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For immediate release

ITE's Technical Engineer Diploma (TED) Students Provide Industry Partners with Innovative Solutions

TED in Machine Technology students showcase their inventions in annual Project Fair

In future, radiography students may be able to clock in more practice hours without stepping into an X-ray facility, thanks to a prototype by three Technical Engineer Diploma (TED) in Machine Technology students from ITE College Central.

2 Their device –*Teaching Aid for X-Ray Radiography* – was created in collaboration with Changi General Hospital. It uses light and shadows to simulate actual X-ray images so students can learn the principles of setup to obtain good X-ray images any time, anywhere. For their efforts, the team took home the **Most Innovative Award** at the **TED in Machine Technology Project Fair** on **10 March 2016**.

3 “This design and construct is simple, but the idea behind the teaching aid could have a huge impact in the market. With this, we can minimise exposure to radiation, reduce booking of X-ray facilities, and make teaching easier because of the portability of the teaching aid. This project has potential,” said a member of the Jury Panel, Mr Chevy Kok, Founder and Chief Learning Officer of Selfpac3D Pte Ltd.

Fruits of Collaboration with Industry

4 The Teaching Aid for X-Ray Radiography is one of 11 projects showcased at the annual Project Fair. Held at **The Hall, Tay Eng Soon Convention Centre, ITE Headquarters**, the Fair is the culmination of final-year students' hard work over the last few months. This year, the projects are the result of collaborations with industry. Synopses of the 11 projects can be found in the attached brochure. Information on the TED in Machine Technology programme conducted at ITE, can be found at **Annex A**.

25 Years & Going Strong

5 The TED in Machine Technology course is a outcome of the close relationship between ITE, Singapore, and the Ministry of Education, Youth and Sports (KM), Baden Württemberg, Germany. A Memorandum of Understanding (MOU) between the two parties was first signed in 1991 to establish bilateral co-operation.

6 The MOU was renewed for the fifth time on 26 February 2016 in Germany. Mr Ong Ye Kung, Acting Minister for Education (Higher Education and Skills), and Mr Andreas Stoch Mdl, Minister, Ministry of Education, Youth and Sports, Baden Württemberg, were the signatories of the MOU. Details of the MOU can be found at **Annex B**.

7 A Supplemental MOU between the KM Colleges and ITE Colleges was also signed in 1991, and subsequently renewed every five years. The Supplemental MOU was renewed for a fifth time on **9 March 2016** at ITE Headquarters. The Supplemental MOU will further strengthen ties between the Colleges and seek to explore further avenues of co-operation. With this MOU, collaboration between ITE and KM will be extended to the State Academy for In-Service Training and Human Resources Development for Schools, Esslingen; and Gewerbliche Schule, Goppingen. This makes the number of KM Colleges that are in collaboration with ITE's three Colleges to seven.. Details of the Supplemental MOU can be found at **Annex C**.

About ITE

The Institute of Technical Education (ITE) is a post-secondary education institution established in **1992** under the Ministry of Education. As a principal provider of career and technical education, and a key developer of national occupational skills certification and standards, ITE's **Mission** is to create **opportunities** for students and adult learners to acquire skills, knowledge and values for employability and lifelong learning. ITE's **Vision** is to be A **Trailblazer** in Career and Technical Education. Our **Values** are **Integrity, Teamwork, Excellence** and **Care**. ITE comprises the ITE Headquarters and three ITE Colleges - College Central, College East and College West.

**TECHNICAL ENGINEER DIPLOMA (TED)
IN MACHINE TECHNOLOGY PROGRAMME**

The introduction of the first ITE Diploma, the Technical Engineer Diploma in Machine Technology, in partnership with the Ministry of Education, Youth and Sports, Baden Württemberg, Germany, was announced at the ITE Graduation Ceremony 2007. Under this initiative, ITE will work with Gottlieb Daimler Schule (GDS), to provide training in ITE leading to the Technical Engineer Diploma.

Rationale

- To produce highly skilled and specialised manpower to support the demand for Precision Engineering technologists in support of Singapore's machinery and systems manufacturing cluster – an area of high growth identified by the Economic Development Board.
- To provide more progression pathways for ITE graduates.

Collaboration Background

In June 1991, ITE signed a five year Memorandum of Understanding (MOU) to establish bilateral co-operation with the Ministry of Education, Youth & Sports (MEYS), Baden Württemberg, Germany. The MOU was renewed for the fourth time in 2012. At the MOU Signing in 2006 in Germany, Mr Gan Kim Yong, then Minister of State for Education & Manpower, suggested that ITE explored possible areas of collaboration to jointly offer courses leading to certifications that could articulate into the German universities of Applied Sciences.

