



CPE – Level 1 Certified Professional Engineer

Hand holding of engineers till they get certified

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Competency based development

Great opportunity for
Engineering Students & Engineers
to achieve Level 1 Professional Engineer Certification

'Holistic Development of Engineers'
Applied Engineering
+
Campus to Corporate
+
Health & Safety

International Certification

Direct Certification
from CPD UK
www.cpduk.co.uk



TRACEZ
Training and Consultancy Services

TRACEZ Academy
Middle East & India

CPE - Level 1 Training

Successful completion of training and assessment of 20 units

10 Compulsory & 10 Elective units

8 units
from Group A



8 units
from Group B



4 units
from Group C

Groups	Types of Units	No of Units Available	Compulsory	Optional	Minimum Units for Certification
A	Engineering Applied Engineering	60	4	4	8
B	Soft Skills Campus to Corporates	14	4	4	8
C	HSE Health, Safety & Environments	7	2	2	4

Certification Criteria

1. Successful completion of Online Assessments for all 20 Modules.
2. Score minimum grade B in projects assignments
3. Successful completion of final interview/discussions with our expert team

Professional Engineer Certification

Introduction

A professional engineer must be competent to demonstrate both technical and leadership skills at work, that are relevant to his/her job level. Career span of an engineer may vary from 30 to 50 years. The competency and professionalism that to be demonstrated by an engineer will be different for each job level.

CPE - Certified Professional Engineer Level 1 program is aimed to develop, assess and certify the basic competencies of fresh engineers, mainly focusing the employability skills fully in line with the industry expectations.

Professional engineer certification programs must focus engineers job levels and deliverables. CPE Level 2, Level 3, and Level 4 in general are assigned for senior engineer, team leader and manager roles respectively.

CPE Level 1 program will develop, assess and certify the competencies of fresh engineers. This program is developed after evaluating the industry requirements, reviewing the engineering syllabus, interacting with engineering students and faculty members and also taking the guidance from expert engineers.

This program will develop the capability of engineers to prepare the right CVs, ready for campus selection, enhance confidence to attend interviews and excel in group discussions, good level of understanding in engineering applications, knowledge of job roles available for engineers within Indian and foreign industries, etc.



