



No. DCE-007(241)/130

Date: 08-10-2024

## **Announcement of Short Courses on Pressure Equipment Design and Repair Organized by the Directorate of Continuing Education (DCE), BUET.**

### **Dear Sir/Madam**

The Directorate of Continuing Education (DCE), BUET, is pleased to offer short courses on **Pressure Equipment Design and Repair** for Engineers, Professionals and Technicians focusing on the Fundamentals of Design Codes (ASME codes and API standards), Pressure Vessel and Piping design, fabrication, repair, and alteration in Process Plant construction projects, repairing strategies, safety and compliance including regularity requirements.

The short course will cover the following topics: UW (Upset Welding) -12 Weld Joint Efficiency and UG-116 & UW-11 Radiographic Examination requirement, UG-45 & UG-37 Nozzle Design and Reinforcement Area Calculation, API-582 Welding Guidance and UCS-56 Post Weld Heat Treatment, Inspection and Testing Plan (ITP) including Non-destructive (UW-51 to 53) Mandatory Appendix 6, 8, 12) and Pressure testing (UG-99/API 510) requirements, API 510 + PCC-2 Butt Welded Insert Plat Repair and API-510 Alteration (Pressure/Temperature rerating and addition of pressure components) of Pressure Vessel

SL	Topics	Date	Fee (BDT)	Last Date of Registration
1	<b>Pressure Equipment Design and Repair</b>	<b>23 October 2024</b>	<b>6,000/-</b>	<b>22 October 2024</b>

The registration fee for these short courses is to be paid in advance, through Pay-Order or Demand draft, in favor of “**Director, BRTC, BUET**”. Course registration fee may also be electronically deposited at Savings Account Number - **4404034173888** (Routing Number – **200270522**) Account Name: **Director, Directorate of Continuing Education (DCE), Sonali Bank Ltd., BUET Branch, and Dhaka**. Course Fee includes all costs of printed course materials, exams & certificates, etc., and excludes VAT & TAX.

Seats are limited and the application /nomination would be selected on a First Come First Serve basis. For further information, please contact at **01836257866**, E-mail: [info@dce.buet.ac.bd](mailto:info@dce.buet.ac.bd), [dirdce@dce.buet.ac.bd](mailto:dirdce@dce.buet.ac.bd).

We would appreciate it if you could kindly participate and/or nominate the concerned official (s) from your esteemed organization in these short courses.

Thank you

**Prof. Dr. Mohammad Nasim Hasan**

Director, Directorate of Continuing Education, BUET, Dhaka-1000

[For Registration Please](#)

Scan Below



## CONTACT

**Director**  
**Directorate of Continuing Education (DCE)**

BUET, Dhaka-1000

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For Venue Location,

[Click Here](#) or scan



## WORKSHOP OUTCOMES

At the end of this workshop, participants are expected to learn the following:

- Familiarize with ASME Code and API Standards of Pressure Vessel Design and Repair
- Understand the implication of Joint Efficiency and Radiographic Examination requirement
- Acquaint with Welded Fabrication and Post Weld Heat Treatment requirements of various thicknesses and materials
- Inspection and Test Plan (ITP) – familiarize with Non-destructive and Pressure testing requirements
- Familiarize with only two repair methods and the concept of Alteration of Pressure Vessel

## RESOURCE PERSON

Experts from the professional domain will conduct the proposed workshop. For details please visit: [dce.buet.ac.bd](http://dce.buet.ac.bd)

## DURATION

23 October 2024: 1 day (6 Hrs.)

## LANGUAGE

English and Bangla

## CERTIFICATE

Certificate of attendance will be provided.

## Short Course on Pressure Equipment Design and Repair

23 October 2024



*Organized by*

**Directorate of Continuing Education (DCE)**  
**Bangladesh University of Engineering & Technology**  
**Dhaka-1000**

<https://dce.buet.ac.bd>

For [Registration](#), scan below:



## PREAMBLE

Pressure Equipment such as pressure vessel (drums, heat exchangers, towers) and piping are essential components in Oil & Gas, Petrochemical, Fertilizer, and other Chemical operating facility. It is important to understand the design, fabrication, repair, alteration, and quality control requirement per ASME Codes and API standards for maintaining a reliable and cost-efficient operating plant.

As more and more Process Plants are built and operated in Bangladesh, developing the Mechanical Engineers within the country to maximize asset life can save thousands of dollars in operating expenditure (OPEX). Furthermore, an experienced engineer can lead major capital expenditure (CAPEX) project keeping the project scope, cost, and schedule within the expectation while meeting the requirements for codes and standards.

## WHO SHOULD ATTEND?

This workshop is designed for anyone interested in Pressure Vessel and Piping design, fabrication, repair, and alteration in Process Plant construction projects. The following participants will get the most benefit from attending this short course:

- Project Engineers/Managers
- Construction Engineers
- Maintenance Engineers

## PROGRAM OVERVIEW

Contents of the workshop are:

- UW-12 Weld Joint Efficiency and UG-116 & UW-11 Radiographic Examination requirement
- UG-45 & UG-37 Nozzle Design and Reinforcement Area Calculation
- API-582 Welding Guidance and UCS-56 Post Weld Heat Treatment
- Inspection and Testing Plan (ITP) including Non-destructive (UW-51 to 53) Mandatory Appendix 6, 8, 12) and Pressure testing (UG-99/API 510) requirements
- API 510 + PCC-2 Butt Welded Insert Plat Repair and API-510 Alteration (Pressure/Temperature rerating and addition of pressure components) of Pressure Vessel

## VENUE

Directorate of Continuing Education (DCE), 3<sup>rd</sup> Floor, Institute Building, BUET, Polashi, Dhaka-1000. (near Dr. M A Rashid Student Hall, BUET and BUET Gymnasium)

## REGISTRATION FEE

**BDT 6,000/- per Person (Tk. Six Thousand Only)**

The fee will cover lecture instructions, workshop kits, comprehensive materials, refreshments, certificate etc.