Implementation date of TED in Machine Technology

April 2008

Training Mode

Full-Time

Duration

2 years of College-based training and 1.5 years of work experience

Course Venue

ITE College Central

Entry Requirements

Applicants for the Technical Engineer Diploma in Machine Technology course need to be Singapore Citizens with the following ITE qualifications:

Course	Grade Point Average (GPA)
<i>Higher Nitec in Advanced Manufacturing</i> <i>Higher Nitec in Mechanical Engineering</i> <i>Higher Nitec in Mechatronics Engineering</i>	GPA 2.0 and above
<i>Nitec in Aerospace Machining Technology</i> <i>Nitec in Laser & Tooling Technology</i> <i>Nitec in Machine Technology</i> <i>Nitec in Mechatronics (Automation Technology)</i> <i>Nitec in Mechatronics (Equipment Assembly)</i> <i>Nitec in Mechatronics (Medical Technology)</i> <i>Nitec in Medical Manufacturing Technology</i> <i>Nitec in Precision Engineering (Injection Mould)</i> <i>Nitec in Precision Engineering (Precision Machining)</i> <i>Nitec in Precision Engineering (Press Tool)</i> <i>Nitec in Precision Engineering (Tool & Mould)</i>	GPA 3.0 and above

For other Engineering courses, applicants are required to meet minimum GPA and have at least two years of work experience in the Precision Engineering areas such as Machining and Machine Assembly.

Course	Grade Point Average (GPA)
<i>Higher Nitec in Aerospace Engineering</i> <i>Higher Nitec in Civil & Structural Engineering Design</i> <i>Higher Nitec in Electrical Engineering</i> <i>Higher Nitec in Electronics Engineering</i> <i>Higher Nitec in Facility Management</i> <i>Higher Nitec in Facility Systems Design</i> <i>Higher Nitec in Marine Engineering</i> <i>Higher Nitec in Marine & Offshore Technology</i> <i>Higher Nitec in Mechanical & Electrical Engineering Design</i> <i>Higher Nitec in Offshore & Marine Engineering Design</i> <i>Higher Nitec in Process Plant Design</i>	GPA 2.0 and above and 2 years of relevant work experience

<p> <i>Nitec</i> in Aerospace Avionics <i>Nitec</i> in Aerospace Technology <i>Nitec</i> in Air-Conditioning & Refrigeration Technology <i>Nitec</i> in Automotive Technology <i>Nitec</i> in Automotive Technology (Heavy Vehicles) <i>Nitec</i> in Automotive Technology (Light Vehicles) <i>Nitec</i> in Building Drafting <i>Nitec</i> in Building Services <i>Nitec</i> in Building Services Technology <i>Nitec</i> in Electrical Technology (Lighting and Sound) <i>Nitec</i> in Electrical Technology (Power & Control) <i>Nitec</i> in Electronics (Computer & Networking) <i>Nitec</i> in Electronics (Instrumentation) <i>Nitec</i> in Electronics (Mobile Devices) <i>Nitec</i> in Electronics (Wireless LAN) <i>Nitec</i> in Facility Technology (Air-conditioning & Refrigeration) <i>Nitec</i> in Facility Technology (Landscaping Services) <i>Nitec</i> in Facility Technology (Mechanical & Electrical Services) <i>Nitec</i> in Facility Technology (Vertical Transportation) <i>Nitec</i> in Mechanical Technology <i>Nitec</i> in Rapid Transit Technology </p>	<p>GPA 3.0 and above and 2 years of relevant work experience</p>
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Shortlisted applicants are required to attend an interview.

Progression Opportunities

Graduates of the TED in Machine Technology course will be eligible to apply for admission into the related NUS Bachelor of Technology Programmes, as well as universities of Applied Sciences in Germany. They may be admitted provided they meet the entry requirements specified for the course and university.

Career Prospects

TED graduates can look forward to a mean gross starting salary of \$2,100. Some of the job titles held by Machine Technology graduates include Assistant Engineer and Supervisor. There are excellent opportunities for career development and advancements to supervisory positions and beyond.

Intake Capacity

50 students per year, subject to periodic reviews in accordance with industry requirements.

