



**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*				
<b>GUEE202</b>	<b>GE</b>	<b>Consumer Electronics</b>	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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