WELCOME TO

CCENTRIC LEARNING EDGE PVT. LTD.

We generate professionals

Shaping Careers
Transforming Lives...

www.ccentriclearning.com

CCENTRIC LEARNING EDGE PVT LTD
we generate professionals...

ITI LIMITED, RAE BARELI
(A GOVT.UNDERTAKING)

National Productivity Council

MESSAGE FROM THE CEO

Er. SACHIN SANGAL

I DISAGREE THAT THE COURSES CAN BE TAUGHT INDEPENDENT OF INDUSTRIAL EXPOSURE

I fiercely believe that in this fast-paced setting when the engineering ecosystem is in a constant state of change, we need a workforce of students who are industry-ready and have their fingers on the pulse of the industry.

A degree, alone cannot assure employment. Good grades alone cannot make you successful. It is the amalgam of the right skills and right attitude that makes all the difference in the careers and this is where we come into the picture.

We at the Ccentric, strive to advance the careers of engineering graduates in the right direction by facilitating their career growth through our industry-ready, Targeted, hands-on skill training programs that have long been missing in the industry's education system.

OVERVIEW

Ccentric Learning Edge Pvt Ltd is one of the leading and notable organizations which was incubated with an intent to **resolve the much prevalent "skills-gap challenge between academia and industry".**

- By offering graduates the **"innovative"** and **"industry-focussed"** programs in engineering sector, Ccentric Learning Edge Pvt Ltd provides these students with an opportunity to work hand in glove with the world's leading companies like ***Anchor Electricals Pvt Ltd, Panasonic, Siemens, Havells, Arktron Electronics Pvt Ltd, Maxop Engineering Company Private Limited, Bajaj and many more.***

In less than 2 years, the company has already emerged **as the most preferred and sought-after training and skill development partner** for numerous leading firms and industry giants.

SHAPING CAREERS... TRANSFORMING LIVES...

WHAT WE DO ?

In the present context of globalization and in the shifting economy such as ours; the demand for a skilled workforce is more than ever! Here Ccentric Learning Edge Pvt Ltd comes into the picture.

- We offer the students a practical, industry-focused learning and skill-based training to help them to navigate the perplexing employment, landscaping that will lead them to their dreams.
- The skills that we invest in absolutely conform to the requirements of the engineering industry.

REVOLUTIONIZING THE WAY STUDENTS LEARN...

SALIENT FEATURES

- Customer-centric organization
- Learning by doing
- Skill centric, industry-oriented programs
- Unmatched industrial exposure
- High ROI programes and courses
- Backed by industry giants like ITI Limited
- Rewarding certifications
- Assured job placements

WORKFORCE

Ccentric Learning Edge Pvt Ltd is empowered with a highly competent and committed team of 36+ experts with hands-on mastery in their respective technical domains. The team is a like-minded bunch, that is driven by a passionate and a growing mindset to help students achieve their goals.

The study centre with a build-up area of **2,00,000 sq. ft.** is equipped with state-of-the-art, top-quality equipment and tools that are utilized in engineering industry.

MISSION

In the years to come, Cle ("Ccentric Learning Edge") aims to establish itself as a **center of learning** by bringing a dynamic revolution in the academic realm through its skill-centric and industry-focussed A+ programs and interventions.

VISION

We intend to make minmum two thousand (2000) students employable by 2025.

WHY US ? WHAT MAKES US DIFFERENT ?

- In just two 2 years, Cle has already established a strong footing in the education landscape.

- It has gained the unique distinction of being one of the best-specialized education and training institutes that offers the graduates career-specific, industry-friendly and hands-on training and programs which are in sync with the evolving trends and demands of the technology industry.

- Our collaboration with industry giants and major enterprises like **ITI LIMITED** offers an unrivalled advantage to the students in terms of industrial exposure and is a testament to the high and unmatched credibility factor of Cle.
  • All the programs and courses are curated keeping in mind the current relevance of skills and also their pertinence in times to come.

- We believe in delivering quality at its zenith. We are dedicated towards quality and meaningful programmes in fields of technology.

THE ESSENCE OF CLE...

OUR VALUE GUIDES OUR ACTION.

- **Excellence:** We deliver the best, high impact programs and believe in continuous striving for excellence.
- **Collaboration:** We believe in the power of "Co". Innovation through collaboration is what we strongly believe in. **"Together We Grow"** is the soul and spirit of Cle.
- **Innovation:** Ours is a progressive and futuristic culture, and we constantly push for innovation.
- **Integrity:** We are honest, transparent, and fair in all our actions. Integrity is something that is non-negotiable for us.

