

Discipline's Events

**Opening of Innovative Construction Technology Centre:
Equipping students with knowledge in advanced technologies
and practical skills for the construction industry**



Amid the commencement of numerous large-scale infrastructure projects in Hong Kong, the industry's call for highly skilled engineering professionals is reaching new heights. VTC remains steadfast in its commitment to delivering top quality VPET programmes, infusing innovative technological components into the curriculum, and persistently upgrading teaching facilities to cultivate an enriching learning environment for students.

Details





The inauguration of the state-of-the-art Innovative Construction Technology Centre at VTC, honored by the presence of Ir Dr Lo Wai Kwok, Legislative Councillor, as the Guest of Honour, marks a significant milestone. The center is outfitted with cutting-edge facilities, including the Digital Works Supervision System, a full-scale construction site mock-up, the Smart Site Safety System, and exhibits demonstrating pioneering construction techniques. These facilities are strategically designed to fortify students' training in novel construction technologies, equip them with industry-leading technologies and standards, and elevate their practical skills. VTC is unwavering in its dedication to align with the Government's strategic vision for smart building technology and to address industry demand for development. By introducing a diverse range of programmes, VTC aims to enhance the professional competencies and practical expertise of practitioners, providing a sturdy foundation for the future development of Hong Kong's construction industry.





Signing the Memorandum of Understanding with China Inspection Company to support the development of new energy industry

To align with the trend of developing new energy and the societal demand for green transformation, the VTC and China Inspection Company Limited (Hong Kong CIC) signed a memorandum of understanding on 14 June, 2024. By leveraging the strengths of both parties in VPET and new energy technology, this collaboration aims to advance the training of new energy professionals, explore new energy vehicle technologies, and facilitate discussions on training programmes to support the industry's development.

Details



中國檢驗有限公司與職業訓練局戰略合作協議簽約儀式

簽約成功



With the Environment and Ecology Bureau actively formulating the "Strategy of Hydrogen Development in Hong Kong," the widespread application of hydrogen energy in Hong Kong is imminent. Under the collaborative framework, VTC and Hong Kong CIC will jointly explore hydrogen energy related training programmes and its objectives, teaching plans, train-for trainer programmes and teaching resources. Both sides will also work together to explore new energy transportation inspection technologies, testing standards, related advanced technology research and development, applications, and testing services. They will support each other in establishing broader partnerships with more institutions/organizations, with Hong Kong CIC acting as a hub to assist VTC in extending training programmes to the China Certification & Inspection Group (CCIC) internally, thereby enhancing VTC's brand influence.

VTC's Engineering discipline has long been dedicated to assisting young individuals in exploring the potential and possibilities of new energy. Currently, we have incorporated EV related professional knowledge and



maintenance techniques into full-time training automobile programme and have introduced several EV maintenance in-services training courses, enabling students or industry practitioners to acquire the latest professional knowledge in new energy vehicles. As new energy transportation become more prevalent, there will be increasing opportunities for green employment in related fields. The collaboration between VTC and Hong Kong Inspection will prepare for the future development in the hydrogen energy transportation sector and drive the advancement of new energy industries in mainland China and Hong Kong.

DISCIPLINE PROJECT EXHIBITION 2024 KICK-OFF CEREMONY 6 June 2024



Engineering Discipline Project Exhibition 2024 Showcasing Students' Innovative Abilities

The "Engineering Discipline Project Exhibition 2024," held at IVE (Morrison Hill), showcased exceptional student projects from various professional domains within the Engineering discipline. Students applied their expertise to create practical and innovative engineering solutions addressing everyday challenges. Examples included the "Smart Rooftop Water Tank" for monitoring water quality in older buildings, the "Intelligent Plant Wall" for urban greenery management, and the "Smart Pill Box" for elderly care, highlighting the students' professional and innovative capabilities.

Furthermore, the engineering industry has engaged in collaborations with VTC students on several projects. Notably, project partnering with Siemens involved utilizing Digital Twins technology to improve production line efficiency. Students also collaborated with Hongkong International Terminals (HIT) to devise safety designs for forklift seat belts, improving workplace safety. These multiple industry collaborated projects underscore the students' recognized capabilities within the sector.

