

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra SYLLABUS COVERAGE		Department: <u>ECE</u> Subject <u>Essence of Indian Knowledge & Tradition</u>				
		Course <u>Diploma</u> Duration <u>3 years.</u>				
		Total Periods _____ Theory <u>56</u>				
r. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1.		Indian Knowledge System (IKS)	1.1 Introduction & function of Indian Knowledge system 1.2 Basic Structure of Indian Knowledge system 1.2.1 The 4 Vedas namely Rigveda, Yajurveda, Samveda and Atharveda. 1.2.2 The 4 Upvedas namely Ayurveda Healthcare, Dhanurveda, Gandharva- veda and Sthapatya- veda 1.2.3 The 6 Vedangas namely Shiksha, Kalpa, Vyakarna, Chandas, Nirukta & Jyotisha. 1.2.4 Itihasa and Mahabharata & Purana. 1.2.5 Dharmashstra Manusmriti Yajnavalkya - Smriti. 1.2.6 Darshan Nyaya.	Essence of Indian Knowledge and Tradition by Kumar Patil	Indian General Knowledge & Tradition by Dyscent Publication	
2.		Modern Science	2.1 Introduction, characteristics Importance & example. 2.2. Difference between modern Science & Indian Knowledge system 2.3. Role of IKS in modern Science.	-do-	-do-	
3.		Traditional Knowledge.	3.1 Definition, nature characteristics scope & importance 3.2 Indigenous Knowledge characteristics. 3.3 Traditional Knowledge vis-a-vis Indigenous Knowledge 3.4 Traditional Knowledge Vs Western Knowledge. 3.5 Need for protecting Trad. Knowledge.	-do-	-do-	

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
4.		Yoga & Holistic Health care.	4.1 Meaning & Imp. of Yoga 4.2. Yoga & physical health Yoga & intellectual Health Yoga & spiritual Health. 4.3 Introduction to Ashtanga Yoga 4.4 Pranayama & its types. 4.5 Physical Fitness, health & wellness. 4.6 Components of wellness. 4.7. Traditional Sport & Regional games for promoting wellness. 4.8 Leadership through Physical Activity & Sport.	Essence of Indian Knowledge and Tradition by Ram Patil.	Indian General Knowledge & Tradition by Lucient Publications	
5.		Himachal Pradesh: A Basic Information	5.1 History, culture Heritage/ Tradition, Customs & Manners. 5.2 Regional Knowledge, Geographical Features, Constitutional History. Tourism Place & Scope. 5.3 Festivals and Fairs.	-do-	-do-	

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	HOD Sign <i>N. S. H. S. H.</i>
Date	Principal Sign <i>[Signature]</i>

Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

GPK-F-17

G P Kangra		Department: <u>ECG</u>	Subject: <u>BMI</u>			
SYLLABUS COVERAGE		Course: <u>Diploma</u>	Duration: <u>3 years</u>			
		Total Periods: <u>56</u>	Theory: <u>56</u>			
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	1 TO 12	Overview of Medical Electronics Equipments	Classification and specification of diagnostic Equipments. # Therapeutic Equip. # Clinical laboratory equipments # Method of operation of these Equipments.	Modern Electronic Equipments by R-S Handpu (TMI)	Bio Medical Instruments by (Grosswell)	
2	13 TO 22	Electrodes	2.1 Bio Electric signals 2.2 Bio Electrodes. 2.3 Electrode tissue interface. 2.4 Contact Impedance 2.5 Types of Electrodes 2.6 Electrodes used for ECG, EEG.	- do -	- do -	
3	23 TO 36	Transducers	3.1 Typical signal from physiological parameters. 3.2 Pressure Transducers. 3.3 Flow Transducers. 3.4 Temp. Transducers. 3.5 Pulse Respiration sensors.	- do -	- do -	
4	37 to 44	Bio Medical Recorders.	4.1 Block diagram description & Application of following instruments.	- do -	- do -	

