{ pixels }

Temasek POLYTECHNIC | School of Informatics & IT

TP-IBM Security Operations Centre

IBM

" Real world learning, real world application "

FEATURES

☑ Excellence in Competitions

☑ SkillsFuture Earn and Learn Programme

☑ Overseas Exposure

☑ Outstanding Alumni

Check out our 8 exciting and industry-relevant courses:

- Big Data Management & Governance (T60)
- Business Intelligence & Analytics (T57)
- Cyber & Digital Security (T15)
- Digital Forensics (T55)
- Financial Business Informatics (T17)
- Game Design & Development (T58)
- Information Technology (T30)
- Mobile & Network Services (T42)

Unlocking **TALENT** in Cybersecurity

As cybercrimes become more sophisticated and frequent, there is a need to ensure that our students entering the IT security industry are well-trained and constantly up-to-date in their knowledge of online threats.

The Temasek Advanced Learning, Nurturing and Testing Laboratory (TALENT Lab), a collaboration between the Ministry of Home Affairs and Temasek Polytechnic (TP), aims to foster deeper cooperation between MHA and the Institutes of Higher Learning (IHLs) in the areas of cyber-forensics and cyber-investigations. It will provide a conducive and realistic environment for students to design and validate their innovations, to assess if the innovations are effective in dealing with the latest cyber-threats and preparing our students well for future careers in cyber security.

"In an increasingly sophisticated cyber world, nothing beats having a safe but realistic environment where students can hone their defensive and investigation skills against simulated cyber-attacks."

Ms Mak Yoke Lai Mandy
Course Manager/ Diplomas in Cyber & Digital Security and Digital Forensics

TAKING GAMES SERIOUSLY

Temasek Polytechnic signed a Memorandum of Understanding (MOU) with the Serious Games Association (Singapore) on 17 November 2016. To kick-start the collaboration, the inaugural Gamification Day was held at the School.

TP staff and students from the Diploma in Game Design & Development, as well as industry partners, showcased the serious games they had developed and shared their experiences in the industry. Serious games are games designed for a primary purpose other than pure entertainment and some of the projects showcased focused on education, training of problem solving skills, and even interior design. Some of the technologies shared at this event also included the latest developments using Virtual Reality (VR) technology in Serious Games Development.

"Our collaboration as an Association with TP is certainly timely. Serious Games impact many industries in Singapore, from Education to Medical to Business. It provides a new stream of innovation for Singapore's Smart Nation endeavour."

Mr Ivan Lim
Chairperson
Serious Games Association (Singapore)

Pioneers of the IMDA's iPrep Programme

At the Ministry of Communications & Information (MCI) Awards Ceremony on 13 October, Dian Masura, a Freshmen from the Diploma in Digital Forensics, received the iPoly Scholarship which sponsors tuition fees, provides funding for certification courses and sponsorship for overseas student internship.

Also, more than 100 students from the School of Informatics & IT who had been selected for the inaugural Industry Preparation for Pre-Graduates Programme (iPREP) were acknowledged at the event.

Lim Wei Ming, a graduate from the Diploma in Cyber & Digital Security, received the National Infocomm Scholarship from IMDA. He is currently pursuing a degree in Infocomm Security at the Singapore Institute of Technology.

Dian Masura, recipient of the iPoly Scholarship with her family at the Awards ceremony

Teh Yi Kuang (2nd from left), part of the pioneer batch of the iPREP programme with Minister Yaacob Ibrahim

Temasek Polytechnic students at the MCI Awards Ceremony

"I feel fortunate to be selected for the iPREP programme and be supported by the government and Industry. Getting the chance to be exposed to Industry, going on overseas internships, and attending specialist courses would greatly enhance my knowledge."