Fresh Engineers



CPE – Level 1
Bridging the Gap



Industry Expectations

CPE Level 1 Units

Applied Engineering Skills - Group A				TZ1E- 047	Industrial applications of Civil engineering.	C	CE
Unit Code	Unit title	C / O	Suitability	TZ1E- 048	Stormwater Drainage , Flood control and Mitigation measures	C	CE
TZ1E- 001	Industrial applications of Chemical Engineering	C	Ch E	TZ1E- 049	Auto CAD and Introduction to Civil Engineering Design soft wares	C	CE
TZ1E- 002	Fundamentals of Process Design, reading and interpreting all kinds of technical drawings	C	Ch E	TZ1E- 050	Structural Engineering: Design Packages, Codes and Standards	C	CE
TZ1E- 003	Basics of Oil & Gas Exploration, Drilling, Production & Processing Operations	O	Ch E	TZ1E- 051	Water: Resource management, Production & Treatment	O	CE
TZ1E- 004	Basics of Oil refining , Chemical & Petrochemicals plants Operations	O	Ch E	TZ1E- 052	Road Safety Engineering - Codes and standards	O	CE
TZ1E- 005	Heat Transfer equipment: Types, Selection, and Operations	C	Ch E	TZ1E- 053	Environmental engineering: Protection & Management	O	CE
TZ1E- 006	Mass Transfer equipment- Basics of Selection, Design, Operation & Optimisation	C	Ch E	TZ1E- 054	Quantity Surveying & Contract Management	O	CE
TZ1E- 007	Fundamentals of Process Instrumentation & Control Systems	C	Ch E	TZ1E- 055	Quality Control and Material Engineering	O	CE
TZ1E- 009	Process Safety & Plant Integrity Management	O	Ch E	TZ1E- 056	Advanced Survey and Geographical Information Systems	O	CE
TZ1E- 010	Types & Basic Operation of Rotating equipments: Pumps, Compressors & Turbine	O	Ch E	TZ1E- 057	Project Planning & Construction scheduling / Introduction to Planning software	O	All branches
TZ1E- 011	Process engineering: Material & Energy balance calculations	O	Ch E	TZ1E- 058	Industrial applications of IT & CS Engineering	C	IT/CS
TZ1E- 012	Water & Waste water treatment systems	O	Ch E/ME/CI	TZ1E- 059	Fundamentals of Cyber security	C	IT/CS
TZ1E- 013	Basics of Project Management	O	All branches	TZ1E- 060	Basics of Cloud Computing	C	IT/CS
TZ1E- 014	Industry 4.0: Machine Learning, AI, IIOT & Big Data	O	All branches	TZ1E- 061	Programming Languages : Python, Java, Basics of R, etc.	C	IT/CS
TZ1E- 015	Fundamentals of Oil & Gas Operations and Economics	O	All branches	TZ1E- 062	IT Engineering in Oil & Gas Operations	O	IT/CS
TZ1E- 018	Industrial applications of Mechanical Engineering	C	ME	TZ1E- 063	Fundamentals of Digital Marketing	O	IT/CS
TZ1E- 019	API standards, Design and construction of pipelines	C	ME	TZ1E- 064	Basics of Cyber forensic	O	IT/CS
TZ1E- 020	Design, Selection & Operation of Pumps, Compressors , Gas and steam turbines	C	ME	TZ1E- 065	Fundamentals of Ethical Hacking	O	IT/CS
TZ1E- 021	Design & Construction of Static equipment: Tanks & Process vessels.	C	ME	TZ1E- 066	Telecom Networks: Basic design and Operation		
TZ1E- 022	Metallurgy, Corrosion and basics of material selection for industries	O	ME	Softs skills- Campus to Corporate modules - Group B			
TZ1E- 023	Basics of Power plant Operation & Maintenance	O	ME	TZ1S-001	Technical English & Business Communication for engineers	C	All branches
TZ1E- 024	QA & QC Systems for Industries	O	ME	TZ1S-002	Work Ethics & Social Responsibility of Engineers	C	All branches
TZ1E- 025	Basics of Modern Maintenance Management, RBI & RCM	O	ME	TZ1S-003	Placement tests & Interviews skills development	C	All branches
TZ1E- 026	Technical engineering: Material & Energy balance calculations	O	ME	TZ1S-004	Essential behaviours for success in Industries	C	All branches
TZ1E- 027	Industrial applications of Electrical engineering.	C	EE/EEE	TZ1S-005	Technical reports writing & Presentations	C	All branches
TZ1E- 028	Electrical Drawings & Control Circuits	C	EE/EEE	TZ1S-006	Basic Supervisory skills & Industrial culture	O	All branches
TZ1E- 029	Power Generation, Transmission & Distribution Systems.	C	EE/EEE	TZ1S-007	Time management & Work in teams	O	All branches
TZ1E- 030	General Electrical Safety & First Aid	C	EE/EEE	TZ1S-008	Fundamental Leadership Traits for Engineers	O	All branches
TZ1E- 031	Electrical Protection Systems	O	EE/EEE	TZ1S-009	Basic understanding on Finance management in industries	O	All branches
TZ1E- 032	Electrical Design basics	O	EE/EEE	TZ1S-010	Confidence building & Empowerment	O	All branches
TZ1E- 033	Fundamentals of Substation Operations.	O	EE/EEE	TZ1S-011	MS office(word, excel, ppt & outlook) skills for Business	O	All branches
TZ1E- 034	Fundamentals of Electrical Operation & maintenance	O	EE/EEE	TZ1S-012	How to be a successful Entrepreneur?	O	All branches
TZ1E- 035	Basics of electrical testing & Inspection	O	EE/EEE	HSE - Health, Safety & Environment Modules - Group C			
TZ1E- 036	UPS & Battery- Basics of Selection, Operation & Maintenance	O	EE/EEE	TZ1H-001	Fundamentals of HSE Management in Industries	C	All branches
TZ1E- 037	Fundamentals of electrical construction & Commissioning	O	EE/EEE	TZ1H-002	Roles & responsibilities of Engineers in managing Safety	C	All branches
TZ1E- 038	Basics of Industrial Automation & Controls	C	IE/AEI	TZ1H-003	Safety Induction- General Safety for Industries	O	All branches
TZ1E- 039	Instrumentation Drawings & Control Logics	C	IE/AEI	TZ1H-004	BBS -Behavior Based Safety for Engineers	O	All branches
TZ1E- 040	Design Fundamentals of Instrumentation & process controls	C	IE/AEI	TZ1H-005	Permit to Work systems & HSE documentations	O	All branches
TZ1E- 041	Flow, Temperature, Pressure & Level: Measurements & Calibration	C	IE/AEI	TZ1H-006	Hazard Identification, Risk Assessment & Management	O	All branches
TZ1E- 042	DCS, PLC & SCADA systems in Industrial applications.	O	IE/AEI	TZ1H-007	HSE Tools & Skills for Engineers	O	All branches
TZ1E- 043	Network Security & protection Systems	O	IE/AEI	C - Compulsory Modules O - Optional Ch E - Chemical Engineering, ME - Mechanical Engineering, EE - Electrical Engineering EEE - Electrical & Electronics Engineering, IE - Instrumentation Engineering, AEI - Applied Electronics & Instrumentation, CE - Civil Engineering CS - Computer Science, IT - Information Technology			
TZ1E- 044	Basics of electrical engineering for Instrumentaion Engineers	O	IE/AEI	Total 20 units to be selected (8 from group A + 8 from Group B + 4 from group A)			
TZ1E- 045	Installation, commissioning & testing of Instrumentation systems for Industries.	O	IE/AEI				
TZ1E- 046	Instrumented Safeguarding Systems- SIS & SIL classifications	O	IE/AEI				

