

Explosion of success & innovation

Since 1965

60*years*

SCHOOL OF CHEMICAL & LIFE SCIENCES
SINGAPORE POLYTECHNIC

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Forward

As we celebrate the Singapore Polytechnic (SP) Chemical & Life Sciences (CLS) 60th anniversary, we reflect on a remarkable journey marked by innovation, growth and a steadfast commitment to excellence. Established in 1965, CLS has evolved in tandem with Singapore's transformation, making significant contributions to the nation's development and the global scientific community.

From its inception, CLS has been at the forefront of education in chemical and life sciences, adapting to the changing needs of the industry and society. Our history is rich with milestones that highlight our dedication to shaping industry-ready talent. Over the years, we have expanded our curriculum, introduced cutting-edge facilities and fostered a culture of continuous learning and innovations.



Our achievements are a testament to our unwavering commitment to excellence. CLS has pioneered numerous initiatives, including the University Accelerated Pathway Programme with NUS and NTU (UAPP), which enables high-achieving students in applied sciences to jump-start their university education. We have also established state-of-the-art facilities, including the Energy & Chemicals Training Centre, SMARTLab, Biologics Corridor, SP Optometry Centre, Materials Performance Centre, Medical Technology Suite and the Future Food Lab. These facilities provide our students with authentic hands-on experience, preparing them for the industry's demands.

Our journey in education has been complemented by robust research and strong industry collaborations. CLS has consistently engaged with industry partners to ensure our curriculum remains relevant and impactful. Our partnerships with leading organisations, including their co-location on the SP campus, have enabled our students to work on industry-paid projects, gaining invaluable experience and insights. These collaborations have also led to significant advancements in various fields, contributing to the betterment of society.

As we celebrate this milestone, we extend our heartfelt gratitude to our dedicated CLS staff (current and past), students, alumni and industry partners. Your unwavering support and commitment have been instrumental in our success. In addition, we extend our sincere gratitude to all the schools and departments in SP for their kind support and collaboration. Together, we look forward to many more years of growth, innovation and excellence.

Innovate. Grow. Excel.



Dr. Tan Tuan Lin
Senior Director
Computing, Chemical & Life Sciences

In the Spirit of Discovery

60 Years of Chemical & Life Sciences at
Singapore Polytechnic



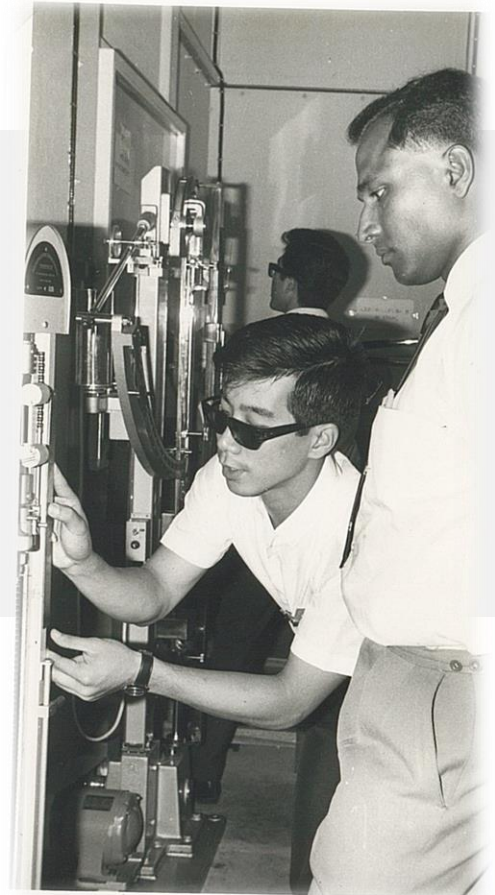
The journey of CLS began in 1965

with the founding of the Division of Rubber and Plastics at SP's Prince Edward Campus. This pioneering unit was established to meet Singapore's pressing demand for skilled talent in the rapidly expanding rubber and plastics industries.