Teh Yi Kuang
Diploma in Big Data Management & Governance (Formerly from St. Hilda's Secondary School)
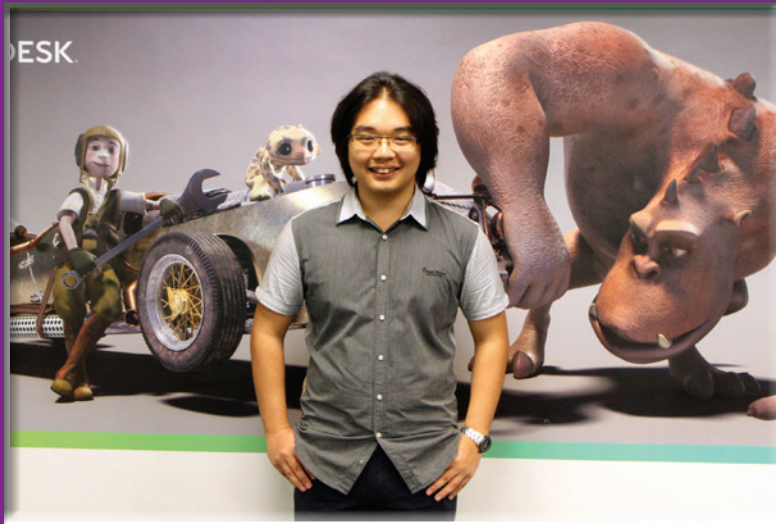
GIC LEARNING JOURNEY

On 16 November 2016, students from the School of Informatics & IT visited GIC Private Limited (GIC) for a learning journey. Through the visit, they learnt how GIC was formed and how Singapore's foreign reserves are managed. They also observed the GIC traders in action. A closing talk with the GIC group president, Mr Lim Siong Guan, further exposed the students to his views on Singapore's growth and the world economy.

"Even though I am not one who is into investment or economics, this opportunity to visit GIC was incredibly eye-opening and intellectually stimulating. It definitely made me want to research more on the investment and the finance sector as a whole, and be more financially literate."

Jasmine See Yu Ting
Diploma in Big Data Management & Governance (Formerly from Junyuan Secondary School)

Gaming Passion Inspires Top Animation Entry

Final year student, Ambrose Wee Chong Yin, from the Diploma in Game Design & Development demonstrated his talent and skills when he won the Animation Category of the Autodesk ASEAN Design Competition, an annual event where competitors show off their talents in three sectors, Architecture, Manufacturing and Animation, using Autodesk solutions.

"This competition experience has improved my 3D modelling skills and given me more confidence in my work. Winning the Autodesk ASEAN Design Competition allowed me to attend the global Autodesk Panorama Boot Camp where I met professional 3D modellers, designers, architects and engineers from the industry. It was truly an eye-opener."

Ambrose Wee Chong Yin
Diploma in Game Design & Development
(Formerly from Dunman Secondary School)

Winner of the Autodesk ASEAN Design Competition, Ambrose Wee Chong Yin (1st photo) and screenshots from his winning entry (2nd and 3rd photos)

From School Project to Winning Game

A game called Cellulose, created by a team of four students, was conferred the 'Special Mention Award' in the 2016 Singapore infocomm Technology Federation (SiTF) competition, Best Innovative ICM Student Project (Tertiary) Category. The team from the Diploma in Game Design & Development comprises Chong Nian Kai, Tan Xue Wen Rayner, Wong Qin Liang and Xu Jie. Cellulose is a fast-paced, real-time strategy mobile game where players take on the role of a commanding immune system cell, controlling groups of child cells to chase after invading viruses.

The SiTF Awards, inaugurated in 2009, is an annual competition that recognises made-in-Singapore infocomm innovations. The team was awarded a second bonus when Rayner was given the 'Best Presenter Award' in this same competition.

"Taking on this challenge and getting to the finals has made my team and I realise that we shouldn't underestimate ourselves. It is an inspiring reminder to always persevere."

Tan Xue Wen, Rayner
Diploma in Game Design & Development
(Formerly from School of Science and Technology, Singapore)

Demonstrating Determination & Capability at **WorldSkills Singapore 2016**

The WorldSkills Singapore 2016 competition took place from 7-9 July 2016 at ITE College Central and ITE College West. Students from the School of Informatics & IT did Temasek Polytechnic proud by coming in among the top three in two WorldSkills Singapore categories:

Web Design:
Gold Medallist - Clarence Tay Yan Chong
Diploma in Game Design & Development (GDD)

Bronze Medallist - Solomon Tan Teng Shue
Diploma in Game Design & Development (GDD)

IT Software Solutions for Business:
Silver Medallist - Austin Teo Jun Yi, **Diploma in Information Technology (IT)**

Being a winner of the Singapore round of the WorldSkills competition is one of the highest accolades any participant could achieve. Clarence Tay, who won the Web Design category, will go on to represent Singapore at the International WorldSkills competition in Abu Dhabi in 2017. Austin Teo, from the Diploma in Information Technology, will also represent Singapore at the event.