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
5.	45 to 51	Patient Monitoring System	4.2 ECG Machine 4.3 EEG, EMG Machine 5.1 Heart rate, Pulse rate measurement 5.2 Respiration rate measurement 5.3 Blood Pressure measurement 5.4 Principle of defibrillation & pacemaker	Moham Electronic Equipment by R.S. Khurshid (TMI)	Biomedical Medical Instruments by (Cromwell)	
6.	52 to 56	Safety Aspect of Medical Instrument	6.1. Ground current shock 6.2. Micro current shock 6.3. Special design for safety consideration 6.4. Safety standards	-do-	-do-	

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PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>ECE</u> Subject <u>Entrepreneurship & Startups</u>				
SYLLABUS COVERAGE		Course <u>Diploma</u> Duration <u>3 years</u>				
		Total Periods _____ Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	1 TO 12	Introduction to Entrepreneurship and Startups.	1.1. Definition and Traits of an Entrepreneur 1.2. Entrepreneurship 1.3. Motivation. 1.4. Types of Business structures. Similarities difference between Entrepreneur and Manager.	Entrepreneurship and Startups by H.C. Saini	The Innovation Dilemma by Clayton M. Christensen	
2	13 to 22.	Business Idea and their Implementation	2.1. Discovering idea and visualizing the business. 2.2. Activity map 2.3. Business Plan.	- do -	- do -	
3	23 to 36	Idea to Startup	3.1. Market Analysis - Identifying the target Market. 3.2. Competition Evaluation & strategy development. 3.3. Marketing & Accounting 3.4. Risk Analysis.	- do -	- do -	
4	37 to 44.	Management	4.1. Company's organizing structure. 4.2. Recruitment & Management of Talents. 4.3. functional organization and management.	- do -	- do -	

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
5.	45 to 51.	Financing and Protection of Ideas.	5.1 Financing Methods Available for startups in India. 5.2 Communication of ideas to potential investors. Investors pitch. 5.3 Patenting & Licences.	Entrepreneurship & Startups by H.C. Saini	The innovation Dilemma by Clayton M Christensen	
6.	52 to 56	Existing strategy	6.1 Exit Strategies for Entrepreneurs, bankruptcy and Succession. 6.2 Harvesting strategy.	- do -	- do -	

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

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Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

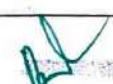
G P Kangra		Department: <u>Electronics & Comm Engg</u>		Subject <u>Digital Comm System</u>		
SYLLABUS COVERAGE		Course <u>PC Course objective</u>		Duration <u>06 months</u>		
SYLLABUS COVERAGE		Total Periods <u>T=56</u>		Theory <u>14x4=56</u>		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
01	1-14 = 14	Unit - 1	- Block Diagram Digital Comm system - Sampling of Lowpass & high pass signal - PAM, PCM quantization etc - Signal to quantization noise Analysis of quantization - Line codes - Band width consideration PCM, TDM - frame structure - synchronization & Bit stuffing	Digital Comm By (Katzson Books)		
02	15-28 = 14	Unit - 2	- quantization Noise Analysis - Digital Adaptive Modulation - Base Band Transmission - Matched filter - Gaussian Noise - Inter symbol interference - Nyquist criterion - Digital Subscribers line	"		
03	29-42 = 14	Unit - 3	- Geometric representation of signals - Maximum likelihood decoding - Correlation receive - matched filter - BPSK - Coherent & Non-Coherent FSK - DPSK - Comparison of Band width etc.			

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
04	43-56 =14	Unit-3 Unit-4	- Bit Rate - digital modulation schemes. - Introduction to Information & Coding - Information theory - Concept of entropy - Shannon entropy - differential entropy - Coding theory - Linear Block codes - definitions & properties.			

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 27/01/2020	HOD Sign 
Date 27/01/2020	Principal Sign 

Use additional sheets (if required).