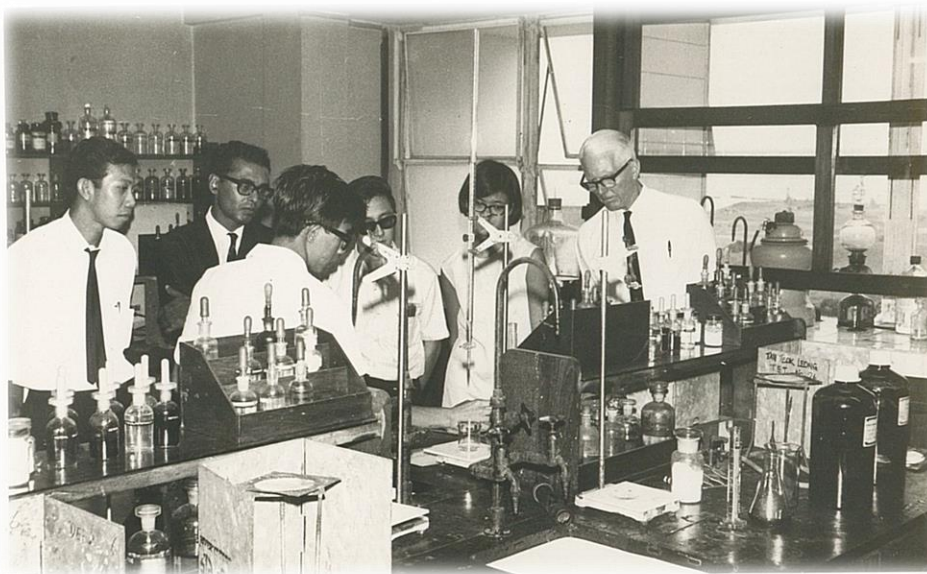


The first cohort of 30 students, drawn from across the ASEAN region, reflected the programme's strong regional relevance and global outlook.

A significant milestone was reached on 26 February 1968 with the official opening of the division, cementing SP's early commitment to materials science and sustainability. The division paved a firm foundation for advancing Singapore's innovation in polymer technology, playing a pivotal role in the nation's early industrial growth and technological progress.



In 1971, SP advanced chemical education with the launch of Chemical Technology courses. This led to the introduction of the flagship Diploma in Chemical Process Technology (DCPT) in 1972, offering specialisations in Food Technology, Polymer Technology and Analytical Chemistry, fields aligned with Singapore's industrial growth. With this expansion, the Division was elevated to the Department of Chemical Process Technology, reinforcing SP's role in shaping the nation's applied science workforce.

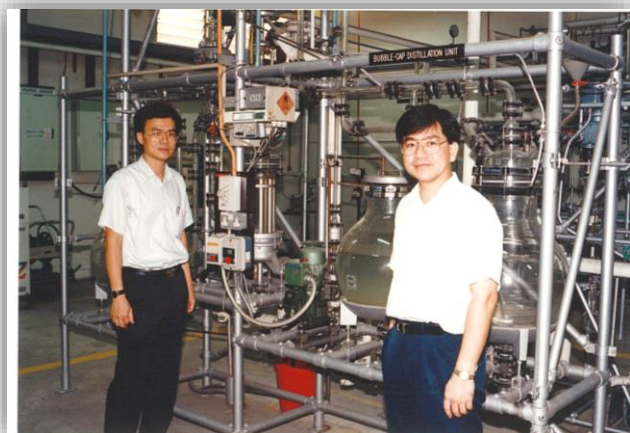


In 1986, DCPT was restructured to introduce new specialisations such as Industrial Chemistry, Process Engineering and Medical Technology, many of which later evolved into the full-fledged diploma programmes offered today.

By 1991, in response to the growing prominence of life sciences, the department was renamed the Department of Chemical Process and Biotechnology (CPB), marking a strategic expansion into biotechnology education and research.



A decade later, in January 2001, the department adopted its current name, the School of Chemical & Life Sciences. This evolution expanded CLS's impact in academia and industry, marking a broader scope and a vision aligned with the demands of a dynamic scientific landscape.



CLS has remained at the forefront of educational and sustainability innovation. In 2023, the adoption of immersive mixed reality experiences marked a significant leap forward in pedagogy, transforming how students explore complex chemical concepts and laboratory simulations. This hands-on approach has greatly enhanced understanding through interactive learning.

CLS curriculum now emphasises critical themes such as renewable energy, green chemistry and sustainable manufacturing. Supported by advancements in AI, digital tools and data analytics, it prepares future-ready graduates to excel in the GenAI age.



