



বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়

ডাইরেক্টরেট অব কন্টিনিউইং এডুকেশন (ডিসিই)

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

No.DCE/007(194)/.73.

Date: 14.10.2022

Announcement of Short Course on
'**Fire and Explosion Safety in Chemical and Allied Industries**' to be organized by
Directorate of Continuing Education (DCE), BUET
on **13-15 October, 2022**

We have the pleasure to inform you that a 3 days Short Course on '**Fire and Explosion Safety in Chemical and Allied Industries**' is going to be organized by the Directorate of Continuing Education (DCE), BUET on 13-15 October, 2022.

This course has been developed to address both principles and advance aspect of fire and explosion in chemical processing facilities. The main aim of this course is to **disseminate knowledge and experience** on general combustion principles of fire and explosion, fire and explosion formation mechanism, risk identification and evaluation, fire and explosion prevention and management system particularly in regard to **chemical and allied industries**.

Highly qualified, professionally trained, reputed and experienced resource persons in the related areas, having ample theoretical and practical knowledge with current information has been invited to conduct this short course.

Registration fee for this short course is **Tk.12,000/- (Taka twelve thousand only)** per person to be paid in advance, through Pay-Order or Demand draft, in favour of "**Director, BRTC, BUET**". Course Fee includes all cost of short course kits, comprehensive materials, certificate etc. and the course fee is excluded VAT & TAX.

Seats are limited and the application/nomination would be selected as First Come First Serve basis. Registration Deadline is **2nd October, 2022**.

For further information, please contact to DCE office, BUET, Cell: **01720-329816, 01745-206831**, Tel: **58610738**, PABX. 55167100 Ext.7848, e-mail: info@dce.buet.ac.bd; dirdce@dce.buet.ac.bd. You may also visit our official website: <https://dce.buet.ac.bd>

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

Prof. Dr. Mohammad Nasim Hasan

Director

Directorate of Continuing Education

BUET, Dhaka-1000

Mail: nasim@me.buet.ac.bd Cell: 01921-506445

CONTACT

Director

Directorate of Continuing Education (DCE)

BUET, Dhaka-1000

Cell: 01720 329816 Tel: 02 58610738

PABX: 02 55167228-57 ext. 7848, 7452

Email: info@dce.buet.ac.bd; dirdce@dce.buet.ac.bd

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

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

October 2022						
SUN	MON	TUE	WED	THU	FRI	SAT
30	31					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



CONTINUING EDUCATION
Path to Excellence

SHORT COURSE OUTCOMES

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

- Assess the fire and explosion hazards in chemical industries
- Develop control measures for fire and explosion prevention
- Implement fire and explosion protection system

RESOURCE PERSON

Experts from both academic and professional domain will conduct the proposed workshop. For details of the course content and resource person biography, please visit:

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

DURATION

13-15 October 2022: 3 days (18 Hrs)
(Thursday-Saturday)

LANGUAGE

English and Bangla

CERTIFICATE

Certificate of participation of the workshop will be provided.

Short Course On Fire and Explosion Safety in Chemical and Allied Industries



13-15 October 2022

Organized by

**Directorate of Continuing Education (DCE)
Bangladesh University of Engineering and
Technology (BUET)**

Dhaka-1000

Cell: 01720 329816; Tel: 02 58610738

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The ever-expanding manufacturing sector is the driving force behind the country's GDP expansion, which has resulted in a significant increase in chemical demand over the last decade. The risks associated with chemical facilities are often greater in a country like Bangladesh because the key players seldom prioritize safety concerns. There have been a series of **catastrophic** events in **chemical industries, chemical warehouse, storage and distribution facilities** in recent years, resulting in many deaths and substantial collateral loss. Understanding chemical safety, risk of fire and explosion is very important to avoid such incident in future. What are the key steps required to implement an effective fire management system in Bangladesh?

This course has been developed to address both principles and advance aspect of fire and explosion in chemical processing facilities. The main aim of this workshop is to **disseminate knowledge and experience** on general combustion principles of fire and explosion, fire and explosion formation mechanism, risk identification and evaluation, fire and explosion prevention and management system particularly in regard to **chemical and allied industries**.