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>E-C-E</u> Subject <u>Industrial Electronics</u>				
SYLLABUS COVERAGE		Course <u>Diploma in E-C-E</u> Duration _____				
		Total Periods <u>56</u> Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1.	1-16	Introduction to Thyristor family	- Overview of SCR, DIAC, TRIAC - Different methods of SCR triggering - Different commutation CKs for SCR - Series & parallel operations of SCR - Constant current, varying principle of UJT - VI characteristics of UJT & JTT as relaxation oscillator - Brief introduction to Gate Turn off Thyristor (G.T.O)			
2.	17-26	Controlled Rectifier	- Single phase H.W. Bridge Rectifier with R & R-L Load - Single phase fully controlled F.W. Bridge Rectifier R & R-L Load - Single phase fully controlled F.W. Center Taped Rectifier R & R-L Load - Single phase half controlled F.W. Rectifier with R & R-L Load			
3.	27-42	Inverter, chopper, Dual Converter & Cyclo Converter	- Principle operation of Basic Inverter CKs, concept of Duty cycle, Series & parallel inverter & their applications - Chopper: Introduction, Types of choppers (Class A, B, C & D) STEP UP & STEP DOWN choppers - Dual converter, Saw tooth converter Introduction, Types & Basic working principle of dual converter & cyclo converter & their applications			
4.	43-49	Thyristorics control of D-C Drives	- DC Drive control mechanism (Basic working Principles) i) Half wave Drives ii) Full wave Drives iii) Chopper Drives & speed control of DC motor using chopper			
5.	50-56	Applications of Power Electronics Devices	UPS system, its Block diagram & operation - Types of UPS system: on line, off line, line interaction, and their applications -			

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
			- Light intensity control of Lamp using TRIAC - Speed control of universal motor - Fan Regulator - Automatic Battery charger circuit			

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

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Date 27/01/2026	HOD Sign 
Date 27/01/2026	Principal Sign 

Use additional sheets (if required).

Practical Planning & Coverage Status

Department:

E.C.E.

Laboratory: Industrial electronics lab.

Course:

Diplom (Three Years)

Subject: Industrial 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 Plot V-I characteristics of SCR.							
2-	To Plot V-I characteristics of DIAC & measure its break over voltage.							
3-	To Plot V-I characteristics of TRIAC for various firing angles.							
4-	To Plot V-I characteristics of a JT & to use as relaxation oscillator.							
5-	To observe the waveform of voltage at relevant point of angle plane in controlled rectifier & effect of change of firing angle.							
6-	To observe the wave shape of voltage & relevant point of angle plane in uncontrolled rectifier & effect of changed firing angle.							
7-	To observe the wave shape of measurement of voltage at relevant points in TRIAC Based AC Phase Control A.C.T for varying lamp intensity.							
8-	To control the speed of universal motor using SCR.							

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22/01/2026

HOD Sign with date

Principal Signature with date

22/01/2026

Practical Planning & Coverage Status

Department: **ECE**
Course: **Diploma.**

Laboratory:
Subject: **Digital Comm. Lab.**

Sr. No.	Details of Practical	Availability of		Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up					
1.	Pulse Code Modulation & Differential Pulse Code Modulation.	PCM & DPCM Manual Kit		G1 G2				
2.	Delta Modulation & Adaptive Delta Modulation.	DM & ADM Manual Kit.		G1 G2				
3.	Simulation of Bandpass Signal and Reception of ASK, FSK, PSK.	ASK, FSK PSK Manual Kit.		G2				
4.	Performance analysis of B.P. Signal transmission.	ASK, PSK FSK Manual Kit.		G1 G2				
5.	ASK, PSK FSK Implementation of ASK.	ASK Kit Manual.		G1 G2				
6.	Implementation of FSK.	FSK Kit Manual.		G1 G2				
7.	Implementation of PSK.	PSK Kit.		G1 G2				
8.	Time Division Multiplexing PLL (CD4046) BPSK Demodulation & Data Extraction.	(TDN) Manual Kit.		G1 G2				

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Principal Signature with date

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GP Kangra

TRAINING PROCESS ADEQUACY
FACULTY REPORT

1 Department Electronics & Communication Engg.
 Teacher's Name Tajdeep Singh.
 Course Diploma Duration 23 years From 27/01/26 To -----
 Subject Basic of management Total no of period 56

2 Report:

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

Adequate

- Improvements recommended-

Date 27/01/2026

[Signature]
Faculty/ Instructor

3 Comments and recommendation:

Date 27/01/26

[Signature]
HOD

4 Decision /directions:

Date 27/01/2026

[Signature]
Principal

PLANNED SYLLABUS COVERAGE(Theory)

