-10-2024	Wed		Seepage through earthen structures, head, gradient and potential, seepage velocity,	
18-10-2024	Fri		coefficient of permeability and coefficient of transmissibility	
21-10-2024	Mon		FLOW NET	
22-10-2024	Tue			Determination of grain size distribution of given soil sample by sieve
23-10-2024	Wed		How to draw floa net	
25-10-2024	Fri		Shear failure of soil, concept of shear strength of soil,	
28-10-2024	Mon		components of shearing resistance of soil – cohesion, internal friction	
30-10-2024	Wed			Determination of coefficient of permeability by constant head test
04-11-2024	Mon		Mohr-Coulomb failure theory, Strength envelope, strength equation	
05-11-2024	Tue		3Effectivestress principle	
06-11-2024	Wed			Determination of coefficient of permeability by falling head test.
08-11-2024	Fri	Unit 3- Shear Strength of Soil	totalpressure, effective pressure, neutral pressure,	
11-11-2024	Mon		shearstrength equationintermsof effective pressure	
12-11-2024	Tue		Mohr's stress circle.	
13-11-2024	Wed			Determination of shear strength of soil using direct shear test.
15-11-2024	Fri		Determination of shear strength	
18-11-2024	Mon		types of shear test depending upon drainage condition	
19-11-2024	Tue		shear test, Tri-axial Direct test Unconfined compression test , Vane shear test,.	
20-11-2024	Wed			Determination of shear strength of soil using Laboratory Vane shear test
22-11-2024	Fri		4.1Concept of compaction, purpose of compaction field situations where compaction is required.	
25-11-2024	Mon		Standard proctor test – test procedure as per IS code, compaction curve	
26-11-2024	Tue		4.3Modified proctor test	

7-11-2024	Wed	Unit 4-Compaction of Soil and Earth Pressure		Determination of shear strength of soil using Laboratory tri-axial test
29-11-2024	Fri			Determination of shear strength of soil using unconfined compressive strength test
30-11-2024	Sat		4.4Factors affecting compaction	
02-12-2024	Mon		4.5Field methods of compaction – rolling, ramming & vibration and suitability of various compaction equipments, placement water content, field compaction control.	
03-12-2024	Tue		4.6Difference between compaction and consolidation	
04-12-2024	Wed	Unit 5-Bearing Capacity of Soils , Stabilization of soil and Site Investigation And Sub Soil Exploration		Determination of MDD & OMC by standard proctor test on given soil sample as per IS Code
06-12-2024	Fri		5.1.1Concept of bearing capacity	
09-12-2024	Mon		ultimate bearing capacity, safe bearing capacity and allowable bearing pressure	
10-12-2024	Tue		5.1.2Terzaghi's analysis and assumptions made.	
11-12-2024	Wed			Determination of MDD & OMC by modified proctor test on given soil sample as per IS Code
13-12-2024	Fri		5.1.3Effect of water table on bearing capacity	
16-12-2024	Mon		5.1.4IS code method for computing bearing capacity.	

Teacher Name and Sign 2/9/24
Name- Gumdelt

Santosh
I/c HOD

PRINCIPAL
(Govt. Poly. Bijapur)

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : July-December 2024

Semester : 5th **Session start date as per university calender: 20/08/24**

Subject:Installation and Maintenance of Electrical **Course code : 2024574(024)**

: I&MEE Lab **Course code : 2024565(024)**

Theory lecture and tutorial per week (L+T) : 2+1 = 3 **Tr ESE: 70** **Tr TA: 30** **CT: 20**

