

**BUILDING SERVICES TECHNOLOGY:  
WORKSHOP IN AIR-CONDITIONING SYSTEMS MAINTENANCE  
AND DIAGNOSTICS**

**20 October 2007 to 8 November 2007**

Jointly sponsored by the

**MINISTRY OF FOREIGN AFFAIRS, SINGAPORE**

and the

**TESTING & TRAINING INSTITUTE (TTI) /  
VOCATIONAL TRAINING CORPORATION (VTC) IN AMMAN,  
THE HASHEMITE KINGDOM OF JORDAN**

under the

**ASIA - MIDDLE EAST DIALOGUE (AMED) PROGRAMME**

to be conducted by the

**INSTITUTE OF TECHNICAL EDUCATION, SINGAPORE**

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**SINGAPORE COOPERATION  
PROGRAMME**

Singapore has provided technical assistance to other developing countries since the 1960s. As a country whose only resource is its people, Singapore believes that human resource development is vital for economic and social progress. Singapore itself has benefited from training provided by other countries and international organisations. Through the Singapore Cooperation Programme (SCP), Singapore can contribute to the development of other developing countries.

In 1992, the SCP was established, bringing together under one framework the various technical assistance programmes offered by Singapore. Through the SCP, the range and number of training programmes have increased to meet the needs of developing countries. Since 1992, Singapore has sponsored training courses

and study visits for over 49,000 officials from 166 countries. The SCP is managed by the Technical Cooperation Directorate of the Singapore Ministry of Foreign Affairs.

**TESTING & TRAINING  
INSTITUTE (TTI) / VOCATIONAL  
TRAINING CORPORATION (VTC)**

The Testing and Training Institute (TTI), established in 1992, started its workshop training in 1994. TTI is a part of the Vocational Training Corporation's (VTC) efforts to provide training and upgrading the Jordanian work forces according to the needs of Jordanian work market. TTI's vision is to be a pioneer and distinguished organisation in occupational training, classifying both the occupational labourers and workshops, and providing assistance and consultancy to small enterprises in Jordan and the region. TTI also administers practice tests for different career

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ASIA-MIDDLE EAST DIALOGUE (AMED)

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skilled ladder. Successful participants at TTI are awarded certificates according to Jordan's legislations of occupational work organisation law of 1999.

## INSTITUTE OF TECHNICAL EDUCATION

The Institute of Technical Education (ITE) is a principal provider of career-based technical education in Singapore. A Post-secondary education institution, ITE is a statutory board established under the Ministry of Education, Singapore, in 1992.

The mission of ITE is to create opportunities for school leavers and adult learners to acquire skills, knowledge and values for lifelong learning in a global economy. Besides Full-Time and Part-Time Education, ITE also offers Industry-based Training, and develops national-level Certification and Standards for industry to enhance the competitiveness of the Singapore workforce.

ITE is a global leader in vocational and technical education. Its brand name is synonymous with quality, market relevance and value to industry and stakeholders. ITE is the first and only education institution in Singapore to win the prestigious Singapore Quality Award for global business excellence (2005).

## WORKSHOP OBJECTIVES

The objective for the workshop is to equip participants with practical skills and technical knowledge required to operate, maintain, diagnose and repair air-conditioning systems for residential and commercial applications. By the end of the workshop, participants should be able to:

- Perform functional test on air-conditioning systems;
- Install, commission, repair and maintain split units;
- Maintain centralised chilled water air-conditioning system;
- Troubleshoot electrical faults in air-conditioning controls; and
- Conduct preventive maintenance and inspection of equipment.