Today, as we commemorate 60 years of CLS at SP, we celebrate more than a school; we honour a living legacy. CLS continues to embody innovation, resilience and a forward-looking spirit, qualities that have propelled it in step with Singapore's national development.

Building a Legacy

Foundations of Excellence



CLS's excellence is grounded in its commitment to holistic education, which blends strong academic theory with practical, hands-on learning. It offers multidisciplinary programmes supported by state-of-the-art laboratories and advanced research centres. Beyond academics, CLS fosters critical thinking, collaboration and innovation, continually evolving to meet the dynamic demands of science and technology. This future-focused approach has consistently produced well-rounded, industry-ready graduates who are highly valued by the industry.

The Early Years (1960s–1970s)

Maximising impact with available resources, CLS's founding faculty were committed to providing high-quality education. Students spent a significant amount of time in laboratories and workshops equipped with analytical and testing instruments. The first batches of graduates quickly secured roles in the industry, laying the groundwork for CLS's growing reputation.

During this foundational period, CLS also began to forge strong partnerships with local industries, offering students early opportunities for internships and on-site training. These industry links ensured the curriculum stayed relevant and that graduates were well-prepared for Singapore's growing technological and industrial landscape.

Growth & Transformation (1980s–1990s)

The 1980s and 1990s marked a transformative era for CLS, defined by rapid growth and academic innovation. Responding to Singapore's shift toward a knowledge-driven economy, CLS introduced pioneering programmes such as Biotechnology and Analytical Chemistry. A key milestone was the 1992 launch of the Diploma in Process Engineering, which was renamed to Diploma in Chemical Engineering (DCHE) in 1997. Continuing its pioneering efforts, CLS launched Singapore's first full-time Diploma in Optometry (DOPT) in 1994. Designed to meet the nation's increasing need for comprehensive eye care, the programme seamlessly integrates academic theory with hands-on clinical training. It has since nurtured leaders in primary eye care.

During this period, CLS advanced its teaching with computer-aided learning, simulations and upgraded to state-of-the-art labs and equipment. Strengthened industry partnerships through collaborative research, industrial attachments and consultancy services. The school offered students valuable industry exposure, firmly establishing CLS as a leading institution in chemical and life sciences education by the end of the millennium.

Innovation & Excellence (2000s–2010s)

Education remains the core mission of CLS as it grows into a hub for applied innovation. Aligned with national R&D and sustainability goals, CLS deepens industry partnerships and research, enriching and elevating the relevance of teaching and learning.



A hallmark of this era was the launch of the Food Innovation and Resource Centre (FIRC) in 2007, a joint effort between SP and Enterprise Singapore. FIRC provides food companies with expertise in product development, packaging, shelf-life evaluation and market testing. Further exemplifying the CLS' commitment to innovation, SP introduced the Diploma in Perfumery and Cosmetic Science (DPCS) in 2010, supported by Asia's first Perfumery and Cosmetic Science Centre (PCSC). These Centres equip students with hands-on experience and support both SMEs and MNCs across the food, fragrance and cosmetic industries.

This decade also saw major pedagogical innovations, including the adoption of Design Thinking (2011), the 3Cs framework (Conceptualisation, Crystallisation, Communication in 2012) and the CDIO framework (2006). In 2017, the Spiral Curriculum model was introduced to scaffold foundational knowledge through deepening layers of complexity. In parallel, DOPT advanced significantly with retinal imaging and community eye screenings. At the same time, hospital rotations and partnerships with the Singapore National Eye Centre and the National Healthcare Group enriched students' clinical experience.



Furthermore, CLS faculty have actively participated in industry attachments, secured national research grants and collaborated across different sectors through innovation platforms. This has helped strengthen the school's reputation as a leader in chemical and life sciences education.



PUSHING BOUNDARIES: 2020s AND BEYOND

Building on its forward-thinking legacy, CLS is redefining science and health education by integrating projects, digitalisation and artificial intelligence to prepare students for the future. Through the pioneering Industry Now Curriculum (INC), launched in 2021, students are immersed in authentic industry collaborations, working on industry client projects as a core component of their academic journey. This approach ensures that learning remains relevant and aligned with the evolving demands of the industry. In addition, digital tools such as online asynchronous lectures, interactive simulations, e-practical briefing and smart classrooms, together with augmented, virtual and mixed reality technologies further enhances the effectiveness of self-directed and flipped learning.

