GPK-F-23

GP Kangra

TRAINING PROCESS ADEQUACY
FACULTY REPORT

1 Department- Electronics & Communication Engineering

Teacher's Name---------Tajdeep Singh

Course- Diploma in E.C.E ---Duration 03 Years---From 2024 To- 2026

Subject ---Digital Electronics--- Total no of period-----56----------

2 Report:

- Delivery needs: - Adequate/ Less then adequate (give details)

- Improvements recommended- Adequate

Date---01/8/2025

Faculty/ Instructor

3 Comments and recommendation:

Date--01/8/2025

HOD

4 Decision /directions:

Date----------

Principal

GPK-F-17

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra	Department: E-C-E Subject Digital Electronics				
	Course Diploma in E-C-E Duration 03 years.				
SYLLABUS COVERAGE	Total Periods 56 Theory 56				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1.	1 to 12.	Number system & Boolean Algebra.	Introduction to different no systems - Binary, octal, decimal Hexadecimal. Conversion from one number system to another. Boolean variables - Rules & Laws of Boolean algebra. De-morgan theorem - K-maps & their use for Simplification of Boolean expression			
2.	13 to 26	Logic Gates	- AND, OR, NOT, NAND, NOR, XOR, XNOR: Symbolic Representation, truth Table: Implimentation of Boolean expressions & logic functions using gates Simplification of expression.			
3.	27 to 38	Combinational Logic Circuits.	- Arithmatic ckts - Addition, subtraction, 1's & 2's compliment. Half Adder, Full Adder, Half Sub. & Full Sub. Parallel & series adders. Encoder, Decoder, Multiplexer 2:1, 4:1, 8:1 mux & their Applications, Demultiplexer 1:2 1:4 & 1:8 Demux.			
4.	39 to 47	Sequential Logic Ckts	- Flip Flops. - SR, JK, T D, JK-MS., Triggering. Counters: 4bit. up-down counter, ~~Ring~~. Asynchronous/ Ripple counter, Decade counter, mod 3, mod 7 counter - Johnson Counter, Ring Counter. Registers			

To be approved from concerned HOD within seven days from beginning of semester & will be kept with the concerned teacher in his file.

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
			-4bit shift Register, SISO, SIPO, PISO & PIPO.			
5.	48 to 56	Memory Devices	classification of Memories, RAM organization, Address line & Memory Size, static RAM, Bipolar Ram, Cell Dynamic RAM, DRAM, DDR RAM. Read only Memory - ROMs organization, Expanding memory, PROM, EPROM, EEPROM, Flash memory. Data Converters. Digital to analog Converters. Analog to Digital converters.			

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date 01/8/2025	HOD Sign
Date	Principal Sign

Use additional sheets (if required).

G P Kangra

GPK-F-18

Practical Planning & Coverage Status

Department: Electronics & Comm. Engg. **Laboratory:** Digital Electronics Lab / Workshop

Course: Diploma in E.C.E **Subject:** Digital Electronics

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	To verify the T-tables for all logic gates NOT OR, AND, NAND NOR, X-OR X-NOR using C-MOS Logic gates & TTL Logic gates	Standard Trainer kit	Trainer kit Manual.					
2.	Implement & Realize Boolean expression with Logic gates							
3.	Implement H.A, F.A, H.S, F.S using IC's.							
4.	Implement parallel & Serial F.A using IC's.							
5.	Design & development of multiplexer & De-mux using Multiplexer IC's.							
6.	Verification of the function of SR, D, JK & T-F.F.							
7.	Design controlled Shift Registers							
8.	Construct a single digit Decade counter (0-9) with 7 segment display. ~~To design~~							
9.	To design a programmable							

Department:
Course:

Subject:

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
	- segment display.							
10.	- Study of different memory IC's.							
11.	Study Digital to analog and Analog to digital converter.							
12	Simulate in Software (such as PSpice) an Analog to digital converter.							

GPK-F-23

GP Kangra

TRAINING PROCESS ADEQUACY FACULTY REPORT

1 **Department**---Electronics & Communication Engineering.

Teacher's Name---Jagdeep Singh.

Course-Diploma in E.C.E---**Duration** -03 years---**From** 2024-**To**---2026

Subject --E.I.L.M.:---------- **Total no of period**-------56.----------

2 **Report**:

- **Delivery needs**: - Adequate/ Less then adequate (give details)

- **Improvements recommended**- Adequate.

Date--01/08/2025

Faculty/ Instructor

3 **Comments and recommendation:**

Date----01/08/2025.

HOD

4 **Decision /directions:**

Date----------

Principal

PLANNED SYLLABUS COVERAGE(Theory)

GPK-F-17

G P Kangra	Department: E.C.E. Subject E.I.&M.	
	Course Diploma in E.C.E. Duration 03 years	
SYLLABUS COVERAGE	Total Periods 56 Theory 56	

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1.	1 to 04	Basic of Measurement.	- Measurement, method of measurement., types of Instruments. - Specifications of Inst: Accuracy Precision, sensitivity, resolution, range, errors in measurement, Source of errors, Loading effect, imp & applications of Standards & calibration			
2.	5 to 18	Transducers	- Distinction b/w active & passive transducers with examp: Basic requirement of transducer. - Principle of operation of the following transducers & their applications in measuring the Physical quantity - variable Resistance Type- - variable capacitance Type - variable inductance Type - Others, Crystal Gate sensor etc)			
3.	19 to 30	Cathode Ray oscilloscope	- construction & working of CRT - Block diagram of CRO - Specification of CRO & explanation - Measurement of current, voltage freq, time period & Phase using CRO - Digital Storage oscilloscope (DSO)			
4.	31 to 38	- Voltage Current & Resistance Measurement.	- Principles of measurement of DC voltage, DC current; Attention Ac current. - Principles of operation & construction of (PMMC) & moving Iron type Instruments			
5.	39 to 47	Signal Generators & Analytical Instruments.	- Explanation of Block diagram specifications of low frequency & RF generator, Pulse generator			

To be approved from concerned HOD within seven days from beginning of semester & will be kept with the concerned teacher in his file.

