

CONTACT

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Course Coordinator

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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 **121,500** professionals.

| JULY 2026 | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|
| SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

SHORT COURSE OUTCOMES

By the end of this course, participants will be able to:

1. **Understand the Principles of HVAC Efficiency**
2. **Identify Key Components of HVAC Systems**
3. **Apply Best Practices in HVAC System Design**
4. **Design Efficient Air Distribution Systems (Duct Design)**
5. **Perform Load Calculations and System Sizing**
6. **Develop and Implement Maintenance Plans**
7. **Assess and Improve Indoor Air Quality (IAQ)**
8. **Use HVAC Controls and Automation Effectively**
9. **Conduct Energy Audits and Performance Evaluations**
10. **Integrate Renewable Energy with HVAC Systems**
11. **Ensure Code Compliance and Green Building Standards**
12. **Troubleshoot Common HVAC Issues**
13. **Promote Sustainable Design and Cost-Effective Solutions**

RESOURCE PERSON

Experts from the Academic, Public, and Private sectors who have demonstrated track records in project management will deliver the lectures of the short course, along with practical knowledge sharing and case studies.

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

Registration Deadline

05 July 2026

LANGUAGE

English and Bangla

CERTIFICATE

A certificate of attendance will be provided.

Short Course On

Efficient HVAC System: Design and Maintenance



17-19 July, 2026

(3 days)

BUET, Dhaka

Organized by

Directorate of Continuing Education (DCE)

**Bangladesh University of Engineering and Technology
Dhaka-1000**

For registration in this course

(Click Here), or

Please Scan below –



An efficient HVAC (Heating, Ventilation, and Air Conditioning) system is essential for reducing energy consumption, lowering utility bills, and minimizing environmental impact by cutting greenhouse gas emissions. These systems are designed to operate with less energy while providing consistent indoor comfort through stable temperature, humidity control, and proper ventilation. Improved efficiency also enhances indoor air quality, which is vital for health, especially in spaces like hospitals, offices, and schools. Additionally, efficient HVAC systems have lower operating and maintenance costs, are more durable, and help ensure compliance with modern building codes and environmental standards. Overall, investing in an efficient HVAC system leads to better performance, cost savings, and a healthier indoor environment.

This short course on HVAC Systems, organized by the DCE, BUET, is designed to provide the participants with comprehensive knowledge of HVAC and efficient execution, designing, and maintenance in the context of Bangladesh by mastering modern tools, techniques, and strategies.

WHO SHOULD ATTEND?

This short course is designed for anyone who has an interest in HVAC Systems. The following participants will get the most benefit from attending this short course:

- Aspiring HVAC Maintenance Engineers
- HVAC project management/ managers
- Government Officials
- HVAC Design Engineers
- Freelancers & Self-Employed Individuals
- HVAC related Entrepreneurs & Small Business Owners

Seats are limited to 40, and the selection procedure will be on a first-come, first-served basis.

PROGRAM OVERVIEW

Contents of the course are:

- ✓ Introduction to HVAC systems and their role in comfort cooling
- ✓ Understanding the refrigeration cycle, main components, and types of compressors used
- ✓ Types of compressors used in household air conditioning systems
- ✓ Common types of residential air conditioning systems
- ✓ Basics of cooling load calculation
- ✓ Inverter vs. Non-Inverter ACs: Working principle and benefits
- ✓ Key components of inverter-based cooling systems
- ✓ Best practices in residential HVAC installation and maintenance
- ✓ Duct design fundamentals and air distribution techniques
- ✓ Minimizing environmental impact in residential HVAC systems
- ✓ Know about the approach to dealing with flammable refrigerants
- ✓ Know about the safe workplace organization handling flammable refrigerants
- ✓ Practical handling of safely organizing the workspace
- ✓ Practical handling of key tools and dealing with flammable refrigerants
- ✓ Know about the importance of OFDN when handling flammable refrigerants
- ✓ Having the correct and safe tools and equipment for handling flammables and knowing how to use them
- ✓ Apply OFDN in general work practice

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, comprehensive materials, lunch & refreshments, certificates, etc.

PAYMENT

The 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 Continuing
Education (DCE), Sonali Bank Ltd., BUET Branch, Dhaka

REGISTRATION FORM

Efficient HVAC System: Design and Maintenance

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)
- Online Banking

Please attach the original copy of the payment.

Details of Pay Order/Demand Draft:

Signature:

Date:



Short Course on
Efficient HVAC System: Design & Maintenance

DCE, BUET

17-19 July 2026

PROGRAM SCHEDULE (Tentative)

| Day | Time | Topics | Resource Person |
|--------------------------|-------------------|--|---|
| 17 July 2026 Friday | 8:30 AM-9:00 AM | Registration | |
| | 9:00 AM-10:30 AM | Lecture 01: Introduction to HVAC System & Refrigeration Cycles | Prof. Dr. Mohammad Arif Hasan Mamun Department of Mechanical Engineering, BUET |
| | 10:00 AM-11:00 AM | Tea Break | |
| | 11:00 AM-12:30 PM | Lecture 02: Main Components and Types of Compressors Used | 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: Types of Air Conditioning Systems, Cooling Load Calculation & Duct Design | Prof. Dr. Mohammad Arif Hasan Mamun Department of Mechanical Engineering, BUET. |
| | 4.00 PM-4.15 PM | Tea Break | |
| | 4:15 PM-5.45 PM | Lecture 04: Types of Air Conditioning Systems, Cooling Load Calculation & Duct Design (Contd.) | Prof. Dr. Mohammad Arif Hasan Mamun Department of Mechanical Engineering, BUET. Muhammad Ershed Jaman Khan Managing Director, E4-Tech Engineering Ltd. |
| 18 July 2026 Saturday | 9.00 AM-10.30 AM | Lecture 05: Types of Air Conditioning Systems, Cooling Load Calculation & Duct Design (Contd.) | Muhammad Ershed Jaman Khan Managing Director, E4-Tech Engineering Ltd. |
| | 10.30 AM-11.00 AM | Tea Break | |
| | 11.00 AM-12.30 PM | Lecture 06: Key Components for Inverter ACs & Residential HVAC Maintenance | Muhammad Ershed Jaman Khan Managing Director, E4-Tech Engineering Ltd. Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |



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|--------------------------------|-------------------|--|--|
| | 12:30 PM-2:00 PM | Prayer and Lunch Break | |
| | 2.00 PM-4.00 PM | Lecture 07: EER, SEER & BSTI Certification (BDS 1852) | Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |
| | 4.00 PM-4.15 PM | Tea Break | |
| | 4.15 PM-5:45 PM | Lecture 08: Refrigerants (CFC, HCFC, HFC, HC etc) | Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |
| | | | |
| 19 July 2026 Sunday | 9.00 AM-10.30 AM | Lecture 09: Handling Flammable Refrigerants | Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |
| | 10.30 AM-11.00 AM | Tea Break | |
| | 11.00 AM-1.00 PM | Lecture 10: VRF Installation & Maintenance | Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |
| | 1:00 PM-2:30 PM | Prayer and Lunch Break | |
| | 2.30 PM-4.00 PM | Lecture 11: VRF Installation & Maintenance (Contd.) | Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |
| | 4.00 PM-4.15 PM | Tea Break | |
| | 4.15 PM-5:30 PM | Lecture 12: AC Manufacturing, Quality Control & Best Practices | Engr. Md Noor A Alam Deputy Managing Director Elite Hitech Industries Ltd |
| | 5:30 PM-6.00 PM | Prayer Break | |
| | 6.00 PM-6.30 PM | Certificate Awarding | |