In a bold move of academic innovation, the Common Science Programme was launched in 2023 to foster interdisciplinary learning and offer students greater choice. At the same time, DOPT introduced work-based learning, immersing students in real-world patient care from examination to diagnosis and management. Building on initiatives in the 2020s, most CLS diplomas now offer the UAPP with NUS, NTU or both, enabling students to take university-level modules at SP and strengthen their academic readiness for seamless university transitions.

CLS upholds rigorous academic standards through accreditation by internationally recognised professional bodies. DCHE was re-accredited by IChemE, UK, affirming the relevance of its chemical engineering curriculum, while DAPC and DPCS earned recognition from the Royal Society of Chemistry (UK) for excellence in Analytical Instrumentation and Laboratory Techniques, supported by university affiliations offering advanced standing and placements. The DOPT programme is accredited by the Singapore Optometrists and Opticians Board, ensuring alignment with professional standards. These validations highlight CLS's commitment to high-quality, industry-relevant education and pathways for students to gain international recognition and advance their careers.

The Diploma in Biomedical Science (DBS) has led innovation in GenAI-integrated learning with platforms like AskWhat Cher, while DOPT leverages cutting-edge digital vision analysis equipment and simulation-based ocular anatomy tools to strengthen student engagement and clinical readiness. Starting in 2025, the AI for Education (AiE) initiative will be piloted in DCHE, underscoring CLS's commitment to preparing students for an AI-augmented future in science and technology.



Powering Progress

Strategic Industry Partnerships



CLS has been a beacon of collaboration, forging strong partnerships with industry leaders, research institutions and prestigious universities. Central to this is the visionary “Industry on Campus” initiative, which brings industry expertise right into the heart of the academic environment. Through the innovative co-location model, companies embed their R&D operations within the campus, creating a dynamic living lab where education and enterprise seamlessly intersect. This unique setting empowers students to work alongside professionals, tackling real-world issues and gaining invaluable hands-on experience.



Longstanding partnerships with industry leaders such as Procter & Gamble and Lubrizol have ensured curricula remain closely aligned with the growing complexity of perfumery and cosmetic science in personal care. Similarly, alliances with global giants, such as Kenvue, Unilever, Firmenich, Givaudan, International Flavors & Fragrances (IFF), Robertet, Symrise and Takasago provide innovation-driven internships that cultivate talent and foster creative problem solving. Furthermore, engagement with the chemicals and materials industries is strengthened through sponsored research projects and merit awards funded by organisations, including GSK, Nanolumi and Evonik, enhancing students’ experiential learning and readiness for industry challenges.

CLS marked another exciting milestone with the addition of Fisheroo and Immodx as co-located partners on campus, forming the first biomedical industry ecosystem within the campus environment. This facilitates internships, applied research and skills-based training for students, reinforcing CLS’s identity as a dynamic space where industry and education meet. On the food innovation front, our strong ties with FoodTech innovators drive Singapore’s push for sustainable food solutions. Through these partnerships, students have the opportunity to explore future-focused areas, such as alternative proteins and sustainable food systems, equipping them to make meaningful contributions to global food security.

CLS forged a strategic partnership with Emerson to establish the Energy and Chemicals Training Centre. This state-of-the-art facility features an Integrated Pilot Plant, equipped with advanced Distributed Control Systems that simulate real industrial environments. Cutting-edge technologies, including the smart iBoiler and ultrafiltration skids donated by Grundfos Singapore, provide students with immersive, hands-on training that emphasises sustainability, process optimisation and energy efficiency. Global partnerships with Japan's KOSEN institutes introduce students to cross-cultural Problem-Based Learning workshops and research, promoting exchanges of knowledge and innovation. Participation in the international CDIO Academy connects students with global peers and allows them to learn from top engineering educators. Exchange programmes with institutions in the US, Australia and Germany further broaden their global outlook and cross-cultural skills.



In the domain of eye care, strategic partnerships with industry leaders such as ZEISS Singapore have led to the establishment of advanced training suites equipped with next-generation digital refraction technologies. The launch of a myopia management suite, developed with EssilorLuxottica, exposes students to cutting-edge interventions, including orthokeratology and myopia-specific lenses. Hosting the 4th Global Orthokeratology and Myopia Control Conference further cemented the institution's leadership in regional optometric education. Industry collaboration also drives public health initiatives, with students gaining clinical experience through national vision screenings and World Sight Day.

