SITizen BUZZ
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SIT and Industry Partners Launch
Competency-Based Workplace Learning to Upskill Singaporeans in
Infocomm Technology and Land Transport Sectors

MOUs signed with Ensign InfoSecurity, the Land Transport Authority, SBS Transit and SMRT Corporation to address industry skills gaps and provide an inclusive alternative pathway for in-workplace learners to upskill and pursue a degree, through the pilot of a new Competency-Based Learning Pathway

17 November 2022

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As part of the effort to bridge greater relevance and upskill manpower for Singapore’s key sectors, the Singapore Institute of Technology (SIT) has signed Memorandum of Understandings (MOUs) with industry partners Ensign InfoSecurity Pte Ltd, the Land Transport Authority (LTA), SBS Transit Ltd and SMRT Corporation Pte Ltd to provide workplace learning opportunities.

The collaboration will not only position a new Competency-Based Workplace Learning Pathway that will provide adult learners, regardless of their starting qualifications, a means to enhance their skills and pursue a degree while working – the first of its kind in Singapore.

The signing ceremonies were graced by Minister for Education, Mr Ong Ye Kung, during SIT’s 4th Quarter Lunch (Q4LT) on 8 August 2022.

As part of the MOUs, SIT will collaborate with these industry partners to upskill their workforce to meet evolving industry needs and achieve greater alignment between academic learning and workplace performance. This will take place on the SIT campus. Including cybersecurity, rail and transport, an expert group of key skills and critical talent to develop a resilient workforce that will help power sustained growth in the post-pandemic era.

The new pathway, designed in collaboration with industry partners, will deliver a different model to deliver new existing IT degree programmes in cybersecurity and transportation. Under the new pathway, adult learners will be able to acquire competencies and gain recognition of their skills in the workforce. They will also be assessed based on their workplace performances.

"Through our engagements with industry, we see the increasing importance of workforce learning in the workforce and our role in supporting their appetite to transform and upskill," said Professor Chee Wee Chong, Deputy President (Academic) and Finance, SIT. "Our work with companies to design learning solutions for their employees to acquire skills and gain relevant competencies is important for the industry and indeed for the country, to propel Singapore forward. That is why we are committed to bringing Singapore’s first Competency-Based Workplace Learning Pathways to the country."

"This partnership with SIT will enable us to help grow the cyber talent and talent in the rail and transport sector through new learning pathways that will provide industry with a robust pipeline of talent that is upskilled and ready to take on the roles that we have for them, thereby contributing to overall efforts to boost our workforce to meet our growing cyber and rail transport needs," said Dr John Chung, Group Chief Executive Officer, Ensign InfoSecurity.

"Our engineering, operations and maintenance workers are the backbone of safe and reliable railway systems. Today, SIT and SMRT are working together to bring new and improved learning solutions for our engineering graduates to continue to nurture and develop a strong pipeline of talent with deep technical expertise and very strong competencies." Dr Neo Kon Heng, Group Chief Executive Officer, SMRT Corporation.

"We look forward to developing a pathway for our employees to continue their education and seek their second degree, to enable them to rise to the top of the industry," said Mr Wei Sim, Chief Executive Officer, SMRT Corporation.

SIT’s Competency-Based Workplace Learning Pathway

The new Competency-Based Workplace Learning Pathway will roll out as a collaborative approach with industry partners to make workplace learning more meaningful and rewarding for students. Through this pilot phase, SIT will introduce

- Recognition of Prior Learning (RPL): This pathway will recognise learners’ work experience and prior competencies using competency-based assessment methods, and award credits towards fulfilling the degree programme requirements.
- Learner-Made Pathway: This pathway allows the learner to choose the courses that meet their learning and career objectives. The learner selects three courses from each of the three degree programmes, and receives facilitated coaching and instruction from SIT faculty through online platforms. This approach will provide learners with greater flexibility and ownership over their learning journey and pace, minimising disruption to their work and personal lives.
- Collaboration with Industry Partners: The new pathway has been developed in close consultation with industry partners. This collaboration process ensures that both the industry’s training needs and adult learners’ upskilling opportunities are met.

