



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in the Light of NEP-2020

| COURSE CODE | CATE-GORY | COURSE NAME | TEACHING & EVALUATION SCHEME | | | | | | | | |
|----------------|-----------|-----------------------------|------------------------------|---------------|----------------------|-------------------------|----------------------|---|---|---|---------|
| | | | THEORY | | | PRACTICAL | | L | T | P | CREDITS |
| | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* | | | | |
| GUEE202 | GE | Consumer Electronics | 60 | 20 | 20 | 0 | 0 | 3 | 0 | 0 | 3 |

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit.

***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Educational Objectives (CEOs): -

1. Build an understanding of the fundamental concepts of Consumer Electronics.
2. Familiarize the student with the equipment's like microphone, speakers, and TV.
3. Introduce the student to working of digital cameras, washing machine, microwave oven etc.

Course Outcomes (COs): -

1. Analyze various measuring instruments.
2. Maintain and troubleshoot different microphones and speakers
3. Analyze composite signals used in TV transmission
4. Troubleshoot color TV receiver.
5. Maintain various consumer electronics appliances.

Syllabus

UNIT I

Introduction to Electronic Instruments, Multimeter – Features, Block Diagram, Safety Precautions, CRO – Block Diagram, Measurement of amplitude, time period, frequency using CRO, DSO – Block Diagram, Principle of Operation

UNIT II

Basic Characteristics of sound signals: Level, Loudness, Pitch, Frequency Response, Fidelity, Sensitivity, Selectivity, Audio Amplifiers: Basic Operation, Types, Microphone: Working Principle, Characteristics, Types, Speaker : Working Principle, Characteristics, Types

UNIT III

CD Player : Block Diagram, Operations, Types, Hi Fi Amplifier: Block Diagram, Working, PA System : Block Diagram and Operation, MP3: Block Diagram, working principle.

UNIT IV

Color TV Receiver - Block Diagram and operation, LCD/LED Technology – Principles and working of LCD and LED TV, DTH – Concept, Block Diagram, Indoor and Outdoor unit, Block Diagram and working of OLED.

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UNIT V

Photocopier - Block Diagram, Working, Microwave Oven : Block Diagram, wiring and safety instructions, Electrical Specifications, Washing Machine : Block Diagram, Electrical Specifications, Types, Digital Camera, Cam coder: Basic Introduction.

Text Book:

1. S.P.Bali , “Consumer Electronics”, Pearson Education, 2014.
2. Dr.B.R.Gupta, V. Singhal, “Consumer Electronics” , Katson Publications, 2013.

References:

1. R.G. Gupta, “Audio Video System Principles, Maintenance and Troubleshooting”, McGraw Hill. 2010.
2. A.M. Dhake , “Television and Video Engineering, , McGraw Hill, 2006.

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