

CONTACT

Director, Directorate of Continuing Education (DCE)
BUET, Dhaka-1000; Tel: 02 58610738
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Course Coordinator

Engr. Nurul Huda, Scientific Officer DCE, BUET;

Mobile: 01836257866, 01918285231 (Saturday-Wednesday
10 AM-4 PM)

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***BUET weekly holidays are Thursday & Friday.**

About DCE

DCE established in **1995 at BUET**, a platform for decentralized and adaptive learning to bridge the gap between Professionals and Academicians, promotes pedagogical development with a combined experience of Academicians and Professionals and offers distance training opportunities. So far, **255** short courses/training workshops have been offered to serve more than **11,500** professionals.

JULY 2026						
SUN	MON	TUE	WED	THU	FRI	SAT
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST 2026						
SUN	MON	TUE	WED	THU	FRI	SAT
30	31					1
2	3	4	5	6	7	8

Short Course Outcomes

At the end of this course, participants are expected to learn and subsequently apply knowledge on:

- Understand the fundamentals of Pressure Vessels
- Strength of Materials for Pressure Vessels.
- Pressure Vessel Design Basics
- Materials & Metallurgy for Pressure Vessels
- Welding Engineering for Pressure Vessels
- NDE Methods
- Fabrication, Forming & Testing
- Nozzle Reinforcement & External Loads

RESOURCE PERSON

Experts from both **Academic and Professional** domains will conduct the proposed short course.

For details, please visit: dce.buet.ac.bd

Registration Deadline

15 July 2026 (Wednesday)

LANGUAGE

English and Bangla

CERTIFICATE

A certificate of attendance will be provided.

Short Course On Pressure Vessel Design, Fabrication, Inspection, and Testing as per ASME BPVC



BUET, Dhaka

31 July & 01-02 August 2026

Organized by

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

[Register Here!](#)



Pressure vessels play a critical role in modern industry, supporting safe and reliable operation in sectors such as power generation, chemical processing, oil & gas, pharmaceuticals, food processing, and many others. Ensuring their structural integrity and compliance with international standards is essential for operational safety, regulatory approval, and long-term asset performance.

This short course provides a comprehensive introduction to the principles and best practices of pressure vessel design, fabrication, inspection, and testing, following the guidelines of the ASME Boiler and Pressure Vessel Code (BPVC). Designed for engineers, inspectors, technical managers, and industry professionals, the program equips participants with the foundational knowledge required to understand pressure vessel requirements across the full lifecycle—from conceptual design to commissioning and in-service evaluation.

Don't miss this opportunity to boost your professional growth. **Register now!**

WHO SHOULD ATTEND?

This Short course is targeted to a wide range of professionals working in vessel operation, maintenance selection, testing and commissioning and will greatly benefit:

- Facility & Utility Engineers
- Operation Personnel
- Maintenance and Troubleshooting Personnel
- High Pressure vessel Operators
- Supervisors & Technicians
- Team Leaders
- Enthusiasts & Mentors

PROGRAM OVERVIEW

Contents of the workshop are:

- Fundamentals of Pressure Vessels
- Strength of Materials for Pressure Vessels.
- Pressure Vessel Design Basics
- Materials & Metallurgy for Pressure Vessels
- Welding Engineering for Pressure Vessels
- NDE Methods
- Fabrication, Forming & Testing
- Nozzle Reinforcement & External Loads

VENUE

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

REGISTRATION FEE

BDT **15,000/-** per Person (Tk. Fifteen Thousand Only)

The fee will cover Printed lecture instructions, workshop kits, Printed comprehensive materials, refreshments, certificate etc. **Excludes VAT & TAX**

PAYMENT

Registration Fee is to be paid in advance, payable through

- 1. Pay Order/Demand Draft (DD) in favor of Director, BRTC BUET, Dhaka OR**
- 2. Electronically deposited at -**
Savings Account No. - 4404034173888
Routing Number - 200270522
Account Name: - Director, Directorate of Continuing Education (DCE)
Sonali Bank Ltd., BUET Branch, Dhaka

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

REGISTRATION FORM

Short Course On

Pressure Vessel Design, Fabrication, Inspection, and Testing as per ASME BPVC DCE, BUET

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

Registration Batch No:

Name:

Affiliation:

Company Name:

Address:

Cell Phone:

Email:

Payment:

- Pay Order/ Demand Draft (DD)
- Online Banking

Please attach the original copy of the payment.

Details of Pay Oder/Demand Draft:

Signature:

Date:



Short Course on
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DCE, BUET

PROGRAM SCHEDULE(Tentative)

Day	Time	Topics		Resource Person
31 July 2026 Friday	8:30 AM- 9:00 AM	Registration		
	9:00 AM-10:30 AM	Lecture 01: Introduction to Pressure Vessels	<ul style="list-style-type: none"> • What is a pressure vessel? • Applications (oil & gas, chemical, pharma, power plants) • Types (Diagram): <ul style="list-style-type: none"> ○ Cylindrical, spherical, conical ○ Horizontal, vertical ○ Jacketed, multi-chamber • Main components: shell, heads, nozzles, flanges, supports • Overview of ASME BPVC Section VIII structure 	Engr. Md. Rashed Kawsar Ex. Managing Director Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation
	10:30 AM-11:00 AM	Tea Break		
	11:00 AM-12:30 PM	Lecture 02: Strength of Materials for Pressure Vessels	<ul style="list-style-type: none"> • Stress & strain basics • Elastic vs plastic behavior • Principal stress, von Mises, Tresca • Thin vs thick cylinder theory • Derivation of hoop stress & longitudinal stress • Lamé equations (thick-walled) • Thermal stresses basics 	Prof. Dr. Mohammad Ali Department of Mechanical Engineering, BUET
	12:30 PM-2:30 PM	Prayer and Lunch Break		
	2:30 PM-4:00 PM	Lecture 03: Pressure Vessel Design	<ul style="list-style-type: none"> • MAWP vs Design Pressure • Joint efficiency (E) • Corrosion allowance 	Engr. Md. Rashed Kawsar Ex. Managing Director