The event was graced by the presence of Legislative Councilor, Ir Dr Lo Wai Kwok, as the Guest of Honour. Guests were guided through tours and presentations to delve into the design concepts behind each project and they warmly recognized the students' achievements.



Details



The 4th New Energy New Generation – Competition and Award Ceremony 2024

Organised by the Engineering Discipline of VTC, the “New Energy New Generation (NENG) 2024 and Electric Vehicles Week” have been held four times since their inception in 2017. The primary objective of the event is to provide secondary students with an opportunity to explore the joys of engineering and apply their theoretical knowledge into practical scenarios. Students tackled various tasks ranging from design, assembly to on-site testing, ultimately leading to the completion of self-developed solar-powered cars that competed on the track. To encourage students to take more initiatives, this year's competition not only maintained the traditional categories of rideable solar cars and mini solar cars from previous years but also introduced two new categories: solar-powered boats and solar gliders. A total of 36 secondary schools and 77 teams took part, actively competing for awards in each category. The competition and award ceremony were successfully held on 12 October, 2024, at IVE (Tsing Yi). Through this event, the Engineering Discipline hopes to inspire the younger generation to cultivate an interest in Engineering and gain a better understanding in effective utilization of new energy sources.



Details



Signing the MoU with subsidiary companies under Shun Hing Group to Promote the Vocational Professionals Admission Scheme


Memorandum of Understanding Signing Ceremony
between Vocational Training Council and
Shun Hing Electric Service Centre Limited &
Shun Hing Systems Integration Company Limited
20 January 2025



The Engineering Discipline of VTC signed a memorandum of understanding with the Shun Hing Group's subsidiaries - Shun Hing Electrical Service Centre Limited and Shun Hing System Engineering Limited, on 20 January, 2025. This partnership aims to attract non-local students to come to Hong Kong to pursue the eligible VTC full-time two-year Higher Diploma in engineering fields. By providing internship opportunities and scholarship schemes, the parties hope to encourage non-local students to stay in Hong Kong after graduation and engage in professions related to their expertise, thereby further supporting the workforce and overall economic development of Hong Kong.

Details





Engineering Discipline Showcases Student Award-Winning Projects at InnoCarnival 2024

VTC participated in the "InnoCarnival 2024" held at the Hong Kong Science Park, showcasing a total of 11 student projects under the theme "Empowering VPET Talent for a Smart Future." Two projects developed by students from the Engineering Discipline stood out during the event, capturing the interest of many attendees. To tackle pressing social issues, the students provided smart solutions using technology and professional knowledge. For instance, the "Rat Detector" project addressed the rat infestation problem in older areas by utilizing a tracking system to monitor the movement and gather data on the rat population's patterns and activities, aiding in pinpointing their nesting locations.

Another notable project, the "Smart Renewable Energy System: SolWind Tree," integrated wind and solar power generation systems with automatic sunlight tracking and wind speed monitoring. This design allowed for adaptive positioning and height adjustments of components based on weather conditions, enhancing energy generation efficiency and system stability. In addition to these projects, the Engineering Discipline also hosted the "Hydrogen Empowerment for Future Bluesky: Hydrogen Fuel Cell Taster Workshop," promoting public understanding of renewable energy technologies through hands-on demonstrations of hydrogen energy's operational principles.

Details



Engineering Discipline participated in EMSD Symposium 2024



VTC Engineering Discipline participated in the “EMSD Symposium 2024” on 16 December 2024. Aligning with the event theme “Empowering High-Quality Development for a Green Future”, we showcased a project titled “Smart Renewable Energy System: SolWind Tree”. The piece harnesses solar and wind energy for power generation and incorporates cutting-edge Internet of Things (IoT) technology to offer a stable renewable energy solution. Through the exhibition, the Engineering Discipline aims to demonstrate renewable energy technologies to visitors and showcase the benefits of sustainable development and the advantages of renewable energy.