WHO SHOULD ATTEND?

This short course is designed for anyone who is involved with the development and operation of chemical handling and processing facilities in chemical, petrochemical, and allied industries throughout their life cycle. The following participants will get the most benefit from attending this short course:

- Chemical Engineers
- Chemists
- Process Engineers
- Fire Safety Professionals
- Safety and Security Professionals
- Health & Safety Managers
- Compliance Officers

PROGRAM OVERVIEW

Contents of the workshop are:

- Fundamentals of fire and explosion
- Fire Hazard Identification and Risk Assessment
- Safe management of flammable chemicals
- Safe handling and transportation of dangerous goods
- Regulatory standard and best practices
- Fire Hazard and prevention techniques
- Chemical Process Risk assessment tools
- Fire management system for chemical intensive industries
- Fire protection system in chemical industries
- Implementation of fire protection system
- Fire incident management system
- Lesson learned from recent fire accident
- Fire and Explosion safety challenges: Global and Bangladesh Perspectives

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 12,000/- per Person (Tk. Twelve 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.**

Online registration can be made following instructions as outlined: <https://dce.buet.ac.bd>

For more information: 01720 329816

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

REGISTRATION FORM

Workshop On

Fire and Explosion Safety in Chemical and Allied Industries

13-15 October 2022

DCE, BUET

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

Name:

Designation:

Organization/Company:

Address:.....

Cell Phone:

Email:

Payment:

- Pay Order
- Demand Draft (DD)

Please attach the original copy of payment.

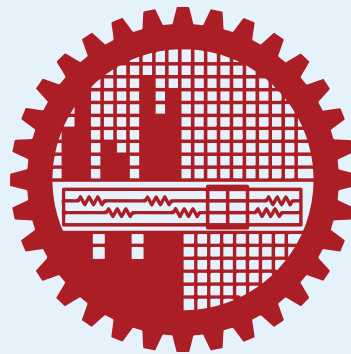
Details of Pay Oder/Demand Draft:

Signature:

Date:

WORKSHOP ON FIRE AND EXPLOSION SAFETY IN CHEMICAL AND ALLIED INDUSTRIES

13-15 OCTOBER 2022
BUET, DHAKA



**DIRECTORATE OF CONTINUING EDUCATION (DCE)
BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)**

Tel: +88 02 58610738, PABX: +88 02 5567228-57 ext. 7848, 7452
Email: dirdce@dce.buet.ac.bd Web: www.dce.buet.ac.bd

Program Content

This course has been developed to address both principles and advance aspect of fire and explosion safety engineering. The main aim of this workshop is to disseminate knowledge on general combustion principles of fire and explosion, fire and explosion formation mechanism, risk identification and evaluation, fire and explosion prevention and management system. The contents of the program are:

- Fundamentals of fire and explosion
- Fire Hazard Identification and Risk Assessment
- Safe management of flammable chemicals
- Safe handling and transportation of dangerous goods
- Regulatory standard and best practices
- Fire Hazard and prevention techniques
- Chemical Process Risk assessment tools
- Fire management system for chemical intensive industries
- Fire protection system in chemical industries
- Implementation of fire protection system
- Fire incident management system
- Lesson learned from recent fire accident
- Fire and Explosion safety challenges in Bangladesh

Learning Outcomes

At the end of the course, participants should be able to

- Assess the fire and explosion hazards
- Develop control measures for fire and explosion prevention
- Implement fire and explosion protection system

Who Should Attend

This course is designed for engineers, chemists, process engineers and safety professionals involved with the development and operation of chemical handling and processing facilities in chemical, petrochemical, and allied industries throughout their life cycle.

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 12,000/- per Person (Tk. Twelve 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 favour of Director, BRTC, BUET. Seats are limited and the selection procedure will be First Come First Serve basis.