OUR

"CAMPUS TO INDUSTRY" PROGRAM

AND COLLABORATION WITH INDUSTRY GIANT LIKE **INDIAN TELECOM INDUSTRY, BANGALORE (ITI LTD).**

We understand that in the dynamic and ever-evolving domains like engineering and technology, **a collaboration between industry and academia is the only way forward.**

- **Over the past few months, Cle has created a series of different partnerships, supporting our roadmap. But no example better demonstrates the same than our collaboration with ITI Limited.**
- **Ccentric has collaborated with ITI Limited for its program "Campus to Industry" with the aim to speed up the workforce, skill acquisition, and development in the engineering and telecom landscape.**

- ITI Limited (PSU) is one of the undisputed leaders in the engineering and telecom realm whose state-of-the-art manufacturing facilities are in multiple locations (1. Raebareli, 2. Jammu, 3. Bangalore, 4. Naini, 5. Mankapur, 6. Palakad are equipped with advanced machinery).

- By partnering with ITI Ltd. The Raebareli Unit is our driving platform for our program called "Campus to Industry", we are equipped enough to offer the students "the optimized learning environment' imperative for their career's growth.

- During our this program of ours, in collaboration with ITI Ltd., students will undergo meticulous training in-demand and future technologies as well as enhanced problem-solving, analytical, and critical thinking skills.

- Owing to this partnership, our students would get extensive access to the much needed resources, infrastructure and tools which would, in turn, facilitate the skills acquisition process of students.

- Students will get to work alongside ITI's staff in its dedicated laboratory which will give them a detailed insight into industrial know-how and make them technically competent.

- This working experience of 4 months in ITI Ltd. will aid the students better understanding of the engineering industry. They will become trained in highly skilled industrial applications, and build a strong network with experts and fellows in the IT field, which can positively contribute to the future career development of the students.

> **IN SHORT, OUR COLLABORATION WITH ITI LTD. WILL PROVIDE STUDENTS WITH A 360 DEGREE LEARNING EXPERIENCE WHICH IS SO VERY VITAL FOR THEM TOFLOURISH IN THEIR PROFESSIONAL WORLD.**

HOSTEL FACILITY INSIDE THE CAMPUS

We understand how hard it is for the students to stay away from home. This is the reason we make every effort to make their stay as comfortable, hassle free, and homely as possible.

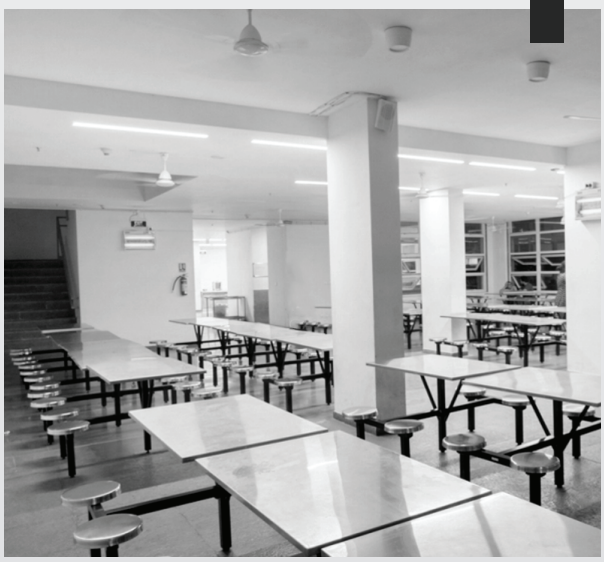
As we have already partnered with ITI Limited, our organization Cle takes the utmost care of the students enrolled in the program.

The hostel rooms in the ITI's campus clearly demonstrate high standards of accommodation and are equipped with all necessary amenities.

We make sure that the students have a pleasant and agreeable environment at the hostel which is also conducive to their learning.

MESS FACILITY

Along with the quality accommodation, we will take care of the food services as well. Mess facility to cater to the food needs of students is provided. The food safety practices are being followed strictly to ensure quality and safe food to the students. High standard hygiene and sanitation is maintained all around.



FEE STRUCTURE

When it comes to transformational skills and knowledge, money isn't the focus at all. Thereby, we at Ccentric have endeavored to make our **"Campus to Industry"** program accessible at minimal operational charges.

> ALL WE SEEK IS TO EQUIP THE STUDENTS WITH **CAREER-SHAPING SKILLS AND INNOVATIVE CAPABILITIES** TO EXCEL.

Component of the fee structure is as follows:

- Rupees **5,000 + GST** at the time of enrollment
- Rupees **5,000 + GST** per month for a period of 4 months each during the training period at the ITI Campus
- Rupees **25,000 + GST** at the time when the students will be provided with a worthy job
- Rupees **5,000 + GST per month for a period of 4 months** for the Boarding & Lodging

Thereby, the total fees for the program will be ₹50,000 + GST (excluding accommodation and mess).