"Prior to the competition, I practised very hard for months, and the improvement in my speed contributed to my overall success at the WorldSkills. This competition has taught me to be efficient, critical, and most of all, dedicated."

Tay Yan Chong Clarence
Diploma in Game Design & Development
(Formerly from Temasek Secondary School)

"Coming from a game development perspective, I never thought that learning web design would help me improve my game development. But it made my game more structured. I'm glad that the training I received for the competition has benefitted me in so many ways."

Solomon Tan Teng Shue
Diploma in Game Design & Development
(Formerly from Pasir Ris Crest Secondary School)

"During the competition, I learnt how to think on my feet and to work more efficiently. The intensive preparation for the competition gave me a strong foundation."

Teo Jun Yi Austin
Diploma in Information Technology
(Formerly from Manjusri Secondary School)

Is That **Skin Rash** a **Cause** for Worry?

Have you ever wondered what that rash on your arm meant? Or wanted a simple diagnosis on whether you need to see a doctor about that rash? A group of four students from the Diploma in Information Technology (IT) have that answer.

Combining their talents, Shawn Tjai, Koh Wee Liang, Vivian Tan and Edmund Yeo came up with a mobile application, called Skin Scanner that allows users to learn more about common skin conditions. This app enables users to easily check their symptoms by taking a photo of their skin lesions and uploading it. If Skin Scanner diagnoses the skin condition as posing serious health complications, it will immediately recommend the user to consult a dermatologist.

This project came in second at the Microsoft Imagine Cup Singapore, World Citizenship Category. This is an annual competition where student innovators from around the world put their creativity and great ideas together to create applications that improve the way people live, work and play.

"The Imagine Cup not only allowed us to work on our idea, but it also gave us a wonderful experience in meeting so many professionals and working with them."

Koh Wee Liang
Diploma in Information Technology
(Formerly from East View Secondary School)

The team at Microsoft Singapore. From left: Edmund Yeo, Vivian Tan, Shawn Tjai, Koh Wee Liang

Spurred by their Love for Movies

Chan Jian Hao (left) and Eyo Wei Chin (right) with their winning application, Moovi

Are you a movie buff? If you are, then the Moovi application, created by Eyo Wei Chin from the Diploma in Cyber & Digital Security and Chan Jian Hao from the Diploma in Digital Forensics, could be just for you. Wei Chin and Jian Hao developed Moovi, a web application that provides movie information and reviews using IBM's artificial intelligence, Watson. This application is also capable of analysing the sentiments of people from social media websites (e.g. Twitter, Facebook) to come up with its own unique scoring and consensus of how good a movie is.

Their idea of a sentiment analyser and web application won them the first position in the IDEA Hacks Competition @UWCSEA 2016, held at the IDEAS Hub, United World College of South East Asia (Dover Campus) from 5-6 November 2016.

"We realised that the movie reviews often contained spoilers or were too subjective. As huge movie fans, we decided to come up with an unbiased and spoiler-free way to evaluate a movie's popularity and enhance our movie-going experience."

Chan Jian Hao
Diploma in Digital Forensics
(Formerly from Ping Yi Secondary School)

Bagging Team Facio's win in Seoul, Korea!

If you've always wanted a customised bag that suits different needs for different days, look no further! A group of students from the Diploma in Financial Business Informatics, came up with an innovative bag called "The Detachable" which could be customised to suit your needs. "The Detachable" is a bag with removable parts such as a flap and a pouch. These parts could be unzipped and removed, enabling users to interchange and choose between different colours and designs. The bag's unique design feature allows users the flexibility of changing the components around to suit the user's needs.