SIT will roll out the new Competency-Based Workplace Learning Pathway in the following learning areas and as adult learners’ upskilling opportunities increase:

- Bachelor of Engineering in Information and Communication Technology (Information Security) – in collaboration with Ensign InfoSecurity Pte Ltd.
- Bachelor of Engineering in Information and Communication Technology (Sustainable Infrastructure) – in collaboration with SBS Transit Ltd.
- Bachelor of Engineering in Master of Engineering in Sustainable Infrastructure Engineering (Land) – in collaboration with LTA, SBS Transit and SMRT Corporation Pte Ltd.

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Singapore Institute of Technology
Appoints Professor Chua Kee Chaing as its Third President

Leadership transition will take effect from 1 January 2022

03 September 2021

The Singapore Institute of Technology (SIT) will appoint current SIT Deputy President (Academic) & Provost Professor Chua Kee Chaing as President-designate from 1 September 2021, and President with effect from 1 January 2022. Prof Chua, who will be SIT's third President, will succeed Professor Tan Thiam Soon who is stepping down as President after nine years in the role.

Prof Tan became SIT's second President in early 2013 and his first task was to steer SIT to become Singapore's fifth autonomous university, which was achieved in March 2014, and launched SIT's first suite of its own programmes that year. He adopted the applied learning pedagogy and introduced the Integrated Work Study Programme which today, is a signature programme of SIT. He also led the effort to get approval for the construction of a new campus in Punggol, which is conceptualised as a living lab to support applied learning. Today, SIT students are well-received by industry and enjoy good employment outcomes.

Prof Chua joined SIT in September 2019 and has led the university's development in academic policies and curriculum, applied learning and applied research, faculty development, as well as student administration. Prior to joining SIT, Prof Chua was the Dean of the Faculty of Engineering at the National University of Singapore (NUS).

Professor John Thong, the current SIT Vice Provost, will be appointed Deputy President (Academic) & Provost-designate from 1 September 2021 and assume the role of Deputy President (Academic) & Provost with effect from 1 January 2022, succeeding Prof Chua. Prof Thong joined SIT in August 2020 and has worked closely with Prof Chua on academic policies and curriculum. Prior to joining SIT, Prof Thong was the Head of the Department of Electrical and Computer Engineering at NUS.

At SIT, Prof Chua has started various initiatives to deepen SIT’s applied learning pedagogy. These include reorganising the academic structure into a matrix of faculty clusters and programmes; harmonising SIT’s suite of education programmes to help students achieve mastery of disciplinary knowledge, skills and agility; as well as weaving interdisciplinary learning into the curriculum to mould highly employable and adaptable graduates. He has also positioned the University to strategically grow its applied research and pioneer a competency-based workplace learning pathway to support upskilling of in-employment learners.

Prof Tan will continue to be an integral part of SIT's leadership as Institute Professor, supporting the new President in the University's continued efforts in community and donor engagements, as well as mentoring younger leaders. He will also continue to contribute to industry in his roles as the Deputy Chairman of the Building Construction Authority and board member of the Land Transport Authority.

"I express my warmest gratitude to Thiam Soon for his visionary and exceptional leadership as President over the last nine years. I have every confidence that SIT will continue to grow and thrive under the leadership of Kee Chaing, who possesses the strategic vision and expertise to solidify SIT’s reputation as Singapore’s premier University of Applied Learning,” said Mr Ng Yat Chung, Chairman, Board of Trustees, SIT.

Prof Chua added, “I am deeply honoured to be given the opportunity to lead SIT into its next phase of growth and I look forward to working with all stakeholders of SIT to further strengthen our mission as Singapore’s premier University of Applied Learning”.

Click links for full biosketches of Prof Chua and Prof Thong.
Immersive Tech Changes How SIT Students Learn

SIT ramps up its AR, VR and MR offerings in teaching and applied research as immersive technology is increasingly adopted in education and local locations.

Professor Tom Dake, the center’s director, is an expert in immersive technology, including AR, VR and MR. He uses these technologies to enhance the learning experience for students.

For example, his class on human-environment interactions, students were able to explore different environments virtually. They were able to visualize the effects of climate change on different ecosystems, and understand the impact of human activities on nature.

The class also included virtual reality tours of different parts of the world, including the Amazon rainforest, the Great Barrier Reef, and the Arctic. Students were able to interact with animals and plants in these virtual environments, and learn about the challenges these ecosystems face.