## OUTLINE/SYNOPSIS

The topics to be covered are:

- Split Unit Air-Conditioning System
  - Understanding Human Comfort
  - Fundamentals of Refrigeration and Air-Conditioning
  - Operation of a Single Split Air-conditioning System
  - Installation of split unit and perform system operation checks
  - Vacuuming and leak test
  - Understanding the electrical and Mechanical Components in Split Air-conditioning System
  - Selecting the location for installation
  - Service Requirements and fault diagnostics
  - Pump down and chemical cleaning of fan coil unit
  - Cooling Capacity Selection
- Centralized Chilled Water System
  - Operation of Air-Cooled Water Chiller and Air-Handling Unit
  - Assess performance of chillers using the Pressure-Enthalpy Diagram
  - Equipment sequencing and Interlocked Motor-Control
  - Chilled Water System configuration and pump selection
  - Chilled water piping installation
  - Air-Distribution System and balancing
  - Preventive maintenance of centralised chilled-water system
  - Features and Operation of the Building Automation System

## METHODOLOGY

The workshop will be conducted through theory and hands-on practical sessions. Simulators will be used to enhance understanding and create scenarios for fault diagnostics. Live systems will be used to give a real work environment to provide a realistic platform for practical training.

## WORKSHOP DURATION

The workshop will be held from **20 October to 8 November 2007**.

## NUMBER OF TRAINING AWARDS

A total of **eighteen (18)** training awards are available for this workshop.

## APPLICATION INFORMATION

Applicants should:

- Be nominated by their Government
- Have the General Secondary Certificate and the relevant Craftsman or Skilled Worker Certificate
- Have work experience in the field of air-conditioning, heating or refrigeration
- Be proficient in both spoken and written English
- Be below 50 years of age
- Be in good health and free from colour blindness

## VENUE

The workshop will be conducted at the Asia-Middle East Dialogue Regional – Vocational Training Centre

Address: Jordan - Amman  
P. O. Box 6042-278–Amman–Marka  
Alhezam Road – Opposite Vehicle  
Licensing Department

## CLASS SIZE

Maximum **18** participants

## TERMS OF AWARD

- The Government of Singapore will be responsible for the cost of the instructors' fees.
- The Government of Jordan will bear the cost of the training facilities.

- The recipient Governments will be responsible for travel arrangements, accommodation and other local and incidental expenses of their participants.

## APPLICATION PROCEDURE

(Closing date of nomination: **1 September 2007**)

The Governments of Singapore and Jordan are pleased to invite the respective National Focal Points for Technical Assistance to nominate **two (2)** suitable candidates for consideration.

Selection of candidates for the limited number of training awards will be based on merit. The Governments of Singapore and Jordan seek the understanding of the respective National Focal Points for Technical Assistance in the event that their nominee is not selected.

All nominations are to be carried out using the official Application Form. Application forms should be printed or typed, and in black ink.

Completed application forms are to be submitted and should reach the **Ministry of Foreign Affairs, Singapore** through the National Focal Point and the Singapore Embassy in the nominating country not later than **1 September 2007**.

Please address the forms to:

**The Director  
Technical Cooperation Directorate  
Ministry of Foreign Affairs  
Tanglin  
Singapore 248163**

**Attn: Ms Joanna Agnes Calalang**

**DID: (65) 6379 8472**

**Fax: (65) 6479 3357**

**Email: calalang\_joanna\_agnes@mfa.gov.sg**

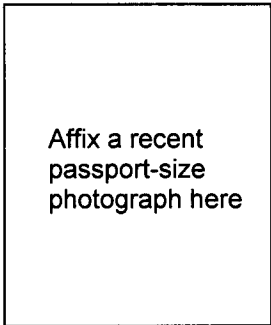
- To expedite the process, a copy of the completed application forms can be faxed to the **Ministry of Foreign Affairs, Singapore** at Fax **(65) 6479 3357**. The hardcopy can be mailed through diplomatic or normal channels.
- All application forms should be completed in full and **must** bear the endorsement of the respective Ministry of Foreign Affairs /

government agency responsible for technical assistance.