Practical per week : 2 **Pr ESE: 40** **Pr TA: 50** **Total: 210**

Name of subject teacher : T. Sonkeshri

LESSION PLAN

SESSION: JULY - DEC 2024

Sem:5th		Discipline: Electrical	Class room instruction start date: 20/08/24				
S. No.	Chapter/ Unit No.	Topic name	No. of periods planned=a+b+c	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods (b) / Date	Remarks if any[No of Practical Classes(c)/Date]
1	UNIT-I	Types of heavy electrical equipment	12	2	22/08/2024	24/08/2024	Lab class 28/08/2024 04/09/2024
2		Unloading electrical equipment at site, Inspection of electrical equipment at site.		1	23/08/2024		
3		Installation procedures of small and large static equipment		1	24/08/2024		
4		Installation procedures of small and large rotating type machine		2	29/08/2024	30/08/2024	
5		Installation of pole mounted transformer		2	31/08/2024	31/08/2024	
6	UNIT-II	Commissioning procedureto be adopted for commissioning the static equipment in respect of:Mechanical installation and alignmentNeed for commutation in SCR	12	2	5/9/2024	12/9/2024	Lab class 11/09/2024 18/09/2024
7		Commissioning procedureto be adopted forcommissioning the static equipment in respect of: Electrical tests and safety precautions to be adopted before energization.		2	7/9/2024		
8		Commissioning procedure to be adopted for commissioning the rotating machine in respect of:Mechanical installation and alignment.		2	13/09/2024	19/09/2024	
9		Commissioning procedure to be adopted for commissioning the rotating machine in respect of: Electrical tests and safety precautions to be adopted before energization. Test report on commissioning and test certificate		2	14/09/2024		
10		Necessity of earthing.		2	20/09/2024	21/09/2024	

11	UNIT-III	Different methods of earthing	12	1	21/09/2024		Lab class 25/09/2024 16/10/2024
12		Permissible earth resistance value for different electrical installations.		2	26/09/2024	27/09/2024	
13		Factors affecting the earth resistance.		1	27/09/2024		
14		Methods for improvement of earth resistance.Measurement of earth resistance		2	28/09/2024	3/10/2024	
15	UNIT-IV	Reason of failure of electrical equipment and machines.	12	1	4/10/2024		Lab class 23/10/2024 06/11/2024
16		Methods for drying insulation, Measurement of internal temperature of winding, load		1	5/10/2024		
17		Need of vacuum impregnationPWM Inverters: single phase Half bridge and full bridge with R and RL Filtering process of insulating oil,		2	5/10/2024	10/10/2024	
18		Testing of insulating oil Concepts of preventive maintenance,		1	17/10/2024		
19		Maintenance sehedule for induction motor, DCMotor, transformer,		1	18/10/2024		
20		power Distribution line, circuit breaker and underground cable.Tools for hot line maintenance.		2	19/10/2024		
21	UNIT-V	Normal performance of equipment. Causes of Electrical accidents	12	1	24/10/2024		Lab class 13/11/2024 20/11/2024 27/11/2024
23		Common faults in electrical equipment ; DC Machines, AC Machines,Transformers, Power cables and electrical Installations		1	25/10/2024		
24		Trouble shooting of internal and external faults; DC Machines, AC Machines, Transformers,Power cables and electrical Installation		2	26/10/2024		
25		Instruments and accessories for trouble shooting		1	8/11/2024		
26		Trouble shooting charts; electrical iron, ceiling fan, wall fan, washing machine, air cooler.		2	9/11/2024	9/11/2024	
27		Safety regulation and safety measures. Treatment of shock. Different types of Fire extinguishers.		2	14/11/2024	28/11/2024	

Name: Tanvi Sudakeshwari
Signature:

HOD (Electrical Engg.)

Principal

Government Polytechnic Bijapur

Department : Electrical Engineering

Session : July-December 2024

Semester : 5th

Subject: Power system operation & protection

:Power system operation & protection (LAB)

Theory lecture and tutorial per week (L+T): 3+2 = 5

Practical per week : 2

Name of subject teacher : Vikramaditya

Session start date as per university calender: 20/08/24

Course code : 2024572 (024)

Course code : 2024563 (024)