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
6.	48 to 57	Digital Instruments.	- function generator - Distortion factor meter - Instrumentation Amplifier: its characteristics, need & working - Comparison of Analog & Digital Instruments - Working Principle of Dual slope & integration type digital voltmeter - Block diagram & working of digital multimeter - Specification of Digital multimeter & their application - Limitations of digital multimeters.			

Extra Topics to be covered beyond the scope of the syllabus (as required by industry/ as recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommended	Remarks

Approved / Not approved	
Date 01/8/2025	HOD Sign
Date	Principal Sign

Use additional sheets (if required).

GPK-F-18

G P Kangra
Practical Planning & Coverage Status

Department: **Laboratory:**

Course: **Subject:**

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	To observe the loading effect of a multimeter while measuring voltage across low resistance & high resistance.	Standard Trainer kit.	Trainer kit manual					
2.	To observe the limitation of multimeter for measuring high frequency voltage							
3.	Measurement & plot of characteristics of optical device like photodiode & photocell							
4.	Characteristics of light operated switch using photo-Transistor & LDR							
5.	Measurement Strain using thermistor & thermocouple.							
6.	Measurement of temperature using thermistor & thermocouple							
7.	Measurement of Linear & angular displacement							

Approved/ Not approved
10/09/2025
HOD Sign with date

Principal Signature with date

G P Kangra
Practical Planning & Coverage Status

GPK-F-18

Department:
Course:
Laboratory:
Subject:

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
8.	Measurement of distortion of RF Signal generator using distortion factor Meter.	Standard Trainer kit.	Trainer kit Manual					

Approved/ Not approved
01/09/2025
HOD Sign with date

Principal Signature with date

GPK-F-1

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra

SYLLABUS COVERAGE

Department: ECE Subject ECN

Course Diploma. Duration 3 years.

Total Periods ____ Theory T-58

	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1.		Basics of Network & Network Theorem	Node & Mesh Analysis Superposition theorem Thevenin theorem Norton Theorem Max. Power Transfer Theo Reciprocity theorem	Network Analysis by M.E Van Valkenburg PHI	Engg CKT Analysis by W.H Hayt.	
2.		Graph Theory	Concept of Graph Node tree of Network and incidence matrix Analysis of resistive network using cut set and Tie-set. Duality theorem and their application in the electrical ckt.	-do-	-do-	
3.		Time Domain & Frequency domain analysis	Solution of I & II nd order differential equations for series & parallel R-L, R-C R-L-C CKT. Initial & final conditions in Network elements. Forced & free response time constant, Steady state & Transient state response. Analysis of Electrical ckt using laplace transform for std inputs (unit, Ramp, step)	-do-	-do-	

be approved from concerned HOD within seven days from beginning of semester & will be kept with the concerned teacher
is file.

Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended
4.		Trignometric & Exponential Fourier series	Descrete specka & symmetry of waveform. steady state response of Network to Non-sinusoidal periodic I/P power factor, effective values. Fourier transform & continious specka.	- do -	- do -
5.		Two Port Network	Introduction to the two port N/W and various N/W parameters O.C impedance parameters S.C - " - " - Transmission Parameters Hybrid Parameters	- do -	- do -

Extra Topics to be covered beyond the scope of the syllabus (as required by ind
recommended by Teacher which he/ she finds necessary)

Sr. No.	Period No.	Topic Covered	Instruction Reference	Additional Study recommend d

Approved / Not approved	
Date 01/8/2025	HOD Sign
Date 01/08/2025	Principal Sign

Use additional sheets (if required).

Practical Planning & Coverage Status

Department:
Course:

Laboratory:
Subject:

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date
		Equipment Set up	STD Ref. Write up		
1.	Construct the ckt & plot the VI char. of PN diode & find cut in voltage.	PN diode Trainer Kit			
2.	construct the ckt and plot the VI charcts of Zener diode. find the breakdown voltage.	Zener diode Trainer Kit			
3.	Construct a Half Wave rectifier and obtain regulation charact. with out filters & with filters and compare the result.	Half wave Rectifier Trainer Kit			
4.	Construct a full wave centre tap rectifier and obtain regulation charact. without filter & with filters compare the result.	Full wave rectifier Trainer Kit.			
5.	construct a bridge rectifier and obtain regulation charact. without filters and with filters.	Full wave Rectifier Trainer Kit.			

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Practical Planning & Coverage Status

Department:
Course:

Laboratory:
Subject:

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.
		Equipment Set up	STD Ref. Write up				
6.	Obtain the characteristics of Diac & Triac.	DIAC/TRIAC trainer kit					
7.	Simulate Half wave, Full wave and bridge rectifier using simulation tool kit PSpice/ORCAD Multisim.	PSpice software simulator					
8.	Develop a simulation model for voltage series & voltage shunt feed back amplifier and plot o/p. Compare the result for simulation model & develop ckt.	voltage series & shunt feed back Amp. trainer kit					
9.	Develop a model for current series and current shunt feedback amplifiers.	current series & shunt feed back Amp kit					
10.	Develop ckt for current series & current shunt feed back amp & obtain o/p compare result for both.	-do-					

Approved/ Not approved

01/8/25

HOD Sign with date