



**BRIDGING COURSE FOR
CONFINED SPACE SAFETY ASSESSOR COURSE**

COURSE DESCRIPTION

The Bridging Course for “Confined Space Safety Assessor Course” is a prerequisite to attend the latter for participants who do not possess the 3 GCE ‘O’ Level passes (or equivalent) with at least a Science credit requirement stipulated by the Ministry of Manpower. Trainees will be taught chemistry based on GCE ‘O’ Level guidelines as well as basic electrical theories. Upon successful completion and passing of this course, these trainees can then enrol for the Confined Space Safety Assessor Course.

COURSE OBJECTIVE

To provide trainees the fundamental knowledge in Science (Physics and Chemistry).
To serve as a bridging course for personnel taking the CSSAC.

On successful completion of the course, trainees will be competent in :

- Solids, liquids and gases
- Units of measurement
- Atomic Structures and Period table of Elements
- Chemical Mole
- Air, oxygen and common industrial gases
- Redox reactions
- Acid and bases
- Organic and inorganic Chemistry
- Electricity

The trainees will also:

- Acquire basic laboratory analysis methods

FOR WHOM

Workers, Process Technicians and Safety personnel without the minimum GCE ‘O’ Level Chemistry requirement needed to attend the Confined Space Safety Assessor Course.

COURSE LEADERS

Our course leaders are well qualified and skilled Process Specialists and Technologists with years of process and operational experience.

CERTIFICATE

A certificate will be issued to trainees who successfully complete the bridging course.

Note:

1. The Chemical Process Technology Centre (CPTC) is a national training infrastructure owned by EDB, and managed and operated by Petrofac Training. CPTC is dedicated to enhance the manpower competencies of the oil, gas and petrochemicals industry.
2. CPTC is an accredited training provider for the Bridging Course for Confined Space Safety Assessor Course.

COURSE INFORMATION

Course Code	: CT8006
Day/Time	: Day training (9.00 am to 5.00 pm)
Duration	: 3 days
Venue	: Chemical Process Technology Centre (CPTC) 81 Jurong Island Highway, Singapore 627837

COURSE ADMINISTRATION

Registration

For registration, please complete and return the Registration Form together with the appropriate payment by cheque made payable to “Petrofac Training Pte Ltd”.

Enquiries

Telephone: 6880 2000 Telefax: 6896 7151

Course Fee Subsidy/Payroll Subsidy

Not applicable.



COURSE OUTLINE

BRIDGING COURSE FOR CONFINED SPACE SAFETY ASSESSOR COURSE

Competency #1 - Solids, Liquids and Gases

- 1) States of Matter
- 2) Change of State
- 3) Particles of Matter - Kinetic Theory
- 4) Discussion

Competency #5 - The Mole

- 1) What is Mole?
- 2) Moles of Atom: Relative Atomic Mass in Grams.
- 3) Moles of Molecules: Relative Molecular Mass in Grams
- 4) Moles of Gases: Molar Gas Volumes, Avogadro's Law.
- 5) Moles and Equations.
- 6) Moles and Solution.
- 7) Discussion

Competency #2 - Units of Measurement

- 1) Common Units of Measurement
- 2) Units of Concentration
- 3) Gases Concentration
- 4) Basic Calculus
- 5) Discussion

Competency #6 - Redox Reactions

- 1) Oxidation and Reduction
- 2) Redox Reactions
- 3) Discussion

Competency #3 - Atomic structures and Periodic

- 1) Atomic structures
- 2) The Periodic Table of Elements
- 3) Discussion

Competency #7 - Acids and Bases

- 1) Acid: Properties and Reactions.
- 2) Bases: Properties and Reactions.
- 3) Types of oxide: Basic, Acidic, Neutral or Amphoteric.
- 4) Indicators: Showing Acidity or Alkalinity.
- 5) pH scale: The strength of Acid or Alkali
- 6) Discussion

Competency #4 - Common Industrial Gases

- 1) The Composition of Air
- 2) Density of Air
- 3) Relative Density
- 4) The Gas Laws
- 5) Common Industrial Gases
- 6) Discussion

Competency #8 - Organic and Inorganic Chemistry

- 1) What is organic and inorganic chemistry?
- 2) Petroleum Refining of crude oil.
- 3) Common hydrocarbons
- 4) Alkanes, alkenes and alcohols.
- 5) Chemical and physical properties of common hydrocarbons.
- 6) Inorganic chemicals
- 7) Metal, hydrogen, nitrogen, halogen and carbon compounds; oxides.
- 8) Chemical and physical properties.
- 9) Discussion

Competency #9 - Electricity

- 1) What is Electricity?
- 2) Fundamental Units
- 3) Ohm's Law
- 4) Wheatstone Bridge Circuit
- 5) Assessment