National Productivity Council (NPC)

National Productivity Council of India (NPC), established in the year 1958, is an autonomous organization under Department for Promotion of Industry & Internal Trade, Ministry of Commerce and Industry, Government of India, having mission – " Contribute to the sustainable, inclusive socio-economic development of the country by enhancing productivity"

National Productivity Council (DPIIT, Ministry of Commerce & Industry, Govt of India) and Ccentric Learning Edge Pvt Ltd hereby presents, On-Campus setup opportunity for students to imbibe and empower in operational excellence including specific industry requirements with new disruptive technologies of Industry 4.0. The training modules have been designed, keeping in mind the the requirement of various industries.

Cle Join hands to shape up career of Future Engineers with NPC ,in the latest and advanced technology in the field of Engineering Science.

HIGH ROI PROGRAMS...

ALL THE PROGRAMS ARE PURE VALUE FOR MONEY

If we measure the cost of the training program against the benefits it brings to the students, it can be clearly said that ROI of this program is quite high.

LET'S SEE HOW ?

As already mentioned, **the total fee for the training program of 4 months, would add up to be around ₹50,000 plus GST**. Now we at Cle make sure that every student gets placed at an esteemed organization that will pay them **₹20,000 - ₹25,000 per month. ₹20,000 is the minimum salary that would be offered to these students.**

This way if we calculate, the entire amount invested for the program will be covered in the period of **just 3 to 4 months** when students land up with a job at an organization.

CCENTRIC'S CRITERIA FOR SELECTING THE STUDENTS:

We believe in 'Quality Education' and keeping Industrial expectations into consideration, Therefor, we follow an orderly procedure of scrutinizing the candidates for the enrollment into the course. Students who successfully complete the following courses are eligible to apply:

- **BACHELOR IN ELECTRICAL ENGINEERING**
- **BACHELOR IN ELECTRONICS AND COMMUNICATION ENGINEERING**
- **BACHELOR IN MECHANICAL ENGINEERING**

Candidates are required to clear the online aptitude test on the following modules for the first round of qualification. The aptitude test comprises of the following topics:

- **ARITHMETIC**
- **LOGICAL REASONING**
- **ENGINEERING BASICS**
- **IQ**
- **COMMUNICATION SKILLS**

Candidates are evaluated on the basis of their potential and interests, based on which they undergo a specialized "4-month Comprehensive Training Program" of Industrial Training.

- **COMMUNICATIVE ENGLISH & SOFT SKILLS TRAINING**
- **BUSINESS COMMUNICATION (DRAFTING A MAIL AND REPLYING TO IT)**
- **TECHNICAL DOCUMENTATION SECTION WISE**
- **BODY LANGUAGE & DRESSING**

HANDS-ON INDUSTRIAL TRAINING AT CENTER OF EXCELLENCE (COE) (4 MONTHS)

Cle offers the following skill development courses in different functional areas of various Manufacturing Industries.

SR.NO.	COURSE	ELIGIBILITY	DURATION
01.	PRODUCTION ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
02.	MAINTENANCE ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
03.	AUTOMATION ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
04.	PROCESS ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
05.	INDUSTRIAL ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
06.	QUALITY ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
07.	POWER ELECTRONICS Er.	B.E./B.TECH - ELECTRICAL & ELECTRONIC	4 MONTHS
08.	ELECTRICAL ENGINEER	B.E./B.TECH - ELECTRICAL & ELECTRONIC	4 MONTHS
09.	ELECTRONICS ENGINEER	B.E./B.TECH - ELECTRICAL & ELECTRONIC	4 MONTHS
10.	TESTING ENGINEER	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS
11.	OPERATION EXCELLENCE	B.E. / B.TECH – MECHANICAL / ELECTRICAL & ELECTRONICS	4 MONTHS

TRAINING MODULE

Ccentric's broad and an all-inclusive training curriculum ensures that the students are future-ready and industry-ready.

We understand the crucial role of curriculum in enabling quality learning so the **entire module and syllabus has been designed with the consultation of industry experts.**

MODULE - 1: ORGANIZATION, PERSONALITY DEVELOPMENT & OPERATION EXCELLENCE

CHAPTERS	CONTENT	APPLICANT
INTRODUCTION TO INDUSTRY & ITS FUNCTIONS	• Background of Industry from Craft Production to Mass Production • Organization Functions & Roles • Daily Work Management & Key Performance Indicator • SMART Goal Setting & Getting Things Done	ALL
BEHAVIOUR'S EXPECTATION	Soft Skill aspects i.e. Communication , Interview , Presentation , Time Management , Team Building, Creativity & Innovation , Critical Thinking , Leadership	ALL
MANAGEMENT SYSTEM - INTERNATIONAL STANDARDS	• Design & Develop organizational Systems in line with international standards i.e. Quality / Environment / Energy / Occupational Health & Safety • Understanding Key Business Processes i.e. New Product Development Process, Maintenance Management, Tooling Management, Corrective & Preventive Actions etc. • Process & System Auditing	ALL