Program Schedule : Day 01

Time	Session	Speakers
2:30 - 3:00 PM	Registration	
3:00 - 3:15 PM	Inaugural Ceremony	
3:15 - 4:15 PM	Course Introduction & Recent Accidents and Risk Potential related to Fire and Explosion	Dr. Md Easir Arafat Khan Associate Professor, DChE, BUET
4:15 - 4:30 PM	Tea and Prayer Break	
4:30 - 5:30 PM	Fundamentals of Fire and Explosion	Dr. Md Easir Arafat Khan Associate Professor, DChE, BUET
5:30 - 6:30 PM	Safe Management of Flammable Chemicals in Compliance with Regulatory Obligation	Md. Abdul Hannan, PhD Deputy-chief Inspector of Explosives, Department of Explosives
6:30 - 6:45 PM	Tea and Prayer break	
6:45 - 7:45 PM	Safe management of gas cylinders and pressure vessels in compliance with prevailing regulatory obligation in Bangladesh	Md. Abdul Hannan, PhD Deputy-chief Inspector of Explosives, Department of Explosives
7:45 - 8:45 PM	Safe handling and Transportation of Dangerous Goods	Captain Zillur Rahman Bhuiyan Marine Consultant in Marine Risk & Claim, Maritime Safety
8:45 - 9:00 PM	Q/A Session	
9:00 PM	Closing Remarks Day 1	

Program Schedule : Day 02

Time	Session	Speakers
9:00 - 10:00 AM	Special Fire Hazard in Chemical and Petro-chemical Industry	Dr. Md Easir Arafat Khan Associate Professor, DChE, BUET
10:00 - 10:20 AM	Tea and Prayer break	
10:20 - 11:20 AM	How to Prevent Fire and Explosion in Chemical and Petrochemical Industries?	Dr. Md Easir Arafat Khan Associate Professor, DChE, BUET
11:20 - 12:20 PM	Fire Hazard Identification and Risk Assessment	Faisal Ahmed Safety, Fire and Emergency Response Specialist
12:20 - 2:00 PM	Lunch and Prayer Break	
2:00 - 3:00 PM	Methods and tools for risk assessment in Chemical Process Industries	Dr. Iftekhar Ahmed Khan Assistant Professor, DChE, BUET
3:00 - 4:00 PM	Group Exercise	
4:00 - 4:20 PM	Tea and Prayer Break	
4:20 - 5:20 PM	Fire Safety Management System	Faisal Ahmed Safety, Fire and Emergency Response Specialist
5:20 - 6:20 PM	Fire Protection system (inspection, testing, and maintenance) in chemical intensive process	Faisal Ahmed Safety, Fire and Emergency Response Specialist
6:20 PM	Closing Remarks Day 2	

Program Schedule : Day 03

Time	Session	Speakers
3:00 - 4:00 PM	How to implement fire protection system?	Faisal Ahmed Safety, Fire and Emergency Response Specialist
4:00 - 4:15 PM	Tea and Prayer break	
4:15 - 5:15 PM	Fire and Explosion - Incidents Management System	Engr. Brigadier General Ali Ahmed Khan, psc (Retd) Fire and Disaster Risk Management Specialist Former Director General (FSCD)
5:15 - 6:15 PM	Lesson learned from recent fire accidents	Engr. Mizanur Rahman Jony Asst. Inspector General (Safety), Dept. of Inspection for Factories and Establishments (DIFE)
6:15 - 6:30 PM	Tea and Prayer Break	
6:30 - 7:30 PM	Fire and explosion safety challenges in Bangladesh and improvement opportunities	Engr. Brigadier General Ali Ahmed Khan, psc (Retd) Fire and Disaster Risk Management Specialist Former Director General (FSCD)
7:30 - 8:00 PM	Discussion and Q&A Session	
8:00 PM	Closing Ceremony	

Registration Form

WORKSHOP ON FIRE AND EXPLOSION SAFETY IN CHEMICAL AND ALLIED INDUSTRIES

13-15 October 2022

Directorate of Continuing Education (DCE), BUET, Dhaka- 1000

Name:	
Affiliation:	
Company Name:	
Address:	
Cell Phone:	
Email:	
Payment:	<input type="checkbox"/> Pay Oder <input type="checkbox"/> Demand Draft
Details of Pay Oder/Demand Draft:	

Please attach the original copy of payment.