Tr ESE: 70 **Tr TA: 30** **CT: 20**

Pr ESE: 40 **Pr TA: 50** **Total: 210**

LESSION PLAN

SESSION: JULY - DEC 2022

Discipline: **Semester: 5TH** **Class room instruction start date: 20-08-2024**

S.No.	Chapter/ Unit No.	Topic name	No. of periods planned	Actual no. of period taken	Date of class conduction	No. Of Tut. Periods / Date	Remarks if any
1	UNIT-I	Unit-1.0 Representation of Power System	10	1	20/08/2024		Lab Class 28/08/2024
2		Single line representation of a simple power system with standard symbols		1	20/08/2024		
3		Single Phase representation of balanced three phase networks		1	23/08/2024		
4		Per unit (PU system) : Introduction, represent , change of base and simple numerical.		2	23/08/2024	24/08/2024	
5		Complex power flow, Concept of torque or Load angle (δ) and Power factor angle (θ)		2	27/08/2024	27/08/2024	
6		Simplified representation of Synchronous Machines		1	30-08-2024		
7	UNIT-II	Unit-2.0 Power System faults and Stability	12	1	30-08-2024		Lab Class 04/09/2024 11/09/2024
8		Symmetrical Faults: Definition of transients in a transmission lines, Subtransient, transient and steady state period		1	31-08-2024		
9		reactance offered, LLL and LLLG faults		2	03-09-2024		
10		Definition: Short Circuit Capacity (SCC) of a bus, Simple Numerical		1	07-09-2024		
11		Unsymmetrical faults : LG, LL, LLG faults and their effects		2	10-09-2024		
12		Stability: Introduction, Steady state and transients stability,		1	13-09-2024		
13		Steady State stability: static and dynamic stability		1	13-09-2024		
14		Transient stability : swingcurve, Intro to equal area criteria ofstability and its applications		1	14-09-2024		
15		Methods of improving stability		1	17-09-2024		
16		Unit-3.0 Active and Reactive power control		1	17-09-2024		

17	UNIT-III	Introduction to active and reactive power in power system and their sources	16	2	20-09-2024	
18		Requirement of reactive power in power system		1	21-09-2024	
19		Effect of DC excitation on lagging and leading operation of a synchronous machine,		2	24-09-2024	Lab Class 18/09/2024 25/09/2024
20		Vcurve of a synchronous machine		2	27-09-2024	
21		Voltage control in power system: shunt reactor, synchronous phase modifier		1	28-09-2024	
22		shunt capacitors, seriescapacitors, static VAR system and related circuit diagram.		2	01-10-2024	
23	UNIT-IV	Unit-4.0 Elements of Protection and Circuit Interrupting Devices	16	2	04-10-2024	
24		Basic elements of a protective system		1	05-10-2024	
25		Types, causes and effects of various Faults		2	08-10-2024	
26		Protection zones : Backup protection zones		2	15-10-2024	
27		CT and PT: Specifications and Connection diagram (single phase and 3 phase)		2	18-10-2024	
28		Current limiting reactors, Neutral Earthing		1	19-10-2024	Lab Class 09/10/2024 16/10/2024 23/10/2024 06/11/2024
29		Interrupting devices: Sequence of operation and interlocking		2	22-10-2024	
30		Isolators and Fuses: types, features, testing and applications		1	25-10-2024	
31		Construction, working and testing of circuit breakers : Air break, Air Blast, Sulphur Hexa Fluoride (SF6), vacuum and oil circuit breakers		2	25-10-2024	10/26/2024
32		Auto-reclosure, Arc phenomena and extinction		1	05-11-2024	
33		Resistance switching Working principle of arc quenching in HVDC circuit breaker		1	05-11-2024	
34	UNIT-V	Unit-5.0 Introdution Protective Relays and Circuit Breaker	16	2	08-11-2024	
35		Protective relay: Principle of working, construction and operation of electromagnetic induction (shaded pole, watt-hour meter and		1	09-11-2024	
36		Relay Types: Thermal relay, Directional relay, Distance relay		2	12-11-2024	
37		Negativephase sequencerelay, Static relay		1	16-11-2024	
38		Microprocessor based relay: Principle and working of Maintenance and testing of relays		2	19-11-2024	
39		Various faults and abnormal operating conditions in Alternator and its protection schemes Various faults and abnormal occurring in the Motor and its protection schemes		2	22-11-2024	Lab Class 06/11/2024 13/11/2024 20/11/2024 27/11/2024
40		Differential Protection of Bus bars		1	23-11-2024	

41 42 43

1	Over current, Percentage differential and restricted earth fault protection ofTransformers	2	26-11-2024		
2	Inrush phenomenon and over fluxing phenomenon in Transformer	1	29-11-2024		
43	Buchholz Relay,analysis of trapped gases Transmission line protection scheme	1	29-11-2024		
44	Overload protection, Overcurrent and earth fault protection, Time graded and current graded protection, Current balance differential	1	30-11-2024		
45	Carrier aided protection, Carrier inter-tripping, acceleration and blocking scheme	2	03-12-2024		
46	Distance/Impedance protection, Auto reclosing Protection of parallel feeders and Ring Mains	2	06-12-2024		
Total Periods					

Class room instruction date: 20/08/24

HOD(Electrical Engg.)