WORLD CLASS MANUFACTURING PRACTICES & BUSINESS IMPACT	• Introduction & Philosophy to World Class Organization • Driver of Profitability i.e. Value Vs Waste • Concepts to reach Best in Class with Evolution of Quality • Overview & Understanding of methodologies i.e. TQM , Lean Manufacturing , Six Sigma , TPM • Cost of Quality & Cost of Poor Quality • TQM Philosophy Overview with Deming's Rule • 5-S / Work Place Management	**ALL**
PROBLEM SOLVING: BASIC	• 8D Problem Solving covering analytical tools i.e.7 QC Tools Basics & Advanced , Statistical Process Control, Measurement System Analysis , Process FMEA , • Quality Circle – PDCA Approach	**ALL**
ADVANCED PROBLEM SOLVING – LEAN SIX SIGMA (LSS) & TOTAL PREDICTIVE MAINTENANCE (TPM)	• Lean Six Sigma Green Belt – DMAIC Approach	**ALL**
	• Voice of Customer & Voice of Process • Concept of TAKT Time / VA & NVA Analysis / Type of Waste • Value Stream Mapping • Kaizen , Why Why Analysis , One Point Lesson • KANBAN • SMED – Change Over Concept • Layout Designing • Mistake Proofing / Poka Yoke	**ALL**
	• Introduction to concept of TPM • 8 Pillars of TPM • Autonomous & Planned Maintenance • Theory of 16 Losses & Its Measurement • Overall Equipment Effectiveness - OEE	**ALL**
INDUSTRY 4.0	• I 4.0 for Manufacturing • How I 4.0 enables Lean implementation • IT/OT Integration • Use Cases and Case Studies • Industry 4.0 Implementation Framework • Key Performance Indicators(KPIs) for Industry 4.0 Maturity/Readiness	**ALL**

MODULE 2 : MECHANICAL ENGINEERING

CHAPTERS	CONTENT	APPLICANT
GENERAL - MANUFACTURING TECHNOLOGY	Introduction to Various Manufacturing Technologies Shearing & Cutting , Conventional turning, milling, drilling, Shaping, Grinding , Polishing , Buffing Machining , Painting , Welding , Soldering etc	Production / Process /Quality/ Maintenance Engineer
CNC/VMC PROCESS	• CNC / VMC - Features of CNC machines, CNC axis systems • Machine specification, programming fundamentals, machine controls etc • Machine construction, working of CNC subsystems and accessories • Programs and generate part programs for typical operations • Pre machining activities like tool setting, job setting • Post machining activities like deburring, cleaning, • Tool and job changing • Construction and working of basic machine tools – review • Machining parameters - speed, feed and depth of cut Cutting tools, jigs, fixtures and cutting fluids , tool materials, tool classification, tool geometry, tool holders, work holders, clamping devices, jigs • Cutting fluids-types and application	Production / Process /Quality/ Maintenance Engineer
PAINT/COATING PROCESS	• Understand painting processes and equipment requirement • Process parameters, profile required for painting • Surface preparation, set up readiness and painting object readiness • Painting operation on parts, objects • Activities of inspection & testing – Coat test , salt spray test & Tape Adhesion test • Storage, equipment cleaning, and maintenance,	Production / Quality/ Maintenance Engineer
WELDING PROCESS	• Process principles of welding, brazing, soldering, • Classification of welding • All types of joining techniques like Gas Discharge Arc Welding (MIG, MAG, TIG), Resistance Welding (Spot Welding, Projection Welding, Butt Welding) • Automatic or Robotic Welding Process • Weld inspection & test methods	Production / Quality/ Maintenance Engineer