Signature:

Date:

Program Coordinator

Dr. Md Easir Arafat Khan

Associate Professor, Department of Chemical Engineering
Bangladesh University of Engineering and Technology (BUET)
Dhaka-1000, Bangladesh

Phone: +880 1756 414 190
Email: eakhan@che.buet.ac.bd
www.eakhan.com , www.cpisafety.com



Dr. Khan is currently serving as an Associate Professor at the Department of Chemical Engineering, Bangladesh University of Engineering & Technology (BUET). He started his academic career as a Lecturer in BUET since September 2012. Before joining in BUET, he was a researcher at the Nanyang Technological University, Singapore. He obtained his B.Sc degree in chemical engineering from BUET and doctoral degree (PhD) from Nanyang Technological University (Singapore). He was visiting scholar at Mary Kay O'Connor Process Safety Center, MKOPSC, Texas A & M University, USA in 2016. He is resource person for several national and international organizations i.e. Bangladesh National Authority for Chemical Weapon Convention (BNACWC), Department of Environment (DoE), Bangladesh Chemical Industries Corporation (BCIC), Department of Inspection and Factory Establishment (DIFE) and World Bank (WB). He has more than 30 research publications in several national and international journals/conferences. His research primarily focuses on process safety, chemical substitution, chemical safety & security, risk management, fire and explosion safety, occupational health & safety, environmental pollution, gas/liquid separation, adsorption, and catalysis.

Resource Person



Dr. Iftheker Ahmed Khan

Assistant Professor
Department of Chemical Engineering
Bangladesh University of Engineering & Technology (BUET)
Dhaka-1000, Phone: +880 1728 309 913
Email: iftheker@che.buet.ac.bd

Dr. Iftheker Ahmed Khan is currently serving as an Assistant Professor at the Department of Chemical Engineering, Bangladesh University of Engineering and Technology (BUET). He had obtained B.Sc. and M.Sc. in Chemical Engineering from BUET, and Ph.D. from University of South Carolina (U of SC), USA. He is a Chemical-Environmental Engineer by training with multidisciplinary teaching, research and consultancy experience ranging from environmental pollution modeling, environmental nanotechnology, setting up basic chemical engineering plants, developing appropriate technology, industrial safety, and strategic management of technology for chemical and allied industries. He is a resource person for aviation safety and accident investigation at Bangabandhu Sheikh Mujibur Rahman Aviation and Aerospace University (BSMRAAU). He has 3 US patents and invention disclosures and has published peer-reviewed journal articles.

Resource Person



Engr. Brigadier General Ali Ahmed Khan, psc. (Retd.).

Fire and Disaster Risk Management Specialist
Former Director General (Fire Service and Civil Defense)
Chairman (iota Consulting bd)
Managing Director (Risk and Performance Management Ltd.)
Vice Chairman, Occupational Safety Board of Bangladesh (IEB)
Phone: +880 01713377681

Mr Khan is a military commander and all-rounder military leader with 38 years of experience, Former “Director General (Fire Chief)” of Bangladesh Fire Service & Civil Defense “The Life Saving Force” has safeguarded the country and its citizens for the record longest duration over half a decade. He obtained B.Sc from Bangladesh Military Academy, Chittagong university and B.Sc in Civil Engineering from BUET. He obtained his MS degreee in Defense studies from National University and MBA from international islamic university. He participated numeroius courses related to safety, fire and explosion and disaster management from home and abroad.