- Incomplete application forms or forms which are not endorsed will not be accepted.
- Applicants should refrain from making telephone, fax and email inquiries on the status of their applications.
- The **Ministry of Foreign Affairs, Singapore** will inform all applicants of the outcome of their applications. Their National Focal Point will also be informed directly or through our diplomatic representation in the nominating country.
- Flight arrangements are only to be made upon receipt of the Letter of Acceptance to the course.

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**SINGAPORE COOPERATION PROGRAMME  
APPLICATION FORM FOR TRAINING IN JORDAN**



Please type or write clearly in capital letters.  
The words "NIL" or "N/A" should be used where applicable.  
**Do not leave any space blank.**

The Government of \_\_\_\_\_

nominates \*Mr/Mrs/Miss/Dr \_\_\_\_\_  
(Full name in capital letters as in International Passport – please underline Family/Last Name)

for training under the **Asia-Middle East Dialogue Programme**

Course Title : **Building Services Technology: Workshop in Air-Conditioning Systems Maintenance and Diagnostics**

Date of Course : **20 October to 8 November 2007**

**PART I: PARTICULARS OF APPLICANT**

Nationality	Date of Birth (dd/mm/yy)	Place of Birth
Sex Male / Female*	Passport Number  (Diplomatic / Official / Ordinary)*	Expiry Date of Passport (dd/mm/yy)
Marital Status	Religion	Dietary Restriction, if any
Home Address	Tel No: _____ Country Code                      Area Code                      Tel No.	
Airport of Departure to Singapore:	Fax No: _____ Country Code                      Area Code                      Fax No.	
Job Title	Tel No: _____ Country Code                      Area Code                      Tel No.	
Office Address (Name of Organisation and Address)	Fax No: _____ Country Code                      Area Code                      Fax No.	
Email Address:		

\*Delete where applicable

**NOTE :**  
*This application form should be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Forms, which are incomplete and not endorsed, will not be accepted.*

Person to notify in case of an emergency:

Name	Relationship
Home Address	Tel No: _____ - _____ - _____ <small>Country Code                      Area Code                      Tel No.</small>
	Fax No: _____ - _____ - _____ <small>Country Code                      Area Code                      Fax No.</small>

**PART II: EMPLOYMENT HISTORY (starting from present position - in reverse chronological order)**

Organisation	Department	Designation	Nature of job	Period (dd/mm/yy)	
				From	To
					Present

**PART III: EDUCATIONAL RECORD**

Degree / Diploma / Certificate	Educational Institution	Location	Period (dd/mm/yy)	
			From	To

**PART IV: DETAILS OF PROFESSIONAL QUALIFICATIONS**

Type of Professional Qualification	Date Attained



**PART VII: NOMINEE'S DECLARATION**

I, \_\_\_\_\_, of \_\_\_\_\_  
(Name) (Country)

declare that :

- (a) all information provided is true, complete and accurate to the best of my belief and knowledge, and that I have not wilfully suppressed any material fact;
- (b) I am medically fit and free from any medical problem which may impair my ability to attend the training in Jordan; and
- (c) I will be personally liable for all medical expenses incurred during my stay in Jordan. (All successful participants are covered under Group Personal Accident and Hospitalisation Insurance policies against accidents)

Upon successful selection for the training award, I undertake to:

- (a) carry out instructions and abide by such terms and conditions as may be stipulated by the nominating and host governments in respect of this training course;
- (b) abide by the rules and regulations of the training institution in which I undertake to study in or be trained under;
- (c) submit/present any report which may be required;
- (d) refrain from engaging in political activities and any form of employment for profit or gain;
- (e) return to my home country upon completion of the training; and
- (f) discontinue the course should I be found guilty of misconduct or be medically unfit.

I fully understand that if I fail to comply with the terms and conditions of the training award, and/or any of the above declarations are found to be untrue, the award will be terminated with immediate effect and I would be liable to depart from Jordan on my own expense.