Course Approach and Curriculum

The TED in Machine Technology course has a very high practical content comprising laboratory work, assignments and project work. The course curriculum is modelled along that of the 'Staatlich Geprüfter Techniker' (or State Certified Technical Engineer) course conducted by Gottlieb-Daimler Schule.

Certification

The Diploma will be issued by MEYS and will be similar to the one awarded in Germany. TED Graduates will receive their Diplomas at ITE's graduation ceremonies. ITE and MEYS will also issue a joint transcript to all graduates, reflecting the grades attained in the course.

**Memorandum of Understanding Between
Ministry of Education, Youth and Sports, Baden Württemberg, Germany and
Ministry of Education, Institute of Technical Education, Singapore**

In September 1990, Dr Tony Tan Keng Yam, Singapore's then Minister for Education, led a study visit team to Baden Württemberg, Germany. Arising from the visit, a Memorandum of Understanding (MOU) was signed on 3 June 1991 between the Ministerium für Kultus, Jugend und Sport (KM) (Minister of Education, Youth and Sports), Baden Württemberg, Germany, and Singapore's Ministry of Education – Vocational and Industrial Training Board, Singapore (VITB), a statutory board under the Ministry of Education, Singapore then.

Formed on 1 April 1992, the Institute of Technical Education (ITE) took over VITB's roles and functions. The MOU established bilateral cooperation in the field of Vocational Education and Training (VET). The MOU has been renewed five times – in 1997, 2002, 2006, 2012 and 2016.

Implementation Date of Fifth Renewal

The MOU was signed on 26 February 2016 in Germany and will take effect on 1 March 2016, up to 28 February 2021.

Objectives

The objectives are:

- To share information, expertise and best practices in VET
- To conduct joint seminars and workshops
- To cooperate in mutual areas of interest in the field of VET and Pedagogic Training between Baden Württemberg and Singapore, represented by ITE.

<u>Signatories</u>	<u>Witnesses</u>
<p>Mr Ong Ye Kung Acting Minister for Education (Higher Education and Skills), Ministry of Education, Singapore</p> <p>Mr Andreas Stoch Mdl Minister, Ministerium für Kultus, Jugend und Sport (Ministry of Education, Youth and Sports), Baden Württemberg, Germany</p>	<p>Mr Bruce Poh Director & CEO/ITE Singapore</p> <p>Mr Hartmut Mattes Ministerialrat Ministerium für Kultus, Jugend und Sport (Ministry of Education, Youth and Sports), Baden Württemberg, Germany</p>

**Supplemental Memorandum of Understanding Between
Ministry of Education, Youth and Sports, Baden Württemberg, and its
Academy and Colleges, Germany, and
Institute of Technical Education and its Colleges, Singapore**

Under the umbrella MOU, a Supplemental MOU was also established between Germany's Gottlieb-Daimler-Schule (GDS), a Technical Institute in Sindelfingen, Baden Württemberg, and the then ITE East (MacPherson) in 1991. The MOU was also renewed four times in 1999, 2004, 2009, and 2012.

The third MOU was extended to all campuses under the then ITE East and ITE West Networks and GDS 1 and 2, when GDS was reorganized into two separate institutions in 2003.

The fourth MOU was expanded to include ITE College East and Carl-Benz-Schule Gaggenau. The fifth Supplemental MOU and the Addendum were extended to Kerschensteinerschule Stuttgart and Kaufmännische Schule Göppingen.

Institutions under the Sixth MOU

The Supplemental MOU will take effect from 1 March 2016 to 28 February 2021. Under the new MOU, the cooperation between KM Colleges and ITE Colleges will include:

- Landesakademie für Fortbildung und Personalentwicklung an Schulen rAöR (State Academy for In-Service Training and Human Resources Development for Schools), Esslingen
- Gewerbliche Schule Göppingen
- Kaufmännische Schule Göppingen
- Kerschensteinerschule Stuttgart
- Carl-Benz-Schule Gaggenau
- Gottlieb-Daimler-Schule 1
- Gottlieb-Daimler-Schule 2
- ITE College Central
- ITE College East
- ITE College West

Areas of Co-operation

The areas of co-operation include:

- Staff capability development, exchange and attachment for joint projects
- Student attachment for joint projects and student exchange for immersion and overseas experience in Germany and Singapore

- Sharing of systems, best practices, key indicators and processes for benchmarking, organizational excellence and quality assurance
- Collaboration and partnership with industry
- Collaboration in joint seminars, workshops and training for leaders, lecturers and professionals in VET