Exploring the Potential of Immersive Tech

Tapped into by the first quarter of 2023, SIT’s immersive tech center is designed to support research in immersive technologies and develop solutions for challenges faced in the field. Students and faculty members are encouraged to explore the potential of immersive technology in various fields, including education, healthcare, and environmental conservation.

“We are really excited about the potential of this technology,” Professor Tom Dake said. “It provides a unique opportunity to engage students in real-world problems and develop solutions that can make a positive impact.”

The university is currently working on several projects that focus on immersive technologies in collaboration with various partners and communities.

[Image of a student using an AR headset]
The Nutritional Way to Health

SITizens from the Dietetics and Nutrition as well as Nursing programmes were treated to a lecture by Dr Ang Poon Liat, the paediatrician and author who has also made possible the Dr Ang Poon Liat Bursary at SIT.

📅 03 September 2021

The adage "You are what you eat" was explored in greater detail at a special lecture given by Dr Ang Poon Liat at the Singapore Institute of Technology (SIT) on Friday, 20 August 2021.

A paediatrician with over 45 years of clinical practice, Dr Ang has a special interest in nutrition and its impact on childhood development, health, behavioural disorders and ageing. He has written two books – *The Wonders of Nutrition*, which details how genes and our dynamic bodies respond to food and lifestyle, as well as *Roadmaps to Recovery*, which explains how correct and balanced nutrition plays a pivotal role in healing chronic degenerative diseases. In 2020, he also made possible the Dr Ang Poon Liat Bursary at SIT to support undergraduates at SIT who are pursuing a degree programme in Dietetics and Nutrition or Nursing.

Dr Ang Poon Liat, who has made possible the Dr Ang Poon Liat Bursary at SIT, giving a lecture on countering the effects of rapid ageing through correct nutrition and lifestyle choices.

Along with faculty, more than 20 students from both degree programmes attended the lecture which focused on the effects of rapid ageing, and how food and lifestyle can help reduce the effects of chronic degenerative diseases. They also received copies of Dr Ang’s books. This lecture is the first part of a six-lecture series with the theme “Food for Health” that Dr Ang gives publicly.

Among those who attended the lecture was Ms Stephanie Tan, a Year 2 Dietetics and Nutrition student. She said, "The highlight for me was definitely the Question & Answer portion as my classmates and I had similar questions – for example if a keto diet was sustainable. After the lecture, we also continued talking to Dr Ang further clarify our thoughts. My biggest takeaway was definitely to keep an open mind in learning.”

Said Dr Ang, “I very much enjoyed interacting with the students through this lecture. After they graduate, these Nursing as well as Dietetics and Nutrition students from SIT will help drive patient care in Singapore, and I hope they have gained some knowledge or ideas today that will prove useful in their future work.”
Beauty in a Capsule

SITizens try their hand at mini Korean-style bouquet wrapping, capturing preserved flowers in a capsule at a workshop organised by the SIT Alumni Leisure Network

03 September 2021

Floral arrangements can be a simple and effective way to beautify a space, or just be great mood boosters when you look at them. From 28-29 August 2021, a total of 55 SITizens gathered on Zoom to learn the basics of floral arrangement and mini bouquet wrapping at the Floral Capsule workshop, organised by the SIT Alumni Leisure Network and led by Ms Ong Yi Ting from DIY workshop café Make Your Own.

Working with a selection of dried flowers – with unique names such as the star flower, bunny tail and broom, as well as a clear, oval-shaped capsule to contain their completed bouquet – the participants started off by selecting their main and secondary flowers, which would determine the focal and complementary points of the bouquet.

Ms Sayaka Tatekura, a Chemical Engineering graduate, who had previously attended other types of floral arrangement workshops such as box flower arrangements, felt that this was relatively easy to follow. “I enjoyed putting the bouquet in the capsule and it was nice to see everything come together so nicely,” she said. To complete the look, the participants were also given a black stand to hang the capsule and display their handiwork.

Step 1: Select your flowers and arrange them in an attractive manner; Step 2: Secure your bouquet with rubber bands; Step 3: Wrap your bouquet with layers of wrapping paper; Step 4: Fit bouquet in a capsule and hang it up!

Dried flower arrangements have been gaining popularity over the years due to their longevity. Ms Ong explained that such flower arrangements can last for at least two years before disintegrating. Before securing their bouquets in the capsule, the participants also received tips on how to wrap them in an attractive manner with layers of wrapping paper.