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature of Nominee)

**PART VIII: (To be completed by the Nominating Government)**

Comments and observations on applicant's:

(a) \*Proficiency of the English Language

	Excellent	Fair	Basic	Nil
Spoken				
Written				

(b) \*Fitness Level

	Excellent	Good	Fair	Poor
Fitness level				

\*Tick where appropriate

(c) Reasons for nominee's selection:

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(d) The post which nominee will be required to fill upon satisfactory completion of training:

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(e) Relevance of course to nominee's job:

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**PART IX: OFFICIAL DECLARATION (to be completed by the Nominating Government)**

On behalf of the Government of \_\_\_\_\_,  
(Country)

I, \_\_\_\_\_, certify that  
(Name of Official)

- (a) I have examined the educational, professional or other certificates quoted by the nominee in this form and I am satisfied that they are authentic and relate to the nominee.
- (b) The nominee is medically fit and free from infectious disease and that, having regard to his/her physical and mental history, there is no reason to suppose that the nominee is other than fit to undertake the journey to Jordan and to remain in Jordan for the duration of training.
- (c) The nominee has attained a level of proficiency in both spoken and written English to enable him/her to follow the course of study/training for which he/she is being nominated.

I nominate (Mr/Mrs/Miss/Dr) \_\_\_\_\_ holding  
Passport No. \_\_\_\_\_

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name of Organisation)

\_\_\_\_\_  
(Designation)

\_\_\_\_\_  
(Address of Organisation)

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_  
Country Code Area Code Office Fax No.

\_\_\_\_\_  
(Email Address)

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_  
Country Code Area Code Office Fax No.

**Endorsement by the nominating country's Ministry of Foreign Affairs or the National Focal Point for Technical Assistance:**

\_\_\_\_\_  
(Name)



\_\_\_\_\_  
(Designation)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name of Organisation)

\_\_\_\_\_  
(Email Address)

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_  
Country Code Area Code Office Fax No.

\_\_\_\_\_-\_\_\_\_\_-\_\_\_\_\_  
Country Code Area Code Office Fax No.

**Please note:**  
This application form must be duly completed and endorsed by the Ministry of Foreign Affairs or the National Focal Point for Technical Assistance in your country. Please attach copies of the relevant supporting documents (educational certificates, testimonials, experience and training requirements), which are to be submitted with the form.

**INCOMPLETE AND/OR UNENDORSED FORMS WILL NOT BE ACCEPTED.**

To: GOVERNMENT OF THE REPUBLIC OF SINGAPORE AND GOVERNMENT OF THE HASHEMITE KINGDOM OF JORDAN

Dear Sir

**LETTER OF INDEMNITY**

In consideration of your allowing me to do my training with the relevant Government departments/statutory boards/institutions in Singapore, I \_\_\_\_\_, Passport Number \_\_\_\_\_ of \_\_\_\_\_, hereby declare that I shall be personally liable for and shall indemnify the Government of the Republic of Singapore and the Government of the Hashemite Kingdom of Jordan against all liabilities, claims, losses, demands, actions, suits, proceedings, costs or expenses whatsoever arising under any statute or at common law which may be made or taken against the Government of the Republic of Singapore and the Government of the Hashemite Kingdom of Jordan (name of TCTP partner country or international organisation) or incurred or become payable by the Government of the Republic of Singapore and the Government of the Hashemite Kingdom of Jordan in respect of any medical illness, personal injury (whether fatal or otherwise) to or the death of any person or in respect of any injury or damage whatsoever to any property, real or personal arising out of or in the course of or by reason of my carelessness or negligence, omission or default during my training with the relevant Government departments/statutory boards/institutions in Jordan.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2007

Signed by \_\_\_\_\_ (Signature of trainee) \_\_\_\_\_ (Name of trainee)

in the presence of

Signed by \_\_\_\_\_ (Signature of witness) \_\_\_\_\_ (Name & designation of witness)

**OFFICIAL USE ONLY:**

Received on		Dated			
Ref		Status	Selected / Reserved / Unsuccessful		
From		TCS	Replied	Yes / No	