## PAYMENT

Registration Fee is to be paid in advance payable through Pay Order/Demand Draft (DD) in favor of **Director, BRTC, BUET.**

***Seats are limited and the selection procedure will be First Come First Serve basis.***

## REGISTRATION FORM

### Short Course on Pressure Equipment Design and Repair DCE, BUET

Please complete the registration form in BLOCK LETTERS and return it to the address overleaf.

**Name:** .....

**Affiliation:** .....

**Company Name:** .....

**Address:** .....

.....  
.....

**Cell Phone:** .....

**Email:** .....

**Payment:**

- Pay Order
- Demand Draft (DD)

*Please attach the original copy of payment.*

**Details of Pay Oder/Demand Draft:**

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Signature: .....

Date: .....



**Short Course on  
Pressure Equipment Design and Repair  
Organized by: DCE, BUET  
23 October 2024**

**COURSE INSTRUCTOR**

**Abdullah Mamun, P.Eng.**

Senior Mechanical Engineer

Imperial Oil (ExxonMobil)

Email: mdabdull@ualberta.ca

Contact: <https://www.linkedin.com/in/md-abdullaha-al-mamun-b530823a/>



**Course Content:**

The main objective of this course is to familiarize the Engineers with the Standard Protocol of Pressure vessel design, repair and maintenance. The program is also aimed to serve as seeding in developing a comprehensive professional training/course for Professional Engineers working on Oil & Gas, Petrochemical, and other Chemical Facilities in Bangladesh.

**Course Instructor:**

This workshop will be conducted by Engr. Abdullah Mamun, an Oil and Gas professional having 12 years of experience in Oil & Gas and Petrochemical Industry, specialized in Pressure Vessel and Piping Engineering design, Fabrication, Construction, Repair, and Alteration. At present working as a Senior Mechanical Engineer at Imperial Oil (ExxonMobil).

**Learning Outcomes:**

At the end of this workshop, participants are expected to learn the following:

- Familiarize with ASME Code and API Standards of Pressure Vessel Design and Repair
- Understand the implication of Joint Efficiency and Radiographic Examination requirement
- Learn about fabrication of major vessel components such as shell, head, and nozzle
- Acquaint with Welded Fabrication and Post Weld Heat Treatment requirement of various thickness and materials, Overlay, Alternative to PWHT, and Damage Mechanism
- Inspection and Test Plan (ITP) – familiarize with Non-Destructive Examinations and Pressure testing requirements
- Familiarize with two repair methods and concept of Alteration of Pressure Vessel

**Who should attend?**

This workshop is designed for anyone who has interest in Pressure Vessel and Piping design, fabrication, repair, and alteration in Process Plant construction projects. The following participants will get the most benefit from attending this short course:

- **Project Engineers/Managers**
- **Construction Engineers**
- **Maintenance Engineers**



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23 October 2024**

**Course Schedule**

Date	Time	Event
23 Oct. 2024	1:30 PM- 2:00 PM	<b>Registration</b>
	2:00 PM- 3:00 PM	<b>Lecture 1: Design and Fabrication of Vessel Fabrication</b> <ul style="list-style-type: none"><li>UW-12 Weld Joint Efficiency and UG-116 &amp; UW-11 Radiographic Examination requirement</li></ul>
	3:00 PM- 4:00 PM	<b>Lecture 2: Design and Fabrication of Vessel Fabrication</b> <ul style="list-style-type: none"><li>UG-45 &amp; UG-37 Nozzle Design and Simple Reinforcement Area Calculation</li></ul>
	4:00 PM- 4:30 PM	<b>Asar prayer and Tea Break</b>
	4:30 PM- 5:30 PM	<b>Lecture 3: Welding and Post Weld Heat Treatment</b> <ul style="list-style-type: none"><li>API-582 Welding Guidance and UCS-56 Post Weld Heat Treatment</li></ul>
	5:30 PM- 5:45 PM	<b>Maghrib prayer and Tea Break</b>
	5:45 PM- 6:45 PM	<b>Lecture 4: Inspection and Testing Plan (ITP) for Pressure Vessel</b> <ul style="list-style-type: none"><li>Non-destructive (UW-51 to 53) Mandatory Appendix 6, 8, 12) and Pressure testing (UG-99/API-510) requirements</li></ul>
	6:45 PM- 7:45 PM	<b>Lecture 5: Repair and Alteration of Pressure Vessel</b> <ul style="list-style-type: none"><li>API 510 + PCC-2 Butt Welded Insert Plat Repair and API-510 Alteration (Pressure/Temperature rerating and addition of pressure components) of Pressure Vessel</li></ul>
	7:45 PM- 8:00 PM	<b>Esha prayer and Tea</b>
	8:00 PM- 8:30 PM	Open floor discussion for future learning scope
	8:30PM- 8:45PM	<b>Closing Ceremony</b>