This idea was so innovative that the team clinched the third place and the Microsoft Best Use of Information Technology Award at the Junior Achievement (JA) Asia Pacific Company of the Year Competition 2016 held in Seoul, South Korea, from 21-25 February 2016.

Muhammad Firdaus B MD Z (left), Sanchez Angelica Casenas (2nd left), Ang Jing Xuan (2nd right), and Gan Ke Yi (right) after their win in South Korea.

THE DETACHABLE

"Competing in Seoul was an eye-opener for me; there were so many people from different countries like Guam and Thailand. I made many valuable friendships and established working relationships. I also picked up valuable time management and problem solving skills which I believe would benefit me greatly in life."

Ang Jing Xuan
Diploma in Financial Business Informatics
(Formerly from Bowen Secondary School)

THE DETACHABLE

KEEP IT SECURE IN THE **LAPTOP COMPARTMENT.**

THE DETACHABLE
NAVY BLUE & BLACK

IT CAN BECOME A **SLINGBAG** TOO.

THE DETACHABLE
NAVY BLUE & BLACK

The Four Perks of Interning at a Start-up

It is a road less travelled when it comes to interning at start-ups. For Nurfairus and Shafie, the multiple opportunities to learn at the Singapore FinTech Consortium have made their internship more than fruitful. Here are some things they learnt during their time there:

1. Preparing for the FinTech industry

For a start, we received first-hand experience of financial technology, also known as FinTech. Before our internship, we took a module called Risk & Governance where we conducted research and wrote a two-page report about the topic. This gave us prior knowledge before going for the internship job interview and starting the job.

2. Putting theory into practice

It was great putting into practice what we had learnt from the textbooks. Helping out as organisers and managing the events for InsurTech 2016, a conference event our company co-organised with the Singapore Exhibition Services at the Suntec Convention & Exhibition Centre in September, reminded us of the module we took called "IT Project Management". We could put that knowledge to good use.

From left, Muhammad Shafie Bin Pungut and Nurfairus Binte Basheer Ahmed

4. Being exposed to all aspects of the job

We're in a company where we're not invisible even though we're interns. Supervisors and colleagues would include us in meetings so that we get the full exposure from this attachment. What has been beneficial for us is that we've learnt just how important it is to have good persuasive skills when communicating and presenting to an audience so that people are convinced by our message.

3. Learning about professionalism

Although we were interns, we also had to be professionals at the workplace. For instance, when co-organising InsurTech 2016 with another company, we had to ensure that we completed our tasks in order for the other company to continue working on their side. Developing relationships with colleagues also matter at the workplace. Being in a start-up meant we had to be hands-on in every aspect of the business. These experiences have helped us understand how a business is run and the challenges it faces.

Muhammad Shafie Bin Pungut
Diploma in Financial Business Informatics
(Formerly from Bedok Town Secondary School)

Nurfairus Binte Basheer Ahmed
Diploma in Financial Business Informatics
(Formerly from ITE College Central)

A study trip to Kumamoto, Japan

What better way to learn about technology and culture than through a study trip? We encourage students to venture out of Singapore and equip themselves with the knowledge and skills that would give them an edge in a globalised work place. A group of 10 students from the School of Informatics & IT went on an overseas study trip to Kumamoto in Japan from 13-20 October 2016. The group visited several places where they made new friendships and learnt more about technology.

The group before leaving for Kumamoto

Japanese culture and robotics workshop at Kumamoto College

Sean Tham from the Diploma in Information Technology and Darrick Wong, from the Diploma in Financial Business Informatics shared their experiences:
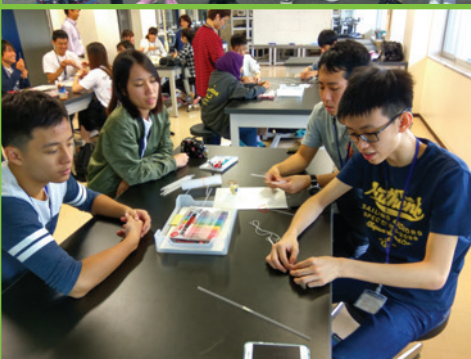
Interacting through projects and innovations