OTHER MANUFACTURING PROCESSES	• Sheet Metal Pressing • Drilling • Plastic Moulding • Powder Coating • Heat Treatment • Castings • Shot Blasting & Peening	**Production / Quality/ Maintenance Engineer**
GEOMETRIC DIMENSIONING & TOLERANCING	• GD & T - Reading engineering drawings, GD&T symbols & Interpretation • Measurement Understanding on GD & T	**Production / Quality/Process/ Industrial Engineer**
METROLOGY- MEASUREMENT & CALIBRATION	• Metrology - Units of measurement, Selection of Measuring equipments • Limits and tolerances, quality and quality control aspects • Measuring Devices i.e. Rulers , Vernier Caliper, Depth Vernier , Micrometer - Internal, External,3 Point, 2 Point, Conventional, Bore Gauge - 2 Point, 3 Point, Digital, Air Gauge , Electronic Gauging Systems , Types of Attribute Gauging i.e. Plug Gauge , Snap gauge , Roundness Tester , Profile Projector • Calibration of Measuring Instrument / test equipment's • Understanding national & international standards for calibration • Traceability requirement and its application	**Production / Quality/Process/ Industrial Engineer**
MATERIAL TESTING	Materials testing – mechanical, metallurgical and NDT Strength tests, weld testing standards, microstructure examination, MPT, DPT, UT testing of weld joints	**Testing Engineer/ Quality Engineer**
MACHINE TOOLS	• Machine Tool Geometry (Surface flatness of bed slides. Coincidence and intersection of related axes. • Parallelism and perpendicular of straight lines to straight lines and flat surfaces to flat surfaces - equidistance. • Squareness of revolving spindle to flatbed surfaces. • Trueness of spindle and its bore, its faces and to find out – eccentricity, radial through, run out, periodical axial slip, axial play etc. • Measuring Equipment's used for Geometrical check	**Maintenance Engineer/ Production Engineer**
ELECTRICALS	• Basic of electrical, basic hydraulic and basic pneumatic equipment - coolant pumps, chip conveyors, material handling and automation components	**Electrical Engineer/ Maintenance Engineer**

PNEUMATICS & HYDRAULICS	• The Basics of pneumatic & Hydraulics like cylinder Nut runners, auto shutoff tool, 2/3way valve, and various applications.	**Production Engineer/ Maintenance Engineer**
	• Pneumatics - Introduction, Air Cylinders, Air Compressors, FRL, Air Dryers, Direction & Flow control valve, Pneumatic circuits Basics of compressor, Chiller, air dryer its operation & maintenance. • Tool & crib -Auto shutoff tool, Pneumatic impact tool, Battery tool, Lump tool, Torque wrench etc.	
MAINTENANCE MANAGEMENT	• Pre-operational checks, routine maintenance, running repairs, simple trouble shooting. • Predictive maintenance, Preventive maintenance, BD percentage, MTBF, MTTR & Utilization. • CLIT - Cleaning, Lubrication, Inspection & Tightening Standards	**Maintenance Engineer**
COOLING SYSTEM	• Introduction to Cooling Systems • Introduction to Coolants • Components of Cooling System	**Maintenance Engineer**
EXHAUST SYSTEM	• Introduction to Exhaust System • Exhaust System Types • Operations / Applications	**Maintenance Engineer**
HOST & LIFTING EQUIPMENTS	• Hoist maintenance & operation • Safety • Inspection & testing	**Maintenance Engineer**

MODULE 3 : ELECTRICAL & ELECTRONICS ENGINEERING

CHAPTERS	CONTENT	APPLICANT
PNEUMATICS & HYDRAULICS	Fundamentals of electric supply, voltage, current and power, transformers, AC and DC supply, polarity, magnetism, safety aspects, etc. Test, operate and analyse the basic analogue and digital electronic circuits.	Production Process/Quality/ Maintenance Engineer
INTRODUCTION TO ELECTRIC VEHICLES (BASICS AND PARTS USED)	• Introduction to motors and their Torque Characteristics • Types of motors used in Electric Vehicles • Parts Used in EV - Chargers , Permanent Magnet Motor / BLDC , Inverter , Battery Charger , Battery , Regenerative Braking , Quick Charging .	Electrical/ Electronics/ Maintenance Engineer
BASIC COMPONENTS OF ELECTRICAL CONNECTIONS, LIMIT SWITCH,SENSOR RELAY, CONTACTORS & RELAYS	DOL & Star/delta connection Control devices like Limit switch, Proximity sensor, photo sensor, LVDT, Encoder, Relay, and Solenoid valve etc. Motor control device connector - MCB, MPCB & other. Control transformer, Contactors, Types of Relays – SSR.	Electrical/ Electronics/ Maintenance Engineer
POWER & CONTROL WIRING	Knowledge of power & control wiring. Using tools, calibration equipment, and wires to build electrical systems. Control wiring relay logic, contactor, MCCB and its complete architecture. Understand and interpret different types drawings like electrical, pneumatic and P&ID diagrams.	Electrical/ Electronics/ Maintenance Engineer
MAINTENANCE MANAGEMENT	• Pre-operational checks, routine maintenance, running repairs, simple trouble shooting. • Predictive maintenance, Preventive maintenance, BD percentage, MTBF, MTTR & Utilization. • CLIT - Cleaning, Lubrication, Inspection & Tightening Standards • Problem-solving skills. Diagnosing and repairing electrical & Electronics problems	Electrical/ Electronics/ Maintenance Engineer