Ultimately, CLS's strong and diverse partnerships across sectors reflect a sustained commitment to integrating academic excellence with industry relevance. These alliances sharpen the competitive edge of CLS graduates and reaffirm the school's role in nurturing practice-oriented, globally connected professionals who are ready to lead and transform their industries.

Advancing Sustainability

Collaborative Innovation



Integrating Sustainability into Curriculum and Research

CLS's commitment to sustainability begins in the classroom.

Modules such as *CP4181 Environmental and Water Technology* include climate change, water management, renewable energy, waste minimisation and carbon management. This equips students to think critically about ecological impact and directly supports the United Nations Sustainable Development Goals (UN SDGs), particularly SDG 6 (Clean Water and Sanitation) and SDG 7 (Affordable and Clean Energy).

In the module *CP4187 Organic Synthesis and Characterisation*, green chemistry principles take centre stage. Students explore the synthesis of organic molecules in ways that avoid hazardous reagents and reduce chemical waste. This aligns with SDG 3 (Good Health and Well-Being) and SDG 12 (Responsible Consumption and Production), promoting public health and responsible industrial practice. Enhancing this commitment, CLS houses a Green Chemistry Laboratory equipped to monitor air and water pollutants, offering students vital tools to support environmental quality assessments.

Similarly, the Optometry programme embeds sustainability across discipline-specific modules. From Year 1, students are introduced to the UN SDGs through the Common Core Curriculum, with deeper integration occurring in advanced modules. In the Dispensing and Contact Lens modules, students learn how sustainable practices are reshaping the manufacturing of ophthalmic devices through material innovation and energy-efficient processes (SDG 9 and SDG 12). Clinical modules emphasise SDG 3 by framing eye care within the broader context of public health, highlighting its role in mental well-being, mortality outcomes and accessibility to healthcare technologies.

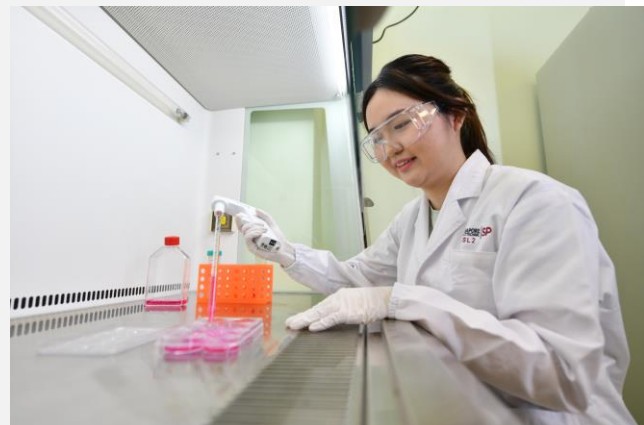


Empowering Students through Real-World Industry Collaboration

CLS actively partners with industry leaders to co-create innovative solutions aligned with Singapore's Green Plan and broader global sustainability objectives. By integrating national frameworks such as the Energy & Chemicals Skills Framework into its curriculum and building strong ties with professional bodies, graduates are prepared for professional excellence while being empowered to champion sustainable practices.

Engagements with food technology companies gives students hands-on experience in pioneering sustainable food solutions, from alternative protein sources and food waste reduction to climate-resilient agriculture. Through DPCS INC, students gain foundational knowledge and skills in sustainability practices, which they can directly apply during internships. These experiences equip them with the skills and insights needed to drive innovation in food security and environmental sustainability, seamlessly bridging learning from school to the workplace.

In partnership with TK Biofarm, students upcycled agricultural waste by extracting skincare-grade oil from discarded soursop seeds, diverting biomass from landfills and demonstrating the commercial potential of sustainability. This project was presented at the SP Industry & Innovation Showcase 2025 and highlights the power of waste-to-resource innovation in driving a circular economy.





Leading the Charge in Sustainability and Energy Efficiency

The Centre for Environmental Sustainability & Energy Efficiency (ESEE) at SP exemplifies collaborative innovation in sustainability.

