



MEDIA RELEASE

Ngee Ann Polytechnic launches new Industry-in-Curriculum framework for all diplomas to have a third of curriculum co-developed, co-delivered and co-assessed by industry professionals by 2024

Over 100 industry partners commit to develop future talents

Singapore, 24 May 2023 — Ngee Ann Polytechnic (NP) today announced the launch of its new Industry-in-Curriculum (IiC) framework in conjunction with its Industry Partners Appreciation Day graced by Minister for Education Mr Chan Chun Sing. With the increasing pace of technological adoption and disruption across industries, the IiC framework will further align students' learning with the latest industry developments, so that students will graduate with in-demand skill sets and industry-validated competencies.

More than 100 partner-companies attended the inaugural event to celebrate the key role they play in working with NP to nurture talents for the industries. Currently engaged in providing industry-relevant training, these partners will further deepen industry elements within the curriculum in line with the IiC framework.

Co-development, Co-delivery and Co-assessment of Curriculum

The IiC framework enables NP to collaborate with industry practitioners to co-develop, co-deliver, and/or co-assess at least one-third of the curriculum for all its full-time diplomas. Students will benefit from learning industry-current practices through lessons designed by industry experts; plug into emerging trends and developments; as well as gain validation of their skills through assessment and feedback from practitioners. Some may also attain industry certifications as part of the curriculum requirements. NP will roll out the IiC framework to all diploma courses by end 2024.

New Models of Incorporating Industry into Curriculum

As part of the new framework, NP will see existing modules being refreshed and new modules being added in a bid to enhance practical learning outcomes. Innovative curriculum models that NP has rolled out in partnership with industry include:

- A **year-long internship programme** for students to develop skills and amass real-world work experience earlier;
- The **integration of bleeding-edge technologies and equipment** within the curriculum to accustom students to working with emerging technologies;
- An **increased presence of industry on campus** to provide a “living lab” for students to experiment with solutioning under guidance;
- **Multi-disciplinary projects** based on industry-based problem statements; and

- An **agency model** where students are organised in cross-functional teams to provide a service to industry clients.

Wednesdays Without Walls (W3)

To support IIC's implementation, NP has put in place a new initiative known as "Wednesdays Without Walls" (W3) for its academic staff and students. There will be no classes scheduled on Wednesdays, which will be reserved for industry engagements and cross-disciplinary industry-real projects. Students will be involved in collaborative industry projects across courses, while staff will have the space to embark on industry-focused activities to deepen capabilities or tighten the academia-industry nexus.

Mr Lim Kok Kiang, Principal & CEO of NP, said: "While polytechnic courses have always incorporated industry-learning elements, our concerted efforts in redefining our curriculum framework with the support of industry partners will make industry pervasive in curriculum, taking real-world learning to the next level. By placing industry at the core of the curriculum, lesson content and learning activities are designed, delivered and assessed to address industry needs and trends. This helps to close the gap between academia and industry, hence strengthening the industry-readiness of our students."

Unique Partnerships to Drive Industry-Relevant Training

A global leader in cybersecurity artificial intelligence, **Darktrace**, is one of the industry players who will collaborate with NP to train students in cyber defence skills, an emerging area in the fast-growing cybersecurity field. They will work with NP's School of InfoComm Technology (ICT) to equip students with the knowledge to pre-empt cyber-attacks using artificial intelligence (AI) and machine learning. This will be part of the first AI in Cybersecurity specialisation among local Institutes of Higher Learning. Students will attend masterclasses delivered by Darktrace experts, learn from real-life use cases through a curriculum that Darktrace has advised on, as well as attain industry-recognised certification.

Ms Germaine Tan, Vice President of Cyber Risk Management at Darktrace, said: "As a leader in cybersecurity, we are proud to support the next generation of talent in Singapore by providing Ngee Ann Polytechnic with industry expertise. By taking insights gleaned from our ongoing collaborations with customers in an ever-changing cyber landscape, our experts impart valuable advice on the AI skills required for students to embark on successful careers in the future. As part of this partnership, students will learn to use AI to identify real-time threats, participate in discussions about industry challenges and insights, and better understand the role of a cybersecurity professional."

NP is also partnering **Surbana Jurong** to train students from the School of Design & Environment (DE) in the latest smart facilities management skills. The partnership will build on NP's efforts in accelerating the transformation of the smart facilities management industry, following a grant awarded by the Building and Construction Authority (BCA) for it to spearhead the adoption of integrated and aggregated facilities management.

Through this partnership, NP will be the first Institute of Higher Learning to offer students the opportunity to work with real-time data on campus facilities at the newly established Integrated Operations Centre for learning. Through gaining hands-on experiences working with the latest cloud-based technologies powered by Internet of Things applications and artificial intelligence, as well as

digital twin models, students will learn to develop solutions for more efficient and sustainable ways to manage facilities and resources.