CIRCUIT, SWITCH GEARS, SIGNALS SYSTEM AND NETWORKS	• Designing Electric Circuit , Signals , Systems & Networks • Electrical Component used in Machine (LIMIT SWITCH MICRO SWITCH , PUSHBUTTONS/SELECTOR SWITCHES , INDIACTING LAMPS , PROXIMITY SWITCHES , PHOTO SENSORS , MULTIPLUNGER SWITCHES , PRESSURE SWITCHES , FLOW SWITCHES , FOOT SWITCHES , SOLENOID COILS • Electrical (Single line diagrams& MCC Panel wiring) & electronic circuits and its drawings. Test, operate & troubleshoot electronic based circuit. • Test basic electrical (MCBs, push buttons, relay, contactors)/electronic components (diodes, transistors, capacitors, coils, resistors etc.) using proper measuring instruments.	**Electrical/ Electronics/ Maintenance Engineer**
CONTROL PANEL DESIGNING	• Familiarize with instrument drawing in sketching, identify instruments symbols and blocks diagrams of existing units in the plant. • Check Instrument and Panel Installation as per layout plan	**Electrical/ Process/ Electronics/ Maintenance Engineer**
PLC & HMI	• Introduction to PLC & HMI. • Execute and correct programs in PLC. • Communication of PLC with HMI. • Basics of PLC, VFD, starter, I/O card 24 V DC & ladder monitoring	**Electrical/ Electronics/ Maintenance Engineer**
SCADA	• DCS & SCADA system in the industry. • PC interface of intelligent devices	**Electrical/ Electronics/ Maintenance Engineer**
INSTRUMENTATION & CALIBRATION	• Find faults, troubleshoot, calibrate, connect • Electrical & Electronic measuring instruments, Continuity Testers, meggers, earth resistance testers and multi meters etc. • Calibration of Measuring Instruments	**Electrical/ Electronics/ Maintenance Engineer**

MOTORS	• Introduction to Motors • Overview of motor types / characteristics i.e. AC single phase and three phase induction motors, synchronous motors. • Principles of Operation of Motors • Motor Characteristics Test, connect with devices, start and control & Rotation of motors	**Electrical/ Electronics/ Maintenance Engineer**
SOLDERING	• Soldering like metal to metal, wire to wire, wires to plugs, wires to connectors, wires to component PCB and de-soldering work.	**Electrical/ Electronics/ Maintenance Engineer**
DRIVES	Basic Understanding of Drives , Its Application and problem Solving	**Electrical/ Electronics/ Maintenance Engineer**
EMBEDDED SYSTEMS, ROBOTICS, VLSI DESIGN AND PCB DESIGN	• Characteristic, Components & Type of Embedded System. • How to make different cool robots like android controlled robot, accelerometer controlled robot, Remote controlled, Bluetooth controlled robot and voice controlled robot. • How Integrated Circuits are made, how they are connected , Hardware description language, understanding and programming	**Electrical/ Electronics/ Process Engineer**

BASICS OF MICROPROCESSOR	• Understanding of Microprocessor • Test and Operate microcontroller based systems.	**Electronics Engineer**
INTRODUCTION TO PNEUMATICS	• Pneumatics - Introduction, Air Cylinders, Air Compressors, FRL, Air Dryers, Direction & Flow control valve, Pneumatic circuits Basics of compressor, Chiller, air dryer its operation & maintenance. • Tool & crib -Auto shutoff tool, Pneumatic impact tool, Battery tool, Lump tool, Torque wrench etc. • Carry out Dismantling, Cleaning and Re-assembling of Air-Filters, Air Regulators. Connect pneumatic instruments & adjust as per nameplate.	**Maintenance Engineer**
ANALOG INSTRUMETS	• Calibrate and Maintain field instruments (displacement, pressure, flow, level, temperature etc.) and panel instruments (indicator, controller, convertor, recorder) used in instrumentation field. • Dismantle, inspect, calibrate and assemble various Control Valves, Valve Positioner, Convertor, various types of final elements and actuators	**Maintenance Engineer**
INDUSTRIAL AUTOMATION	• What is Industrial Automation • Type & Application of Automation • Benefits of Automation	Automation/ Production/ Process/Quality/ Maintenance Engineer