Details



VTC and National Institute of Technology (NIT) Oyama College Signing the Memorandum of Understanding to foster Mutual Exchange and Collaboration to Enhance Academic Performance



On 13 December, 2024, Engineering Discipline and Health and Life Sciences Discipline under Vocational Training Council (VTC) signed a memorandum of understanding with NIT Oyama College to promote mutual exchange between staff and students, aiming to enhance academic performance at both institutions.

NIT Oyama College has achieved outstanding success in robotics development and electronic engineering research. The Engineering Discipline looks forward to collaborating with NIT, Oyama College in the future through knowledge exchange and project collaboration to promote advancements in innovative technology for institutions.

Details



SOPHIE 6s Solar Car Shined in the International MotorXpo Hong Kong (IMXpo) 2024



The VTC Solar Car Team showcased the SOPHIE 6s solar-powered car at the International MotorXpo Hong Kong (IMXpo) 2024 held from 5 to 8 December, 2024. SOPHIE 6s previously clinched third place in the Cruiser class at the World Solar Challenge 2019, reflecting the professional expertise of the VTC Solar Car Team. Additionally, the solar-powered car created by the winning team of "New Energy New Generation Competition 2024," HHCKLA Buddhist Ching Kok Secondary School, was also featured at the event. The Engineering Discipline aims to encourage the younger generation to explore new energy technologies and spark their interest in engineering through a series of events such as New Energy New Generation Activities, with focus on themes related to technology, innovation and engineering.

Details



Memorandum of Understanding with Mainland Institutions to promote Vocational Professionals Admission Scheme

In September and October 2024, the Engineering Discipline of VTC signed memoranda of understanding with Zhuhai Technician College, Zhejiang Industry & Trade Vocational College, and Shunde Polytechnic. This collaboration primarily focuses on nurturing engineering talents in both regions, exploring the potential for joint curriculum development, certification, and credit recognition between mainland China and IVE. The objective is to enhance students' competitiveness by awarding certificates from both institutions upon graduation. Through mutual exchanges, both parties seek to introduce mainland students to the VPAS, attracting them to pursue education in Hong Kong and potentially work there, thereby addressing talent shortages in the city.

Details



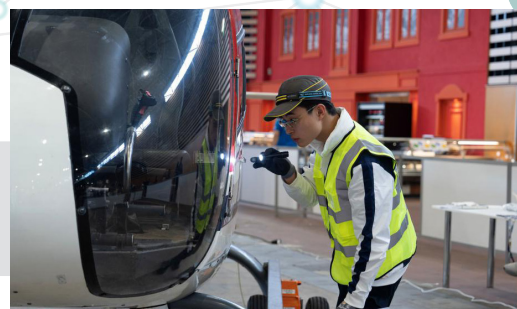
Outstanding Student Achievements

IVE Engineering graduates excel at the WorldSkills Competition, radiating brilliance on the global stage



IVE Engineering graduates and students demonstrated remarkable performance at the esteemed "WorldSkills Lyon 2024," widely recognized as the "Skills Olympics," clinching a bronze medal and Medallions for Excellence. Hosted in Lyon, France, the WorldSkills Lyon 2024 attracted participation from over 70 countries and regions, with more than 1,400 contestants competing in 62 categories. In this year's global event, the Hong Kong team made its debut in the "Aircraft Maintenance" category, with IVE Aircraft Maintenance Engineering Higher Diploma graduate Wong Fu Tung winning the bronze medal. Meanwhile, IVE Mechanical Engineering Higher Diploma Students Lam Choi Chi and Ng Wing Kwan excelled in the mechatronics competition, securing a Medallion for Excellence.

Details





IVE Engineering Student Team Won Bronze Medal in Hong Kong Techathon+ 2025

Three students from the IVE Electrical Engineering Higher Diploma programme participated in the "HongKongTechathon+2025" competition with their project "Eco-Sustainable Motor Design Using Sand to Perform Soundproof", competing against a total of 380 teams worldwide, including mainland China, the United States, Malaysia, Thailand, Singapore, Taiwan, Macau, Australia, Portugal, and Brazil. The students excelled in the competition and secured the bronze medal in the "Sustainable Development and Environment, Social and Governance" for local university student category.