At the National Institute of Technology, Kumamoto College (KNIT), we were impressed how detailed and specific the Japanese students' research were. Through a technical workshop at KNIT, we also got to spend two days interacting with some of them, learning how to build and programme the LEGO MINDSTORMS EV3.
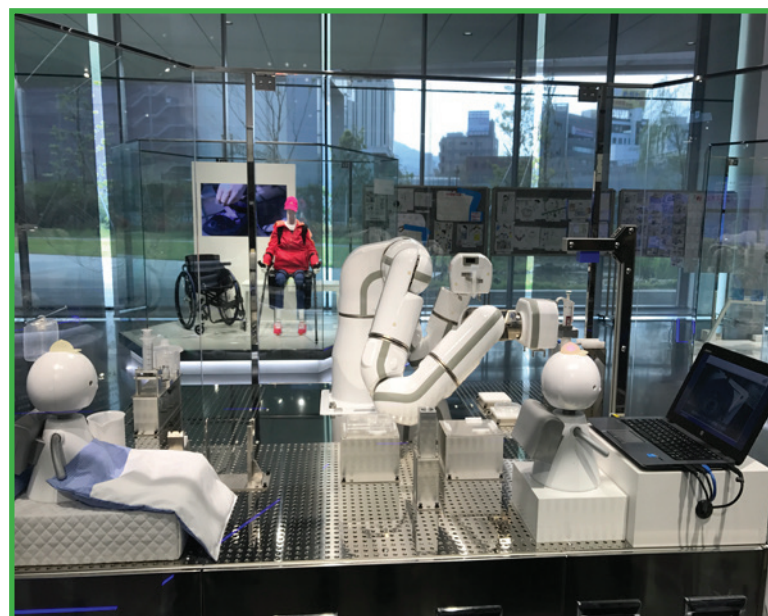
We also had the privilege of visiting YASKAWA Innovation Center, Fujitsu Kyushu Systems and the Bank of Fukuoka. The most unique visit out of the three companies was the YASKAWA Innovation Center, a facility that teaches about cutting edge robotics technology and manufacturing. They showed us one of their plants where robots and humans work together to assemble commercial robotic arms to be exported.

Learning about Japanese culture

We took in Kumamoto's rich culture, beautiful sights, as well as appreciated the wonderful people who've shown us so much warmth and hospitality. Japanese people take pride in punctuality and also give their utmost dedication towards their work. We feel that this is definitely a good habit that we could start cultivating and practising.

Learning more about robot technology at YASKAWA Innovation Center

OUTSTANDING Graduates

LEE KUAN YEW AWARD

How the tables have turned for Goi Jia Jian! From a purposeless boy who was often placed at the bottom of his class in primary school, to the top student and Gold Medallist of his poly course! So just what changed this young man?

Read the rest of his story here:

Goi Jia Jian
Lee Kuan Yew Award Winner and Gold Medallist
of the Diploma in Information Technology 2016
(Formerly from Junyuan Secondary School)

THE NGEE ANN KONGSI MOST OUTSTANDING OVERCOMER AWARD

Chia Hong Sen is the first student with total visual impairment to join Temasek Polytechnic. After secondary school, he eagerly looked forward to the next phase of his education in a polytechnic as he wanted to specialise in something he liked – Information Technology. It was not an easy journey for Hong Sen to pick up IT, given his disability.

Read on to find out how Hong Sen coped at TP here:

Chia Hong Sen
Ngee Ann Kongsi Most Outstanding Overcomer Award Winner
Diploma in Information Technology
(Formerly from Bedok South Secondary School)

Securing the Cyber Space

Sunny is living his dream of being a cyber security professional. We caught up with Sunny to find out what he has been up to since he graduated. Sunny is also the first CREST Registered Penetration Tester (CRT) in Singapore.

Sunny Neo
Alumnus, Gold Medallist,
Diploma in Cyber & Digital Security (2009)

Making inroads as a cyber security professional

What does being a Penetration Tester at BT Security have in common with businesses? Both use technology to solve cyber security weaknesses. In BT Security, which is a part of BT Group Operations, Sunny helps clients understand the business risks and impact of their cyber security weaknesses, so that BT's clients could put in effort in correcting their security issues.