Subject Teacher:
Name: Vikramaditya
Signature:

Principal

GOVT POLYTECHNIC BIJAPUR

Lession Plan

Course Name: **Structural Design and Drafting-II**
Course code : **2020672(020)**
Semester 6th
Session: ~~June to Dec 2023~~ Jan to June 24

Date	Day	Unite	Class room Instruction	Laboratory Experiment
19/02/2024	Mon	Unit-1 Introduction to IS: 800–2007, Working Stress Method and Plastic Analysis	1.1Introduction to IS: 800 – 2007 1.1.1Structural steel and properties of structural steel 1.1.2Standardstructuralsteel sections 1.1.3Permissiblestressesin structural steel	
22/02/2024	Thu			Draw sketches of different types of bolts
24/02/2024	Sat		1.2Limit state design 1.2.1Limit state of strength 1.2.2Limit state of serviceability. 1.2.3Action (loads) 1.2.4Design strength 1.2.5Partial safety factorfor materials	
26/02/2024	Mon		1.2.6Loads. Load combination and partial safety factors for loads. 1.2.7Maximumeffective slenderness ratio 1.3Introduction to Working Stress Method	
29/02/2024	Thu			Draw sketches of different types oflap and butt bolted joints
02/03/2024	Sat		1.3.1General design requirements Permissible stresses as per section 11 of IS800-2007	
04/03/2024	Mon		1.4.1Assumptions in plastic analysis. 1.4.2Plastic moment, shape factor for different common sections, load factor, concept of plastic hinge 1.4.3Principle of virtual work and calculation of collapse moment for simple beams (simple numerical problems.)	
07/03/2024	Thu	Unit-2Design of bolted and Welded Connections		Design and draw various axially loaded tension members
09/03/2024	Sat		2.1.1Types of bolts 2.1.2Definition of general terms related to bolting, Permissible stresses in bolts	
14/03/2024	Thu			Design and draw various axially loaded compression members
16/03/2024	Sat		2.1.3Types of bolted joints 2.1.4Specifications as per IS 800-2007	
18/03/2024	Mon		2.1.5Failure of bolted joints, strength and efficiency of bolted joint 2.1.6 Design of Bolted Connections (only axially loaded members)	
21/03/2024	Thu			Design and draw M.S. Slab base with concrete pedestal
23/03/2024	Sat		2.2.1Definition of terms related to welded joints 2.2.2 Types of welded joints	

28/03/2024	Thu			Sketching of gusseted base
30/03/2024	Sat		2.2.3Types of welds 2.2.4Strength of welded joint	
01/04/2024	Mon		2.2.5Design of welded joints	
04/04/2024	Thu	Unit-3 Design of Tension and Compression members		Design and draw laterally supported beams
06/04/2024	Sat		3.1.1Types of tension members 3.1.2Sections used as tension members	
08/04/2024	Mon		3.1.3Net sectional area. effective net area 3.1.4Slenderness Ratio 3.1.5Types of failures 3.1.6 Design of axially loaded tension members	
11/04/2024	Thu			Draw different types of trusses
13/04/2024	Sat		3.2.1Standard sections used as compression member 3.2.2Effective length and slenderness ratio	
15/04/2024	Mon		3.2.3Design compressive stress and strength 3.2.4Find design strength of strut	
18/04/2024	Thu			Working drawing of steel roof truss with details of joint
20/04/2024	Sat		3.2.5Design of strut 3.2.6Design of simple columns and built up columns	
22/04/2024	Mon		3.2.7Design of lacings 3.2.8Design of battens	
25/04/2024	Thu	Unit 4 Design of column base and beam		4.1.1Types of column bases Slab base and gusseted base
27/04/2024	Sat		4.1.2Design of M.S. Slab base with concrete pedestal	
29/04/2024	Mon		4.1.3Cleat angles, their use only 4.1.4Sketch of gusseted base	
02/05/2024	Thu			4.2.1Types of beams
04/05/2024	Sat		4.2.2Common sections used as beams	
06/05/2024	Mon		4.2.3laterallysupportedand laterally unsupported beams	
09/05/2024	Thu			4.2.3Web buckling and web crippling
11/05/2024	Sat		4.2.4Design of laterally supported beams for flexure, shear and deflection	
13/05/2024	Mon	Unit 5 Roof Trusses	5.1Types of Trusses 5.2Definitions of terms related to truss	
16/05/2024	Thu			5.3Combination of loads for design of truss
18/05/2024	Sat		5.4Selection of truss 5.5Forces in the member 5.6Design of members of truss	
20/05/2024	Mon		5.7Design of purlin 5.8Detailing of different roof joints and purlin connection	

Teacher's Name and Sign