

UTKALMANI GOPABANDHU INSTITUTE OF **ENGINEERING, ROURKELA**



LESSON PLAN

SESSION: 2022-2023

DEPARTMENT OF ELECTRONICS AND **TELECOMMUNICATION ENGINEERING**

SUBJECT CODE: Th.3

NAME OF THE SUBJECT: DIGITAL ELECTRONICS

BRANCH: ELECTRONICS & TELECOMMUNICATION

SEMESTER: DIPLOMA 3rd SEM

NUMBER OF CLASSES ALLOTTED PER WEEK : 4

**TOTAL PERIODS ALLOTTED TO THE SUBJECT ACCORDING TO
SCTEVT: 60**

NAME OF THE FACULTY: MANASI PRIYADARSHINI

UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING,ROURKELA



LESSON PLAN

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SUBJECT CODE: Th.3

NAME: DIGITAL ELECTRONICS

BRANCH: ELECTRONICS & TELECOMMUNICATION

SEMESTER: DIPLOMA -III

PERIODS PER WEEK: 4

NAME OF THE FACULTY: MANASI PRIYADARSHINI

NO OF CLASSES ALLOTTED PER WEEK : 4(15/09/2022 to 22/12/2022)

Week/Date	Lecture	Topic to be covered	Remarks
1 st week 15/09/2022 To 17/09/2022	1 st	Chapter-1 Introduction to digital electronics	
	2 nd	Number system	
	3 rd	Interconversion of number systems Binary arithmetic operation	
2 nd week 19/09/2022 To 24/09/2022	1 st	1's & 2's complement	
	2 nd	Subtraction using 1'S and 2's complement	
	3 rd	Codes, BCD code	
	4 th	Ex-3, gray, alphanumeric codes	
3 rd week 26/09/2022 To 01/10/2022	1 st	Logic gates	
	2 nd	Universal gates	
	3 rd	Boolean algebra	
	4 th	DeMorgan's theorem	

UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SUBJECT CODE: Th.3

NAME: DIGITAL ELECTRONICS

BRANCH: ELECTRONICS & TELECOMMUNICATION

SEMESTER: DIPLOMA -III

PERIODS PER WEEK: 4

NAME OF THE FACULTY: MANASI PRIYADARSHINI

NO OF CLASSES ALLOTTED PER WEEK : 4(15/09/2022 to 22/12/2022)

4 th week 03/10/2022 To 08/10/2022	1 st	Minterm and Maxterm	03/10/2022 TO 08/10/2022(durga puja holidays)Need four extra classes for adjustment
	2 nd	k-map (2 & 3 variable)	
	3 rd	4-variable k-map	
	4 th	Don't care condition, problem	
5 th week 10/10/2022 To 15/10/2022	1 st	Combinational logic circuit, half adder and full adder	
	2 nd	Half Subtractor and full subtractor	
	3 rd	Parallel adder, serial adder(4 bit binary adders)	
	4 th	Multiplexer (4:1) mux	
6 th week 17/10/2022 To 22/10/2022	1 st	Multiplexer application	
	2 nd	Demultiplexer	
	3 rd	Encoder	
	4 th	Decoder	

UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SUBJECT CODE: Th.3

NAME: DIGITAL ELECTRONICS

BRANCH: ELECTRONICS & TELECOMMUNICATION

SEMESTER: DIPLOMA -III

PERIODS PER WEEK: 4

NAME OF THE FACULTY: MANASI PRIYADARSHINI

NO OF CLASSES ALLOTTED PER WEEK : 4(15/09/2022 to 22/12/2022)

Week/Date	Lecture	Topic to be covered	Remarks
7 th week 24/10/2022 To 29/10/2022	1 st	Digital magnitude comparator	24/10/2022(holiday)Need one extra class for adjustment
	2 nd	3-bit magnitude comparator	
	3 rd	Seven segment decoder	
	4 th	Sequential logic circuit	
8 th week 31/10/2022 To 05/11/2022	1 st	Latch	
	2 nd	S-R Flip-flop	
	3 rd	J-K flip-flop	
	4 th	Race-around condition	
9 th week 07/11/2022 To 12/11/2022	1 st	T flip-flop	08/11/2022(holiday)Need one extra class for adjustment
	2 nd	Application of flip-flop	
	3 rd	Registers	
	4 th	SISO shift register	

UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SUBJECT CODE: Th.3

NAME: DIGITAL ELECTRONICS

BRANCH: ELECTRONICS & TELECOMMUNICATION

SEMESTER: DIPLOMA -III

PERIODS PER WEEK: 4

NAME OF THE FACULTY: MANASI PRIYADARSHINI

NO OF CLASSES ALLOTTED PER WEEK : 4(15/09/2022 to 22/12/2022)

Week/Date	Lecture	Topic to be covered	Remarks
10 th week 14/11/2022 To 19/11/2022	1 st	Registers, SIPO shift register, PISO shift register	
	2 nd	Universal shift register	
	3 rd	Types of counters and counter application	
	4 th	Binary Counters and asynchronous ripple counter(up and down)	
11 th week 21/11/2022 To 26/11/2022	1 st	Decade counter	
	2 nd	Synchronous counter	
	3 rd	Design of asynchronous counter	
	4 th	Ring counter	
12 th week 28/11/2022 To 03/12/2022	1 st	RAM, ROM, STATIC RAM, DYNAMIC RAM	
	2 nd	Logic families	
	3 rd	Characteristics of digital ICs	
	4 th	Transistor-transistor logic	

13 th week 05/12/2022 To 10/12//2022	1 st	CMOS logic	
	2 nd	Introduction to ADC	
	3 rd	Introduction to DAC	
	4 th	Weighted-resistor type DAC	
14th week 12/12/2022 to 17/12/2022	1 st	R-2R ladder type DAC	
	2 nd	Basic principle of ADC	
	3 rd	Counter type ADC	
	4 th	Successive approximation type ADC	
15 th Week 19/12/2022 to 24/12/2022	1 st	Chapter wise long question and short question discussion	Classes will be continued upto 22/12/2022 as per academic calender
	2 nd	Semester Question discussion	