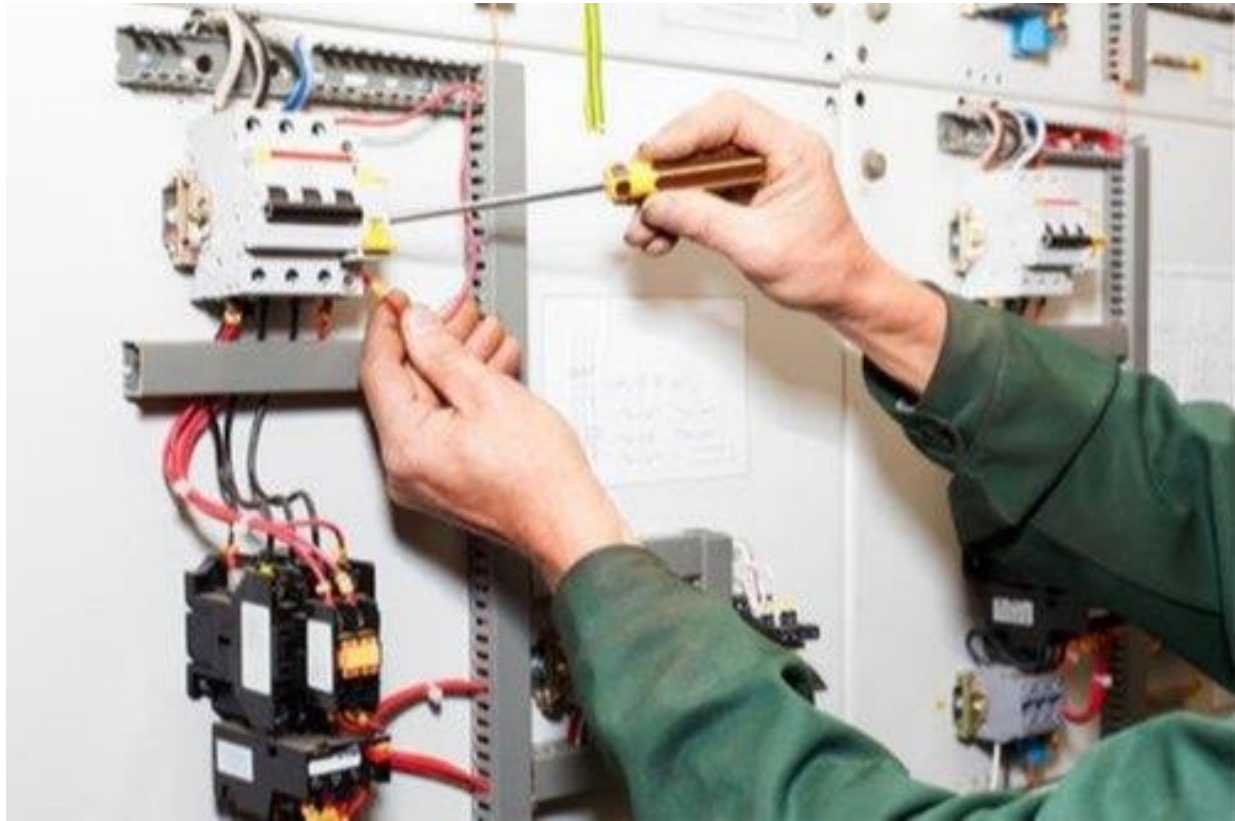


COURSE TITLE-Advanced Techniques in Circuit Wiring (ATCW)

COURSE CODE- DC-03-02

PERIODS/SEMESTER-35

CREDITS – 3



TIME SCHEDULE

MODULE	TOPICS	PERIODS
1	Fundamentals of Circuit Wiring.	6
2	Measurement, Testing and calibrations.	8
3	Domestic wiring of electrical appliances.	8
4	Residential wiring and circuit fabrication.	8
	Activity / Practical / Exam / Viva	5
Total		35

Course Objectives:

Module	Objectives
1	To build the strong foundation in various electrical quantities and electrical equipments.
2	To provide students with the information of measuring instruments in the field of electrical engineering.
3	To provide good information and foundation the working and maintenance of domestic equipments.
4	To provide students about the strong information of electrical loads and fuses.