MODULE 4 : ELECTRICAL ENGINEERING

CHAPTERS	CONTENT	APPLICANT
GENERAL BASICS OF ELECTRICAL ENGINEERING	Fundamentals of electric supply, voltage, current and power, transformers, AC and DC supply, polarity, magnetism, safety aspects	Production/ Process/ Quality/ Maintenance Engineer
	Test, operate and analyse the basic analog and digital electronic circuits.	
INTRODUCTION TO ELECTRIC VEHICLES/ (BASICS AND PARTS USED)	• Introduction to motors and their Torque Characteristics • Types of motors used in Electric Vehicles • Parts Used in EV - Chargers , Permanent Magnet Motor / BLDC , Inverter , Battery Charger , Battery , Regenerative Braking , Quick Charging .	Electrical/ Maintenance Engineer
BASIC COMPONENTS OF ELECTRICAL CONNECTIONS LIMIT SWITCH, SENSOR RELAY, CONTACTORS & RELAYS	DOL & Star/delta connection Control devices like Limit switch, Proximity sensor, photo sensor, LVDT, Encoder, Relay, and Solenoid valve etc. Motor control device connector - MCB, MPCB & other. Control transformer, Contactors, Types of Relays – SSR.	Electrical/ Maintenance Engineer
POWER & CONTROL WIRING	Knowledge of power & control wiring. Using tools, calibration equipment, and wires to build electrical systems. Control wiring relay logic, contactor, MCCB and its complete architecture. Understand and interpret different types drawings like electrical, pneumatic and P&ID diagrams.	Electrical/ Maintenance Engineer
MAINTENANCE MANAGEMENT	• Pre-operational checks, routine maintenance, running repairs, simple trouble shooting. • Predictive maintenance, Preventive maintenance, BD percentage, MTBF, MTTR & Utilization. • CLIT - Cleaning, Lubrication, Inspection & Tightening Standards • Problem-solving skills. Diagnosing and repairing electrical & Electronics problems	Electrical/ Maintenance Engineer

CIRCUIT, SWITCH GEARS, SIGNALS SYSTEMS, AND NETWORKS	Designing Electric Circuit , Signals , Systems & Networks Electrical Component used in Machine (LIMIT SWITCH MICRO SWITCH , PUSHBUTTONS/SELECTOR SWITCHES , INDIACTING LAMPS , PROXIMITY SWITCHES , PHOTO SENSORS , MULTIPLUNGER SWITCHES , PRESSURE SWITCHES , FLOW SWITCHES , FOOT SWITCHES , SOLENOID COILS Electrical (Single line diagrams& MCC Panel wiring) & electronic circuits and its drawings. Test, operate & troubleshoot electronic based circuit. Test basic electrical (MCBs, push buttons, relay, contactors)/electronic components (diodes, transistors, capacitors, coils, resistors etc.) using proper measuring instruments.	**Electrical/ Maintenance Engineer**
CONTROL PANEL DESIGNING	Familiarize with instrument drawing in sketching; identify instruments symbols and Check Instrument and Panel Installation as per layout plan	**Electrical/ Process/ Maintenance Engineer**
PLC & HMI	Introduction to PLC & HMI. Execute and correct programs in PLC. Communication of PLC with HMI. Basics of PLC, VFD, starter, I/O card 24 V DC & ladder monitoring	**Electrical/ Maintenance Engineer**
SCADA	DCS & SCADA system in the industry. PC interface of intelligent devices	**Electrical/ Maintenance Engineer**
INSTRUMENTATION & CALIBRATION	Find faults, troubleshoot, calibrate, connect Electrical & Electronic measuring instruments, Continuity Testers, meggers, earth resistance testers and multi meters etc. Calibration of Measuring Instruments	**Electrical/ Maintenance Engineer**
MOTORS	Introduction to Motors Overview of motor types / characteristics i.e. AC single phase and three phase induction motors, synchronous motors. Principles of Operation of Motors\ Motor Characteristics Test, connect with devices, \start and control & Rotation of motors	**Electrical/ Maintenance Engineer**

SOLDERING	Soldering like metal to metal, wire to wire, wires to plugs, wires to connectors, wires to component PCB and disordering work.	**Electrical/ Maintenance Engineer**
DRIVES	Basic Understanding of Drives , Its Application and problem Solving	**Electrical/ Maintenance Engineer**
INTRODUCTION TO PNEUMATICS	• Pneumatics - Introduction, Air Cylinders, Air Compressors, FRL, Air Dryers, Direction & Flow control valve, Pneumatic circuits Basics of compressor, Chiller, Air dryer its operation & maintenance • Tool & crib -Auto shutoff tool, Pneumatic impact tool, Battery tool, Lump tool, Torque wrench etc. • Carry out Dismantling, Cleaning and Re-assembling of Air-Filters, Air Regulators. Connect pneumatic instruments & adjust as per nameplate.	**Maintenance Engineer**
ANALOG INSTRUMENTS	• Calibrate and Maintain field instruments (displacement, pressure, flow, level, temperature etc.) and panel instruments (indicator, controller, convertor, recorder) used in instrumentation field. • Dismantle, inspect, calibrate and assemble various Control Valves, Valve Positioner, Convertor, various types of final elements and actuators	**Maintenance Engineer**
INDUSTRIAL AUTOMATION	• What is Industrial Automation • Type , Application & Benefits of Automation	**Automation/ Production/ Process/ Quality/ Maint. Engineer**

A QUICK RUN-DOWN OF THE MODUS OPERANDI :

- The process initiates with the *Cle carrying out a thorough "training needs assessment and analysis".* The required eligibility and screening test is conducted by us.