G P Kangra		Department: <u>E.C.E</u> Subject <u>Basic of Management</u>				
SYLLABUS COVERAGE		Course <u>Diploma in E.C.E</u> Duration <u>03 years</u>				
		Total Periods <u>56</u> Theory <u>56</u>				
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
1	1-12	Introduction to Management	- Definitions & concept of management. Functions of management: planning, organising, staffing, co-ordinating & controlling various areas of management. Structure of an organization.			
2	13-25	Self Management & Development	- Life long learning skills. Concept of personality development. Ethics & moral values. Concept of Physical development. Significance of health. Hygiene, Body gestures. Time management. Concept of its importance. Intellectual development. Reading skills, speaking, listening skills & writing skills. Note taking, rough draft, revision, editing & final drafting. Concept of critical thinking & problem solving (approaching, steps & cases)			
3	26-36	Leadership & Motivation	- Meaning. Importance, Types of Leadership & qualities of good leader. Concept & importance of motivation drives and incentives. Types of motivation			
4	37-47	Legal Environment & Business	- a) Various Labour Laws & its necessity. Salient features of Income tax. Act-Computation of Income on salary income. Sales & excise tax Act. VAT & excise duty & factory Act-1948 b) Labour welfare scheme wage			

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Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	Remarks
5-	48-56	Total Quality Management-	payment, types, systems of wage payments & incentives c) - Intellectual Property of Right (IPR) concepts infringement- remedies related to patents, copy right, trademarks & design d) - Accidents & safety measures concept of accident & safety causes, safety precautions & various measures after accident. Meaning and concept of Total Quality management- various factors measure to achieve TQM in an organization - Standards & Code National & International.			

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

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PLANNED SYLLABUS COVERAGE(Theory)

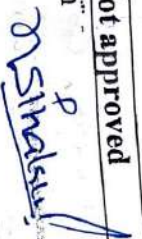
G.P. Kangra		Department: <u>ECE</u>		Subject <u>Microcontroller and Application</u>		
SYLLABUS COVERAGE		Course <u>Diploma (4th)</u>		Duration <u>6 Months</u>		
		Total Periods <u>56</u>		Theory <u>56 + 42</u>		
Sr. No.	Period Nos.	Topic	Details	Instruction Reference	Additional Study Recommended	R. marks
1.	1-8	Introduction	Introduction to microcontroller and Microprocessor, Architecture of 8085, 8086, Intel MCS-51, family feature - 8051, Organisation and architecture.	Micro Controller by Mazidi		
2.	9-19	Programming using 8051	8051 Instruction Set, Addressing Mode, Conditional Instruction, I/O programming. Arithmetic and logical Instruction, Interrupt handling, Programming Counter, timer and stack.	do		
3.	20-27	MCS51 and External Interface.	User Interface Keyboard LCD, LED Real world. Interface. ADC, DAC sensor and Comm. Interface.	do		
4.	28-42	C-programming with 8051	I/O programming timer, counters Serial Communication. Interrupt, User Interface LCD, LED, Keyboard and Comm. Interface.	do		

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
5.	43-56	ARM processor - Core based Microcontrollers	Need of RISC processor ARM processor fundamentals ARM Core based controllers LPC 214x I/O ports ADC / DAC Timer.	do	do	

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Date 27/01/20	HOD Sign 
Date	Principal Sign 

Department: **ECE**
Course: **Diploma**

G P Kangra

GPKE-F-18

Practical Planning & Coverage Status

Laboratory Subject:

Micro Controller and Application Lab

Sr. No.	Details of Practical	Availability of			Likely Turn/Date	Actual Date	Responsibility	HOD Sign.	Remarks
		Equipment Set up	STD Ref. Write up	Kit's					
1.	Programming 8051 MC using ASM's C and implementation of them.	do	do	do					
2.	Programming with AL Instruction.	do	do	do					
3.	Programming using Contracts.	do	do	do					
4.	Programming using Ports.	do	do	do					
5.	Delay generation using timers.	do	do	do					
6.	Programming Interrupts.	do	do	do					
7.	Implementation standard. USART Comm.	do	do	do					
8.	Interfacing LED display.	do	do	do					
9.	Interrupts with Keyboard.	do	do	do					

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Principal Signature with date

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