Details



HONG KONG

TECHATHON⁺ 2025

52 Te Tellurium	85 Am Americium
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66 Dy Dysprosium	7 N Nitrogen	85 Am Americium	53 I Iodine	6 C Carbon
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49 In Indium	16 S Sulfur	15 P Phosphorus	53 I Iodine	71 Rb Rubidium
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89 Ac Actinium

74 W Tungsten	68 Er Erbium
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92 U Uranium	28 Ni Nickel	27 Co Cobalt	86 Rn Radon	16 S Sulfur
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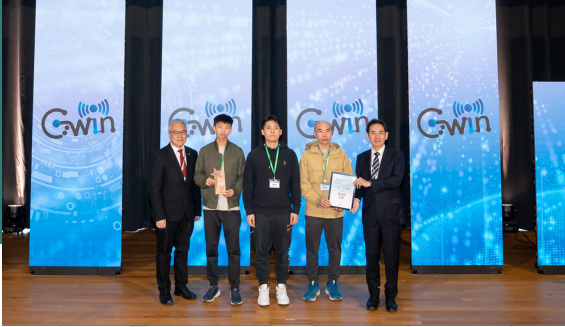
The award-winning project, inspired by the Engineering discipline's solar-powered car SOPHIE, utilized a material consisting of sand mixed with resin for effective sound insulation in the car engine. Compared to traditional soundproofing materials, the sand-based material is lighter in weight and can reduce noise by about 5-10 decibels. This material is easy to shape and apply to surfaces, solidifying quickly under sunlight to simplify the application process. The students plan to further research this material and potentially implement this the technology in small appliances such as vacuum cleaners or drills.

Among the three award-winning students, one is local, while the two are first-year students who enrolled the Higher Diploma through the Vocational Professionals Admission Scheme (VPAS). Despite coming from different regions of China and Hong Kong, these students, united by a shared belief and goal, effectively applied their knowledge, achieved success in the competition, secured startup funding, and took an important step towards their future development.





GWIN 2024 Smart City E&M IoT Application Challenge | IVE Engineering Students emerged as Champion, sweeping multiple awards



Leveraging their understanding and concern for the community, along with solid engineering knowledge, IVE engineering students excelled in the tertiary/open category of the "GWIN 2024 Smart City E&M IoT Application Challenge" organized by the Electrical and Mechanical Services Department. They clinched multiple awards, showcasing their outstanding practical skills and innovative ideas. The award-winning project, "Smart Smoke Door," introduced a low-power technology that can detect the status of smoke doors and issue timely alerts. Its user-friendly design and simple operational concept made a profound impression on the judges. Additionally, other winning projects presented creative yet practical proposals to address various community issues, earning unanimous acclaim from the judging panel.

Details



Tertiary/public category	Proposal title	School name
Champion	Smart Smoke Door	IVE (Sha Tin)
First runner-up	Emergency Alert System for Sudden Loss of Consciousness in Older or Vulnerable Individuals at Home	IVE (Sha Tin)
Second runner-up	Smart Road Sign	IVE (Sha Tin)
Judge commendation awards	Rodent Detection System	IVE (Sha Tin)
	Smart Recreational Facility Monitoring	IVE (Sha Tin)
Consolation prizes	Smart Water Meters	IVE (Tsing Yi)
	Bird Detection for Electric Tower	IVE (Sha Tin)



URA x IVE Innovation Design Competition 2023/24

Urban Renewal Authority and the Hong Kong Institute of Vocational Education (IVE) co-organized the seventh Innovative Design Competition. This year's competition, themed "Vertical Wisdom City," aimed to promote the concept of vertical urban development in densely populated areas. The competition attracted a total of 29 teams, with over 70 students participating. Students from the engineering discipline fully showcased their innovative spirit and successfully conceived multiple sustainable creative architectural design solutions, aiming to enhance the livability and convenience of citizens in high-density areas.