Features of CPE Level 1 program

- ✓ CPE program is aimed to provide **holistic development** for fresh engineers.
- ✓ This is the first comprehensive training program in Asian region, developing work focused engineering skills, basic behavioral skills and also the basics of Health, Safety & Environment management in industries.
- ✓ The basic foundation received as part of CPE will help the candidates not only to secure employment in core industries but also to develop their career further. .
- ✓ Applied engineering modules, delivered as part of CPE is specific to engineering discipline and completely focus the practical applications of engineering.
- ✓ The CPE program will prepare an engineer ready for industries. It will improve the employability of engineers and help them to secure jobs in core engineering fields.
- ✓ Engineering students can study the CPE program during their engineering study, ideally to start at the beginning of 7th semester.



Mode of Teaching

Self study

Online Modules

Interactive modules
+
Videos
+
PDF Documents

- Available on mobile devices or lap tops
- Candidates can access all materials online



Live Training

- Our experts will run Online training sessions for clearing doubts and confirm the learning.
- Online webinars will be arranged once in 2 weeks



Online Assessments

- All Modules will have Assessments Online.
- Random questions each time.
- Minimum 80 % score required



Project Assignments

- All modules will have project assignments.
- Learners must upload the completed assignments on website.
- Experts will evaluate and grade the assignments



Handholding

- TRACEZ will provide continuous support to engineers.
- Support by emails and online training
- Our experts will hold engineers hands till they achieve the expected level of competencies.

CPE Benefits for Engineers

- ✓ Stand out from the crowd with an international accreditation as **Certified Professional Engineer Level 1** and stay ahead in all interviews and selection tests.
- ✓ Develop own CV by adding all the skills learned as part of CPE – Level 1 program
- ✓ Learn the application of engineering in different types of industries specific to each engineering branch
- ✓ Learn to read and interpret drawings
- ✓ Skills to prepare work reports
- ✓ Can effectively communicate, present and lead/work in teams.
- ✓ Good understanding of the **Industry/Engineering 4.0** requirement on **IIOT, Machine Language, AI & Big Data** and its application in own engineering branch.
- ✓ Understand the Indian and international standards in Engineering
- ✓ Good understanding on types of jobs available for engineers with various industries.
- ✓ Ability to prepare correct CVs relevant to job opportunity.
- ✓ High level of confidence to face interviews and to succeed in group discussions and other selection tests
- ✓ Get support from TRACEZ for getting employment...etc.



TRACEZ team of experts will
**‘Hold the hands of
Engineers’**
till they achieve the required competencies

‘CPE- Level 1 transforms an engineering degree certificate holder to a
Real engineer

who will be successful in finding employment and also able to deliver excellence at work’

Benefits for Employers

- ✓ Opportunity to recruit employable engineers whose capabilities are assessed and certified systematically.
- ✓ CPE certified engineers can be put at work/office without any additional training other than induction
- ✓ It is not required to maintain trainers/training departments to develop fresh engineers
- ✓ Get TRACEZ support for further development of new recruits for higher roles..

Please click for registration

Register now

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Engineering branches for CPE

- ☉ Chemical / Petroleum /Process
- ☉ Instrumentation Engineering
- ☉ Electronics & Electrical
- ☉ Electronics & Communications
- ☉ Applied Electronics & Instrumentation
- ☉ Electrical Engineering
- ☉ Mechanical Engineering
- ☉ Civil Engineering
- ☉ IT & Computer Science

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