SMART TRAINERS

LESSON PLAN FOR

ETAP for Electrical Engineers

COURSE TITLE: **ETAP for Electrical Engineers**		No. of Lectures: **54**
COURSE INSTRUCTOR: **Chandar Kumar**		
Batch: **03**	Course Starting Date: 30/05/2025	Course Suspension Date: 30/07/2025

COURSE LEARNING OUTCOMES: Upon successful completion of the course, the student will be able to:

Design and simulate power systems, Simulate AC Power systems, Simulate DC Power systems

Conduct stability studies, Conduct studies for Load dispatching, Simulate Industrial Power networks

LESSON CONTENTS AND ASSOCIATED CLO(s)

Contents		Marks Assigned	Delivery Methods	Assessmen Methods (Marks)
1) Introduction 2) ETAP Toolbars 3) Drawing a Single Line Diagram 4) Rating Components 5) Presentation Toolbar 6) Load Flow Analysis - Part 01 7) Load Flow Analysis - Part 02 8) Load Flow Analysis - Part 03 9) Short Circuit Analysis - Part 01 10) Short Circuit Analysis - Part 02 11) Arc Flash Studies – Part 01 12) Arc Flash Studies – Part 02 13) Transient Stability Analysis 14) Harmonic Analysis – Part 01 15) Harmonic Analysis- Part 02 16) Harmonic Analysis – (Filter Sizing) 17) Motor Acceleration Analysis I- Static Motor Starting 18) Motor Acceleration Analysis II- Dynamic Motor Starting 19) Motor Acceleration Analysis III- Motor Starter 20) Motor Acceleration Analysis IV- VFD Starting		50%	Recorded Lectures & Practical work	Tests & Projects

21) Ground Grid Systems 22) Ground Grid Systems - IEEE 80 23) Ground Grid Systems –FEMA 24) Cable Pulling Systems –I 25) Cable Pulling Systems –II 26) Cable Ampacity 27) Underground Raceway Systems 28) Coordination Basics 29) Protection Coordination – I 30) Protection Coordination – II 31) Bus bar Differential Protection 32) Transformer Differential Protection 33) Motor Protection 34) Directional Overcurrent Protection 35) Over & Under Voltage Protection 36) Over & Under Frequency Protection 37) Reverse Power Protection 38) Distance Relay Protection- I 39) Distance Relay Protection- II 40) Distance Relay Protection- III 41) Revision Control 42) Wizard Toolbar 43) DC Load Flow 44) DC Short Circuit & Arc Flash 45) Battery Sizing Calculation 46) Photovoltaic Systems 47) Wind Power 48) Optimal Power Flow 49) Unbalanced Load Flow 50) Optimal Capacitor Placement 51) Switching Sequence Management 52) Contingency Analysis 53) DC Control wiring systems 54) Transient Stability		50%	Online Lectures & Practical work	Test

……GOOD LUCK……