Discovering his potential

Looking back at his time at TP, Sunny recalls that he constantly sought out opportunities to challenge himself on personal growth. When I was a student, I was constantly given opportunities to develop my values and the soft and hard skills necessary in life. I remember vividly, in 2008, after attending a Security Conference held in Kuala Lumpur, I suggested to one of the lecturers, "Let's organise one in TP too!" Even though it was a casual suggestion, I was surprised to be taken seriously. Eventually, several students and I organised the first All 'Bout Security Seminar (ABS) several months later. It still runs annually and is attended by students and industry guests. I believe it would not have happened without the strong support and guidance from the lecturers. I am incredibly grateful to my lecturers. We still catch up regularly."

Paying it forward

Seeing how TP launched him for a better life and career, Sunny was motivated to pay it forward. Sunny returned to IIT to teach Ethical Hacking and Intrusion Prevention to current full-time second year IIT students.

> **"I am passionate about sharing knowledge and I get to share cool tips with students. My students appreciate that I try to make things as fun as possible. I am thankful for all the support I got from my friends, teachers and lecturers along the way. I would like to encourage all fellow alumni to give back to TP in any way that they can."**

After graduating from Temasek Polytechnic, Sunny pursued a Bachelor of Engineering (Computer Science) degree at Nanyang Technological University, followed by a Master's of Science (Computer Science: Information Security) degree at Georgia Institute of Technology.

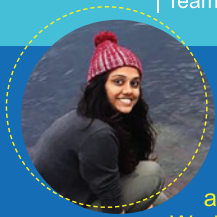*Sunny was formerly from Springfield Secondary School.*

Getting a Headstart with

SkillsFuture Earn & Learn Programme

The **Earn and Learn Programme (ELP)** is a work-study programme designed to give fresh graduates from ITE & Polytechnic a head-start in careers related to their discipline of studies. This programme supports the transition into workforce by allowing individuals to secure full-time employment with industry leaders, tapping on structured on-the-job and institution-based training so as to deepen skills and knowledge acquired in school after graduation.

Participating companies for the Specialist Diploma in Big Data & Analytics are: Accenture Pte Ltd | Azendian Solutions Pte Ltd | CTC Global Pte Ltd | DBS Bank Ltd | Fujitsu Asia Pte Ltd | Integrated Health Information Systems Pte Ltd (IHiS) | Lithan Pte Ltd | NCS Pte Ltd | QED Consulting Pte Ltd | SAS Singapore Ltd

Participating companies for the Specialist Diploma in Smart Solutions are: Accenture Pte Ltd | ACP Computer Training & Consultancy Pte Ltd | Activate Interactive Pte Ltd | Team One Technologies Pte Ltd

"Participating in the ELP has given me the unique experience of living the life of a student as well as a working adult. Everyday I'm given the opportunity to absorb and learn from the experience of my colleagues. Working on a project that resonates my specialised diploma is definitely a plus as I get to use what I learn in school on work right away. So overall, it's a very fun and fruitful experience for me!"

Tanujah Swaminathan
Currently with Accenture
Graduated from Diploma in Cyber & Digital Security

As part of our commitment to the practical re-skilling and professional development of adult learners, we offer the following CET Post-Diplomas:

• *Specialist Diploma in Cloud Data Centre Technology & Management*
• *Specialist Diploma in Information Security & Forensics*
• *Specialist Diploma in Big Data Management*
• *Specialist Diploma in Internet of Things*
• *Specialist Diploma in Business Analytics*
• *Specialist Diploma in Big Data & Analytics (ELP)*
• *Specialist Diploma in Smart Solutions (ELP)*
• *Specialist Diploma in Network Management (ELP, launching in April 2017)*

TEMASEK POLYTECHNIC
School of Informatics & IT
21 Tampines Ave 1
Singapore 529757

Tel   : (+65) 6780 5158
Fax   : (+65) 6789 6872
Email   : iit@tp.edu.sg
Website : www.tp.edu.sg/iit