

Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)

Institute of Technology

Electronics & Communication Engineering

B.Tech – III Semester

S.No.	Name of Laboratories
1.	Electronic Devices Laboratory
2.	Digital Logic Circuit Laboratory
3.	Signal & System (Computer Laboratory)

1. Electronic Devices Laboratory

S.No.	Description of equipment
1	Discrete Components Trainer

2. Digital Logic Circuit Laboratory

S.No.	Description of equipment
1	4-Bit Binary Universal Shift Register
2	Frequency to Voltage Converter
3	Voltage to Frequency Converter
4	TTL Training Board
5	4-Bit Binary Adder
6	Verification of Demorgan Theorem
7	Realization of Boolean Expression & Law
8	Half/Full Adder-Subtractor Trainer
9	Encoder / Decoder
10	BCD to Decimal Decoder
11	one input two output demultiplexer
12	BCD to Seven Segment Decoder
13	Logic Gate Apparatus
14	Decimal to Excess-3 Encoder
15	Excess-3 to Decimal Decoder

16	8:1 Multiplexer & 1:8 Demultiplexer
17	Half & Full Adder / Subtractor Circuit
18	BCD to Decimal Decoder
19	Flip-Flop Trainer
20	Logic Gate Using Ics
21	Four Bit Binary Adder
22	BCD to Seven Segment Decoder
23	CMOS : Interfacing of TTL & CMOS
24	Johnson Ring Counter

3. Signal & System

S. No.	Description of Equipment
1	MATLAB

B.Tech – IV Semester

S.No.	Name of Laboratories
1.	Electronic Measurement & Instrumentation Laboratory
2.	Analog Circuit Laboratory
3.	Data Structure (Computer Laboratory)

1. Electronic Measurement & Instrumentation Laboratory

S.No.	Description of equipment
1	Anderson Bridge
2	Maxwell Bridge
3	De-sauty Bridge
4	Schering Bridge
5	Wein Bridge (Frequency)
6	Wein Bridge (Series)
7	Hays Bridge
8	LVDT Trainer

9	Thermo-couple CE
10	Ballistic Galvanometer Range-125 Ohm

2. Analog Electronics Laboratory

S. No.	Description of equipment
1	NI Elvis
2	Analog Circuit Lab Trainer
3	Two Stage Direct Coupled Amplifier Using Transistor
4	H-parameters of Transistor
5	Transistor Amplifier Trainer
6	Single Stage CC Amplifier (Emitter Follower)
7	Class A Amplifier
8	Class B Amplifier
9	Class C Amplifier
10	Transformer Coupled Class A Amplifier
11	Negative Feedback in CE Amplifier
12	Hartlely & Collpit Oscillator
13	JFET as Amplifier
14	RF Single & Double Tuned Amplifier
15	Push-Pull Amplifier
16	Complementary Symmetry Push-Pull Amplifier
17	RC Phase Shift Oscillator
18	Wien Bridge Oscillator

3. Data Structure (Computer Laboratory)

In this lab students perform programming C++ related to syllabus.

B.Tech – V Semester

S.No.	Name of Laboratories
1.	Linear Integrated Circuit Laboratory
2.	Microprocessor & Its Application Laboratory
3.	Communication System Laboratory - II (Analog / Digital)

1. Linear Integrated Circuit Laboratory

S.No.	Description of Equipment
1	Op-Amp Trainer
2	Linear IC Trainer

2. Microprocessor & Its Application Laboratory

S.No.	Description of Equipment
1	Microprocessor 8085 Trainer

3. Communication System – II Laboratory (Analog / Digital)

S.No.	Description of Equipment
1	Signal Sampling & Reconstruction
2	PAM Transmitter / Receiver
3	PCM Transmitter
4	PCM Receiver
5	Delta Modulation
6	Data Conditioning / Carrier Modulation
7	Carrier Demodulation / Data Deconditioning
8	Fiber Optics Trainer
9	Phase Modulation
10	Pulse Coded Modulation & Demodulation

11	Amplitude Modulation & Demodulation
12	Amplitude Modulation Transmitter Kit
13	Amplitude De-modulation Receiver Kit
14	Frequency Modulation Transmitter Kit
15	Frequency De-modulation Receiver Kit
16	FDM Transmitter & Receiver Trainer Kit
17	Fourier Synthesis Kit
18	Signal Generator / Frequency Modulation Kit
19	AM/DSB/SSB Kit
20	Amplitude Demodulation Kit
21	Frequency Demodulation / Phase Modulation
22	Filter / Noise and Audio Amplifier Kit
23	Digital Communication Training System
24	Adv. Digital Communication Training System

B.Tech – VI Semester

S.No.	Name of Laboratories
1.	Digital Signal Processing Laboratory
2.	Advance Communication
3.	Digital Hardware Design

1. Digital Signal Processing Laboratory

S.No.	Description of Equipment
1	DSP Starter Kit (Spectrum Digital)

2. Advance Communication

S.No.	Description of Equipment
1	Digital Communication Training System
2	Adv. Digital Communication Training System

3. Digital Hardware Design

S.No.	Description of Equipment
1	Microprocessor 8086 Training Kit

B.Tech – VII Semester

S.No.	Name of Laboratories
1.	VLSI Design & VHDL Laboratory
2.	Microwave Engg.

1. VLSI Design & VHDL Laboratory

S.No.	Description of equipment
1	Xilinx Spartan 3E FPGA Trainer
2	Universal VLSI Trainer

2. Microwave Engg. Laboratory

S.No.	Description of equipment
1	Microwave Test Bench

B.Tech – VIII Semester

S.No.	Name of Laboratories
1.	Optical Fiber Communication Laboratory
2.	Circuit Simulation Laboratory

1. Optical Fiber Communication Laboratory

S.No.	Description of Equipment
1	Fiber Optic Analog Transmitter Kit
2	Fiber Optic Analog Receiver Kit

3	Fiber Optic Analog & Digital Modulation/Demodulation Kit
4	Fiber Optic Adv. Digital Communication Kit
5	Fiber Optic Communication Trainer Kit
6	Adv. Fiber Optic Communication Trainer Kit
7	Basic Fiber Optic Trainer Kit
8	Physics of Fiber Optic Trainer Kit
9	Laser Diode & Glass Fiber Based Fiber Optic Trainer Kit
10	Optical Power Meter
11	Optical Light Source
12	Dual Wavelength Fiber Optic Laser Source & Detector Module
13	Fiber Optic Passive Component Module
14	Single mode Fiber Optic Cable Module
15	Chromatic Dispersion Module
16	CSK connectorisation cum splicing kit 1km fiber optic cable

2. Circuit Simulation Laboratory

S.No.	Description of equipment
1	ED WINXP VERSION 1.70 Integrated EDA Package