- From *the insight gained from the training needs assessment, a personalized curriculum and program is then strategized* and designed by Ccentric's experts for each student.

- The candidates who are selected for this comprehensive training are then *charged a nominal fee in lieu of which all their boarding, lodging and social security needs would be taken care by the Cle in collaboration with ITI Ltd.*

- These students then undergo a *proper training and up-skilling by the highly professional and experienced team of Ccentric which includes the experts with more than 20 years of industrial experience.*

- All the key areas related to *engineering are entirely covered in the training modules. Improvisation on standard soft skills like communication, leadership, and time management* is also included in the modules.

- The candidates *will get their practical industrial training at our plant for 4 months* in various divisions.

- *The training schedule for the same is prepared in consultation with the experts* in the engineering domain and in line with the requirements of various plants/sections.

- ***All students are paired up with a mentor which will be provided by Ccentric itself.***

- After this dedicated 4 months training at our COE is over, the bunch is identified (through a proper assessment and evaluation) and then ***made a part of the workforce of several automotive and engineering organizations.***

- The selected bunch is ***awarded the certifications by ITI Ltd and National Productivity Council (NPC), Government of India.***

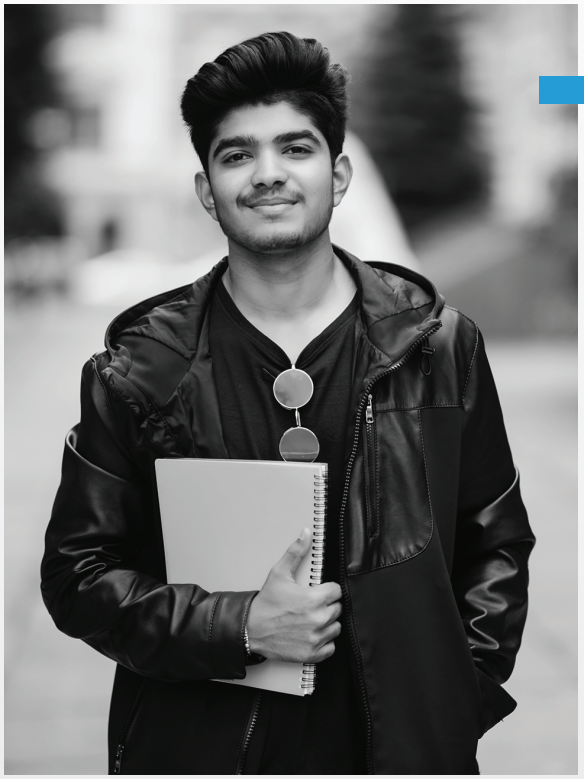
- The students would get an opportunity to work with their respective hiring organizations for a ***minimum period of 3 years*** which would fully equip them with the ***industrial know-how and skill-set to smoothly navigate the technology landscape.***

- The ***salary*** offered to this bunch by the company that employs them ranges from ***₹20,000 - ₹25000 per month.***

THE WAY FORWARD...

With its unique ***career-centric ideologies and workforce-ready model***, Ccentric Learning Edge Pvt Ltd. is seamlessly working towards ***broadening the career horizons*** of countless graduates and is all poised to expand its footprint both nationally and internationally in the next few years.`

"After joining Cle, you would not be just a fresh engineering graduate, you would no longer be a bunch of plain degree holder, in fact, you would be amongst the ones whose degree would carry much more weight and would be much more practical than any conventional degree".



The unmatched industrial exposure and the rewarding certifications that Cle offers through its collaborations with industry leaders like ITI Limited are one of a kind and irreplaceable when it comes to landing a good job.

CCENTRIC LEARNING EDGE PVT LTD
we generate professionals...

ITI LIMITED, RAE BARELI
(A GOVT.UNDERTAKING)

National Productivity Council

REWARDING CERTIFICATION

ALL OUR SUCCESSFUL PARTICIPANTS GET A CERTIFICATE FROM THE NATIONAL PRODUCTIVITY COUNCIL (NPC) AND ITI LIMITED (A GOVERNMENT UNDERTAKING) ALONG WITH CCENTRIC'S SIGNATURE ON IT.

Both the certificates are backed by powerful and accredited bodies like the **NPC and ITI Ltd.** are a testimony to the strong skill set and competence of our students.

These certifications are the acknowledgement of the student's diverse skill set and technical competency which will be gained through our **"Campus to Industry"** program which is beyond valuable.

READY TO SCALE NEW HEIGHTS IN YOUR CAREER...

"we promise you, fulfilling your career ahead"

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