As the Fire Chief, he leaded through planning, administration, operation, training and management in developing his men, team and force to ensure fire safety and affirm emergency response for disaster prevention, preparedness, mitigation and building disaster-resilient society till retirement. He trained more than 1500 fire safety professional in Bangladesh during 2013-2019. He is the current Vice-Chairman of the Occupational Safety Board, Institution of Engineers Bangladesh (IEB). He worked as an expert reviewer fire safety incident reports. He provides consutation service to severl national and international organizations i.e. ADB, RAJUK and international code council. He is vice president of Bangldesh Association of Fire Consultant (BAFCON) and president of safety awareness foundation. As a Former Chief Engineer and Director Works of Military Engineering Services, military engineers services, and Deputy Managing Director of ‘Sena Kalyan Sangstha’ with command, management and engineering career over 3 decades at home and abroad, has planned and directed numbers of iconic marvel infrastructure development works, sensitive projects in local, international, and multi-cultural environments.

Resource Person



Faisal Ahmed

Expertise: Safety, Fire and Emergency Response Specialist

More than 20 years worked with leading chemical manufacturer called Tronox Inc. that produces TiO_2 , $TiCl_4$, Cl_2 and etc.

Managing partner: Fire & Safety Management Co.

House#4, Len#16, Block-C, Section#10, Mirpur, Dhaka-1216

Email: faisalahmed.fsm@gmail.com/ faisal@fsmdbd.com

Cell phone: +880 1971 307 858

Mr. Faisal Ahmed is a competent Safety, Fire and Emergency Response Specialist and he is currently the Managing Partner of a company called M/s. Fire & Safety Management, after completing his Diploma in Engineering, he departed from Bangladesh to work in Saudi Arabia in early 90's and initially practiced mechanical works in a automobile sector, as a mechanical oriented profession year 2008, he obtained offers to join Safety Department in a leading Chemical Manufacturer called Tronox Inc. including Titanium Metal that produces varieties of volatile and neutral chemicals such as $TiCl_4$, Cl_2 , $NaOH$, TiO_2 , and etc., He worked more than 20 years and six months for Tronox Inc. with position validated by employment certificate as a Safety Specialist.

Throughout the career, Mr Faisal achieved technical competency on microlevels both theoretical and practical in industrial Safety, Fire & Emergency Management System, he obtained Safety Innovation Award 2014 for designing a mini breathing apparatus that is capable to interlink series of cylinders and serving 10-12 users simultaneously for excessive periods in IDLH. He is certified and practiced *IC/ Incident Commander, *EOC/ Emergency Operation Center (EMT member), *Firefighter II, *HazMat Tech II, *TTT/ Train the Trainer, *Officer BBS/ Behavior Based Safety, *AGT/ Authorized Gas Tester, *Electrical Safety, Incident Investigator, and many more for specialized field such as *Safety Inspection, WPS/ Work Permit System, *Management of Change/MOC, *JSA/Job Safety Assessment, *PSSR/Pre-Start Safety Review, *PHA/Process Hazard Analyses, *PSM/ Process Safety Management, *ERP/Emergency Response Plan, *EMS/ Emergency Management System, *IMS/ Incident Management System, *ICS/Incident Command System, and many more...

Resource Person



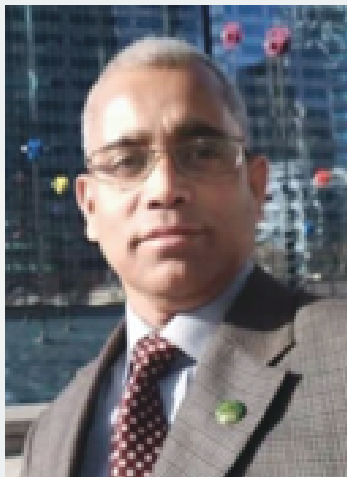
Captain Zillur Rahman Bhuiyan, Master Mariner

Maritime Consultant: Marine Risks & Claims,
Maritime Safety and Maritime Security for port facilities.
Managing Director, Marinecare Consultants Bangladesh
Faruk Chamber, 1403, Sk Mujib Road, Chattogram 4100.
Hp: +880 01922 666111
Email: zillur.bhuiyan@gmail.com,
capt.zillur@marinecare-bd.com

Mr Bhuiyan is a Master Mariner of 3 years command experience and has been a maritime consultant for 33 years and worked in the maritime cities of Dubai and Singapore. He established Marinecare Consultant Bangladesh Limited in 2003, dealing with marine hull, machinery & cargo risk assessment, loss control and claims. Marinecare Consultants has recently completed the project of Developing Maritime Legislation of Bangladesh under Ministry of Shipping. He obtained Post-Graduate Diploma in Maritime Safety and Security from the World Maritime University (WMU), Sweden, in 2019.