“Smart facilities management has implications that go far beyond automation and energy saving. It extends the life of assets and enhance the security and safety of all resources. As a platform for data analytics and insights, it also enables innovation,” said James Chan, Managing Director of SMM Pte Ltd, an entity of Surbana Jurong Group. “We are proud to be a part of this timely initiative to attract and prepare more practitioners to grow and transform this industry as we create smart cities for a sustainable future.”

Under the liC framework, NP’s partnerships with Darktrace and Surbana Jurong will help students in the Cybersecurity & Digital Forensics and Hotel & Leisure Facilities Management courses respectively to acquire the latest skills in frontier technologies. (Please refer to Annex A for more details.) NP is set to extend the benefits of the liC framework to all students by the end of 2024, covering more than 40 courses.

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About Ngee Ann Polytechnic

Ngee Ann Polytechnic started in 1963 and is today one of Singapore’s leading institutions of higher learning with over 13,000 enrolled students in about 40 courses across diverse disciplines. It seeks to develop students with a passion for learning, values for life, and competencies to thrive in a global workplace. The polytechnic also supports Continuing Education and Training (CET) through its CET Academy, which offers a wide range of part-time programmes and short courses. It works closely with industry partners to curate programmes for emerging skills, develop talent pipeline for the industries and help adult learners stay agile in today’s rapidly changing global economy.

For more information, please visit www.np.edu.sg

Annex A

School of Design & Environment (DE) and Surbana Jurong

Equipping smart facilities management talents with the latest skills to lead built environment sector green transformations

NP's partnership with leading urban, infrastructure and managed services consulting firm Surbana Jurong has enabled DE to set up the **first Integrated Operations Centre for learning** among Institutes of Higher Learning, where students use real-time smart facilities management (FM) data as part of coursework.

Through direct access to the **latest cloud-based technologies powered by Internet of Things applications and artificial intelligence in smart FM**, as well as the **Digital Twin model** of the DE campus developed by Surbana Jurong, close to 100 Year 2 students in DE's Hotel & Leisure Facilities Management (HLFM) course will learn how to use the 3D digital dashboard that integrates on-campus smart FM systems for energy use, security, space management, customer service, and maintenance.

Students will have the opportunity to hone their data analytics and visualisation skills, through which they will gain insights on how to optimise system efficiency and make better decisions that contribute to environmental sustainability goals. For instance, students will explore ways to increase energy efficiency for the on-campus air-conditioning system and engage in predictive maintenance of facilities.

In addition to having access to state-of-the-art technology, students will be guided by the Surbana Jurong team of professionals in the forefront of the FM industry. Close to half of the HLFM curriculum of the revamped Smart Facilities Management module will be co-delivered and co-assessed by industry practitioners from Surbana Jurong.

An example of assignment co-assessment is the group project that requires students to apply smart FM solutions to address real-world problems. Through a guided process, students will use their knowledge and skills to formulate proposals which are sustainable, innovative, practical and feasible. This process will help students hone their problem-solving abilities and deepen their understanding of the needs of the industry.

Combining the teaching expertise of the DE team and the industry knowledge from Surbana Jurong, the School is well-positioned to nurture students with the passion for sustainability and in-demand smart FM skill sets to create a greener future.

School of InfoComm Technology and Darktrace

Preparing students for high-demand careers in the information technology field with leading-edge AI in Cybersecurity skills and certification

The future of cybersecurity lies in the harnessing of AI to build cyber defence solutions. By partnering Darktrace, the global leader in cybersecurity AI, NP's School of InfoComm Technology (ICT) will offer the **first-ever AI in Cybersecurity specialisation** in an Institute of Higher Learning to nurture sought-after talents with competencies in Cyber AI applications.

With Darktrace as the industry anchor for this specialisation, close to 80 ICT students in the Diploma in Cybersecurity & Digital Forensics course will have the opportunity to take three electives that have been co-developed, co-delivered and/or co-assessed with Darktrace professionals. Specifically, students will get to attend **masterclasses** conducted by Darktrace representatives; gain access to its **proprietary platform and technology** used by cyber analysts; and train with **actual use cases from its global operations** to gain insights into the practical applications of cyber AI.

Students will also have the chance to take and receive **Darktrace certification**, giving them an edge in their careers upon graduation. Darktrace will host study visits to its facilities overseas, and provide local internship and recruitment opportunities.

As part of strengthening the academic and industry nexus, Darktrace is committed to train NP's faculty using its system and technology, deepening staff capabilities in a fast-evolving technological field.