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PROGRAM SCHEDULE(Tentative)

Day	Time	Topics	Resource Person	
		Basics (ASME VIII Div 1)	<ul style="list-style-type: none"> • Cylindrical shell thickness formula • Spherical shell thickness formula • Head types: <ul style="list-style-type: none"> ○ Elliptical ○ Hemispherical ○ Torispherical • Nozzle reinforcement concept • Loads considered (pressure, wind, seismic, nozzle loads) 	Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation
	04:00 PM-04:15 AM	Tea Break		
	4:15 PM-5.45 PM	Lecture 04: Materials & Metallurgy for Pressure Vessels	<ul style="list-style-type: none"> • ASME Section II materials • Carbon steel vs alloy steel vs stainless • Microstructures: ferrite, pearlite, martensite, bainite, austenite • Heat treatment methods (N, SR, Q&T) • Creep & fatigue behavior • Hydrogen damage • Corrosion mechanisms • Elementary Effect of Alloy • Iron-Carbide Diagram 	Prof. Dr. Mohammad Ali Department of Mechanical Engineering, BUET
01 August 2026 Saturday	9.00 AM-10.30 AM	Lecture 05: Welding Engineering for Pressure Vessels	<ul style="list-style-type: none"> • ASME Section IX overview • WPS, PQR, WPQ • Common welding processes: SMAW, GTAW, GMAW, SAW, FCAW • HAZ metallurgy 	Engr. Md. Rashed Kawsar Ex. Managing Director Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation



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PROGRAM SCHEDULE(Tentative)

Day	Time	Topics	Resource Person
		<ul style="list-style-type: none"> • Preheat, inter pass temperature, PWHT • Residual stress • Common defects (undercut, porosity, cracks) 	
	10.30 AM-11.00 AM	Tea Break	
	11.00 AM-01.00 PM	Lecture 06: NDE Methods (ASME Section V)	<ul style="list-style-type: none"> • VT – Visual Testing • PT – liquid penetrant Testing • MT – Magnetic particle Testing • UT – Ultrasonic Testing • RT – Radiography Testing • Eddy Current basics • Acceptance criteria (relevant indications) • Corrosion and Material Degradation Engr. Md. Rashed Kawsar Ex. Managing Director Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation
	01:00 PM-2:30 PM	Prayer and Lunch Break	
	2.30 PM- 4.00 PM	Lecture 07: Fabrication, Forming & Testing	<ul style="list-style-type: none"> • Plate cutting, rolling, forming • Welding sequences • Fit-up & alignment rules • Assembly & distortion control • Hydrostatic test • Pneumatic test • Quality control documentation • MDR (Manufacturer's Data Report) • Excess thickness credit • Nozzle load effects • Pad reinforcement Engr. Md. Rashed Kawsar Ex. Managing Director Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation



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Day	Time	Topics		Resource Person
	04:00 PM- 04:15 AM	Tea Break		
	4.15 PM- 5.45 PM	Lecture 08: Basics of API 510 (In-Service Inspection)	<ul style="list-style-type: none"> • Internal, external, on-stream inspections • API damage mechanisms: corrosion, SCC, HIC, creep, fatigue • Corrosion rate calculation • Remaining life calculation • Re-rating MAWP • NDE selection based on mechanism • RBI (Risk-Based Inspection introduction) 	Engr. Md. Rashed Kawsar Ex. Managing Director Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation
02 August 2026 Sunday	9.00 AM- 11.00 AM	Lecture 09: External Pressure, Buckling & Supports	<ul style="list-style-type: none"> • UG-28 external pressure rules • Buckling failure modes • Stiffening rings • Wind & seismic load basics of BNBC code • Support types: <ul style="list-style-type: none"> ○ Skirt ○ Legs ○ Lugs ○ Saddles • Thermal expansion effects • Load combinations 	Prof. Dr. Mohammad Ali Department of Mechanical Engineering, BUET
	11.00 AM- 11.30 AM	Tea Break		
	11.30 AM- 01.00 PM	Lecture 10: Fitness-for-Service (API 579) Essentials	<ul style="list-style-type: none"> • Overview of API 579 assessment levels • General metal loss • Local metal loss 	Engr. Md. Rashed Kawsar Ex. Managing Director



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PROGRAM SCHEDULE(Tentative)

Day	Time	Topics	Resource Person
		<ul style="list-style-type: none"> Pitting Crack-like flaws Bulging & blistering FAD (Failure Assessment Diagram) basics When to derate MAWP vs repair 	Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation
	01:00 PM-2:30 PM	Prayer and Lunch Break	
	2.30 PM- 4.00 PM	Lecture 11: Case Studies, Integration & Final Review	Engr. Md. Rashed Kawsar Ex. Managing Director Eastern Lubricants Blenders Limited Bangladesh Petroleum Corporation
	04:00 PM-04:15 AM	Tea Break	
	04.15 PM	Closing and Certificate Awarding	