Mechatronics alumnus Mr Muhammad Zulfiqar felt the process was much easier than expected. “It was quite enjoyable, and the finished product looks beautiful and easy to maintain,” he said, adding that it would also make a great gift for loved ones. “I gave it to my fiancée and she melted,” he revealed. “She gave me an A-star for effort since it was hand-made and way more special than just buying from a shop.”
Calibrating Wellness

Computing Science alum Mr Bryan Se To starts digital platform linking users to practitioners providing pain-relief solutions

03 September 2021

It was a wake-up call for Computing Science graduate Mr Bryan Se To that motivated him to develop Calibrate, a digital wellness platform.

The then 24-year old tech consultant brushed off the numbness or tingling sensation experienced in his fingers and feet, until he found out via x-ray that he had a suspected case of pinched nerve. His doctor informed him that he has the body of a 40-year-old.

Bryan said, “Imagine someone telling you that you have your dad’s body! I was very frightened because I realised my posture for sitting, walking and sleeping has been wrong my entire life.” He realised he was not alone in his suffering after speaking to his managers. It turns out that they too were experiencing pain from the long hours at work but did not know how or where to seek help.

Drawing from the technical skills he acquired from his Bachelor of Science in Computing Science degree, Mr Se To built Calibrate. “From coding to software development framework, I’m implementing most of what I know at my startup. The various leadership positions I’ve held and student leadership boot camps I’ve experienced also helped me in influencing and inspiring my team at Calibrate,” he shared.

Launched in July 2021, the web-based application currently lists 27 practices with a total of 65 practitioners. Calibrate focuses on optimising well-being through pain relief or pain management for sports injuries, postural issues and stress management, and users can find and book a practitioner under 20 minutes on the platform.

An ecosystem of holistic wellness practitioners for your mind and body.

From chronic back pain to sports injuries, postural issues to stress management, expect to find and book practitioners tailored to your needs.


Calibrate is a centralized marketplace to find and book wellness practitioners from specialties such as Traditional Chinese Medicine, Physiotherapy, Chiropractic, Sports Massage and more.

To do so, they can browse the practitioners they are keen to seek treatment for (e.g. sports massage, physiotherapy, chiropractic), or select options based on their condition (e.g. back pain, body ache, etc.), and make a booking on the system.

His sister Ms Maryann Se To has joined him in the business part-time since October 2020, but they only made the leap to full-time work on Calibrate in February 2022, after receiving the Startup SG Founder Grant. The grant is awarded to first-time entrepreneurs with differentiated businesses that identify a specific need and seek to address it.

Maryann now takes care of areas such as growth, partnerships, operations and business development, while Bryan tackles technology matters such as product discovery, design, delivery, maintenance and enhancement.

What will be his markers of success for Calibrate? “Recruiting consistent profit, the number of countries expanded to, as well as when Calibrate becomes a listed company,” Bryan said. He is currently working on product market fit and for their upcoming milestone, the team is producing an AI powered assessment to empower users to quickly select, book and pay their practitioners under 5 minutes.

To find out more, check out Calibrate here.
Sweat It Out with Saturday Zoom-ba

Forget about form or control! SITizens let loose and feel the beat with Latin and salsa-style music at the SIT Alumni Sports Network's online Zoom session.

03 September 2021

On Saturday, 14 August 2021, SIT alumni joined the SIT Alumni Sports Network and Mr Christian Navales from JR Fitness for an online Zumba session. While previous home workouts such as Barry and Pilates focused on form and controlled movements, this session was all about letting loose in a non-stop, hour-long dance session.

Zumba makes use of dynamic movements to combine all elements of fitness – cardio, muscle-conditioning, balance and flexibility. Ms Lool Jia En, an Aeronautical Engineering alumnus, was trying Zumba for the first time. “I think it was quite interesting as it has dance elements, and it’s suitable for all ages,” she said.

While instructors usually use Latin and salsa-style music for the workout, Zumba instructor Mr Navales also incorporated remixes from popular artists such as BTS. Accountancy alumnus Mr Peh Pei Sheng enjoyed that the instructor was motivational with high energy. “I had no idea what Zumba was, and I was surprised that it’s such a fun exercise with dance moves,” he said. “It did not feel like exercise, even though I was sweating profusely. Great for a couch potato like me!”