

St. Xavier's College (Autonomous), Ahmedabad-9
BSc. Physics
Semester I

Elective: Introduction to Digital Electronics

Course Code: EG 1301

No. of Credits: 02

Learning Hours: 30 hrs

Unit: 1

- Digital Principles
- Definition for digital signals
- The basics gates – NOT, OR, AND
- Universal logic gates – NOR, NAND
- AND-OR Inverter gates
- Positive and Negative logic

Unit: 2

- Boolean laws and theorems
- Sum of products method
- Binary number system
- Binary to Decimal conversion
- Decimal to Binary Conversion
- Binary addition
- Binary Subtraction

Unit:3

- Multiplexer
- Demultiplexer
- 1 of 16 Decoder
- BCD to Decimal Decoder
- Seven Segment
- Encoder
- RS Flipflop
- Gated Flipflop
- Edge triggered RS flipflop
- Edge triggered D flipflop
- Edge triggered JK flipflop