Course Outcomes

SL	Sub	On completion of this course the student will be able:
1	1	To familiarize with wiring accessories and their functions
	2	Energy consumption calculations in residential domain
2	1	Measurement and testing of electrical parameters and components using Multimeter
3	1	To know the connection methodology of domestic appliances
4	1	To comprehend the knowledge of Residential wiring
	2	To Understand and design simple lighting circuit

SPECIFIC OUTCOMES

SL NO	TOPICS	CO	Taxonomy Level
MODULE 1			
1	Understanding various Electrical quantities	1	Understand
2	Measurement of resistance using colour coding	1	Apply
3	Biasing of PN junction Diode	1	Understand
4	Residential wiring components and their function	1	Analyse
5	Energy consumption Calculation	2	Evaluate
SL NO	TOPICS	CO	Taxonomy Level
MODULE 2			
1	Measurement of electrical parameters using Multimeter	1	Apply
2	Continuity Testing method in Electrical connections	1	Apply
3	Supply testing using Tester	1	Apply
4	Testing of Electronic components in Electrical appliances	1	Analyse

5	Earth Testing	1	Apply
6	Measurement of phase and line voltages 3 phase connection	1	Apply
7	Soldering practice		Apply

SL NO	TOPICS	CO	Taxonomy Level
MODULE 3			
1	Wiring and connection method in Ceiling Fan	1	Understand
2	Wiring and connection method in Fluorescent lamp	1	Understand
3	Replacement of capacitor in induction motor	1	Apply
4	External wiring of single lamp controlled by 1 way switch	1	Create

SL NO	TOPICS	CO	Taxonomy Level
MODULE 4			
1	Connection of Fuse wire in Kitkat fuse unit	1	Apply
2	Complete wiring of Distribution Board	1	Create
3	Design, fabrication and wiring of a switch board with socket	1	Create
4	Residential wiring from energy meter up to Switchboard with loads	1	Create
5	Design and fabrication of simple circuit of lighting (LED)	2	Create
6	Practice on crimping of Lugs	1	Apply

Bloom's Taxonomy Domain	Percentage Distribution
Remembering- R	0
Understanding- U	18.18%
Applying-P	45.45%
Analysing- A	9.09%
Evaluating-E	4.45%
Creating - C	22.72%

Marks Distribution

Attendance	Exam	Report	Activity / Practical	Viva	Total
20	20	10	40	10	100

Reference Books

- Electrical Design Estimating and costing-New age international publishers- K.B Raina,S.K Bhattacharya
- Electrical Technology Vol 1-S Chand- B.L Thereja,A.K.Thereja
- Electrical Installation Estimating and costing- J.B.Gupta

- Home Electrical wiring – David .W.Rongey
- Electrical Wiring estimating and costing –Khanna Publishers-Dr.S.L.Uppal,G.C.GarG

Video Resources

- Digital Multimeter usage - www.youtube.com/watch?v=vjbaH8qnO-U
- Designing of extension Box - www.youtube.com/watch?v=gWMH-zIph_g
- Usage of crimping tool - www.youtube.com/watch?v=EMSVckWBYHU

Grading System

Grade	Grade Point	Mark Range
S	10	mark > 90 %
A	9	80% < mark < 90%
B	8	70% < mark < 80%
C	7	60% < mark < 70%
D	6	50% < mark < 60%
E	5	40% < mark < 50%
F	0	mark < 40%

Note : Students securing Grade point of 5 or more will be treated as qualified in this course.

Employment Opportunities:

1. Electrical Site Engineer/Supervisor.
2. Electrical harness design engineer.
3. Electrical wiring maintenance Engineer.
4. Electrical Wiring Designing Engineer.
5. Electrical wiring consultant.
6. Electrical System Installer.