Mr Bhuiyan is a lead auditor for the ISM Code, ISPS Code and Maritime Labour Convention. In the Nautical Institute, U K - Member (1980), Fellow (2006), Council Member (2009-2015) & Member of Board of Trustees (2016-2022). A Fellow of the International Institute of Marine Surveying (IIMS), UK. He has recently been awarded the status of Chartered Master Mariner (CMMar) by the Honorary Company of Master Mariners, U K. He is an expert delegate in IMO for the Nautical Institute (2013-2016) and for the International Transport Workers Federation [ITF] (2017 & continuing). He is a permanent Member of the Maritime Safety Committee of the ITF, London. He is the immediate past President of Bangladesh Merchant Marine Officers' Association (2014-2019) and of Marine Surveyors Association of Bangladesh (2020-2022), an affiliated body of FBCCI. He is an adjunct faculty of BSMR Maritime University and teaches in the area of Marine Insurance & Claims, Safety & Security in Port and Shipping, Handling of Dangerous Goods (IMDG Code).

Resource Person



Dr. Md. Abdul Hannan

Deputy-chief Inspector of Explosives
Department of Explosives,
Energy and Mineral Resources Division, Dhaka 1000.
Contact: +8801552382600
Email: hannanchem@gmail.com

Dr. Hannan is currently in chair of Deputy-chief Inspector of Explosives, Department of Explosives, GoB. He obtained B.Sc. (Hon's) M.Sc., M.Phil. and PhD in Chemistry from University of Dhaka. During long tenure of 28 years of his government service, he worked as a specialist in different regulatory bodies of Government of Bangladesh. He's enriched with vast experience regarding regulatory compliances related to explosion caused by explosives, gas and incautiously used DGs including cylinders & PVs.

Dr. Hannan is a Resource Person of Ordnance Centre School, Bangladesh Army; Counter Terrorism and Transnational Crime (CTTC), DMP, Bangladesh Chemical Society, Bangladesh Petroleum Institute, Land-port at Authority, GoB, Petrobangla, Rajuk, Dhaka City Corporation

He participated a good number of overseas-training related safety aspects held in different countries viz. UK, Spain, Switzerland, Italy, France, Germany, Sweden Singapore, Maldives, Thailand, Malaysia etc.

Resource Person



Md Mizanur Rahman Jony

Assistant Inspector General (Safety)
Department of Inspection for Factories and Establishments
(DIFE), Ministry of Labour and Employment,
Shromo Bhaban, Bijoy Nagar, Dhaka-1000,
Phone: +880 1911409406
E-mail: jonydife16@gmail.com

Mr. Md Mizanur Rahman Jony is currently working as an Assistant Inspector General (Safety) at the Department of Inspection for Factories and Establishments (DIFE) under the Ministry of Labour and Employment. He started his career as an Engineer in a Production company in September 2012. But soon after, he started to work as a Health, Safety & Environment Specialist in Chevron Bangladesh. After working for more than three years in Chevron, he joined Bangladesh Government in his current role. While working with the government, he is mostly engaged with multiple national and international development partners such as ILO, GIZ, Royal Danish Embassy and collaborated together to improve the working conditions in Bangladesh. He was part of the investigating committee in almost all the major workplace incidents after joining the government. He obtained his B.Sc. degree in Industrial Production Engineering from KUET and M.Sc. degree in Risk and Safety Management from Aalborg University, Denmark as a DANIDA Fellow. After returning from Denmark, he is working to formulate the curriculums of National Institute for Occupational Health and Safety (OSH) and strengthening DIFE to formulate policies related to OSH. He is currently having another additional charge as an assistant project director of DIFE Strengthening and Modernization project. His current area of work involves accident investigations, fire safety design review, designing evacuation simulations, course formulation for National Institute for OSH etc.