Details





The "Barrier-Free Smart Mailbox" project developed by students from Higher Diploma in Computer and Electronic Engineering won both the Gold Award and the Best Design Award. The project leveraged technologies like optical character recognition and large language models to significantly improve the building's postal system, reducing the space needed for traditional mailboxes and making it easier for elderly and mobility-impaired individuals to collect mail. This enhancement greatly improves the convenience of residents' lives.

Prize	Project Name	Awardee, Programme & Campus
Gold Award Smartest Design Award	無障礙智慧信箱	黃偉成、周諾熙、莫竣林 HD in Computer and Electronic Engineering, IVE (Sha Tin)
Silver Award Best Model & Presentation Award	智能化天花懸吊式充電樁	張俊賢、楊文曦、蔡嘉儀 HD in Building Service Engineering, IVE (Tuen Mun)
Bronze Award	智能綠化外牆管理系統	吳卓橋、余浩堃 HD in Computer and Electronic Engineering, IVE (Sha Tin)
Most Sustainable Award Merit Award	智圍城	陳漢洲、何雨、王家裕 HD in Architectural Studies, IVE (Tsing Yi)
High Potential Award Merit Award	雀鳥防撞設計	黃星祐、陳浩樂 HD in Computer and Electronic Engineering, IVE (Tuen Mun)
	鼠群探測器	黃星祐、陳浩樂 HD in Computer and Electronic Engineering, IVE (Sha Tin) and Diploma of Vocational Education (Electronic & Computer Engineering), YC (Kowloon Bay)
Merit Award	智城摯誠伴您同行	譚天濠、曾健榮 HD in Computer and Electronic Engineering, IVE (Sha Tin)
	智能可再生能源管理系統	林昊熹 HD in Electrical Engineering and 葉東運 HD in Computer and Electronic Engineering, IVE (Haking Wong)

The 2nd "Belt and Road" International Skills Competition | Silver medal winner

The Second Belt and Road International Skills Competition was held from 24 to 26 June 2024 in Chongqing. With the theme "Skills Cooperation • Joint Development" the event aimed to promote skill exchange and collaborative growth among participating countries and regions. The competition brought together nearly 200 contestants from 61 countries and regions to compete in 18 skill categories.

IVE Engineering student Wong Wai Shing participated in the IoT installation and debugging category. Drawing on the expertise gained through the Higher Diploma in Computer and Electronic Engineering programme, Wong competed and exchanged ideas with participants from 16 other countries, ultimately winning a silver medal.



Details



RoboGames 2024 | IVE Engineering students Claiming One Silver and Two Bronze Medals

Fan Ho Wai, a first-year student from the Higher Diploma in Artificial Intelligence and Robotics, participated in the 2024 annual RoboGame robotics competition held in California, USA from April 19 to 21, 2024. He received awards in three categories with a self-designed robot, including:

- Sumo(Humanoid) - Bronze medal
- Kung-Fu(Mid-Weight) - Silver medal
- Kung-Fu(Heavy-Weight) - Bronze medal

Details



2024 Architectural Studies Student Project Exhibition



The annual IVE Architecture Student Exhibition was successfully held in November 2024 at the Tsuen Wan Town Hall Exhibition Hall, showcasing works by students from the Higher Diploma in Architecture at IVE (Tsing Yi) and IVE (Tuen Mun). Additionally, design works by students from the Bachelor of Arts (Hons) in Architecture, jointly organized by VTC and Lancaster University in the UK, were also exhibited at the event.

Details



IVE Engineering swept the awards in "The 11th Cross-Strait and Hong Kong-Macao Student Occupational Skills Competition"

During the "11th Cross-Strait and Hong Kong-Macao Student Occupational Skills Competition" held at Xiamen University, IVE Engineering students swept multiple awards in the "IoT Technology Application Competition - Hong Kong/ Macao /Taiwan Individual" category, including first, second, third places, and honorable mentions, achieving remarkable results. This event brought together 42 institutions and nearly four hundred teachers and students for participation, providing students with the opportunity to showcase their exceptional skills and engage in profound exchanges with their peers, offering a valuable experience.



Details