Established as a one-stop hub, ESEE partners with enterprises to deliver practical solutions that support the transition to low-carbon operations and align with the Singapore Green Plan 2030. Through consultancy, training and project-based support, the centre empowers organisations to enhance energy efficiency, develop sustainable roadmaps and strengthen sustainability capabilities. By bringing together industry expertise, education and hands-on guidance, ESEE fosters a culture of workplace sustainability, driving meaningful change towards a sustainable and energy-efficient future.

As part of its commitment to sustainability, CLS is proud to be the first academic institution in Singapore to achieve the internationally recognised My Green Lab certification for its Medical Technology Suite and Chemistry Labs Cluster. This milestone reflects CLS's proactive efforts in integrating sustainable practices into laboratory operations, including water conservation, responsible procurement and the application of green chemistry principles such as renewable feedstocks. This achievement demonstrates CLS's leadership in promoting environmentally responsible laboratory practices, setting a standard for academia and inspiring students, staff and industry partners to contribute to a more sustainable future.

Student Leadership in Sustainability

In the Upcycle Revival Challenge 2024, led by FIRC in partnerships with the Singapore Food Manufacturers' Association and Enterprise Singapore, DFST students worked closely with industry mentors and participating companies to generate impactful outcomes. They developed novel upcycled food products, designed creative packaging and devised marketing strategies, promoting sustainability and innovation in the food manufacturing sector. Engaging in hands-on training and real-world project experience, the students gained invaluable industry exposure while contributing fresh ideas and solutions that advance sustainable practices.



Biomedical students lead sustainability efforts by advocating responsible pharmaceutical waste disposal and reducing plastic consumption through partnerships with SG Green Pharma and Blossom World. These initiatives raise awareness of sustainable pharmaceutical practices and promote responsible medication disposal, which are closely aligned with national environmental objectives.

CLS remains deeply committed to drive industry partnerships and advancing environmental innovation, empowering the next generation of scientists and technologists to lead with purpose in a world where sustainability presents both pressing challenges and transformative opportunities.

Legacy in Action

Stories from Our Alumni





**Rooted in SP,
Rising Beyond**

Looking back, my time at SP's School of Chemical & Life Sciences was instrumental in shaping both my professional and personal identity. The DCHE programme did not just teach technical content, it instilled critical thinking, problem-solving and the confidence to make decisions that matter in the chemical industry.

At CLS, I didn't just study engineering — I learned to think like one.

Wong Jun Jie, SP CLS Alumnus, Class of 2016

Process Engineer, Croda Singapore Pte Ltd

One turning point was the industrial plant tour to Jurong Island. For the first time, I saw the complexity and scale of the industry I was stepping into. The SP Chemical Process Technology Centre (CPTC) further reinforced this with immersive training on real plant systems. That exposure gave me a head start in understanding how theory translated to practice and prepared me for real-world challenges.

Today, as a Process Engineer at Croda, I continue to rely on the lessons learned at SP. The grounding in safety, systems and teamwork has made all the difference. I have transitioned from executing tasks to leading processes; this shift began with the confidence SP instilled in me.

More than the technical knowledge, SP gave me a sense of purpose and the courage to grow. To all current students: take every opportunity seriously. It is these early experiences that will shape your future success and impact.



Scent of a Dream

DPCS gave me the opportunity to indulge my curiosity. Through modules like ‘The Art of Perfumery’, we had practical sessions where we will be smelling raw materials and building accords. The programme was rigorous, offered hands on practical sessions and I am very grateful for the experience. I also benefited from the support and encouragement to pursue a path less trodden.

After graduation, I took a gap year to better understand the industry, starting out as a Perfumery Assistant. This gave me industry exposure and along the way, I learned that DPCS has advanced standing with the MSc Cosmetic Science at London College of Fashion, University of the Arts London.

My time in London was a transformative period of my life; a mix of self-discovery, learning and community. The highlight of my adventure was my summer internship, where I got to present a consumer insights report to a global client at their headquarters.

Phoebe Germaine Tan, SP CLS Alumna, Class of 2014
Perfumer, Keva Fragrance Industries Pte. Ltd.

At CLS, my curiosity was not just encouraged — it was shaped into a journey of discovery.

After I came back to Singapore, I sent out many job applications but were met with disappointment. I persevered and managed to land a great job in the industry. Six years and one brilliant mentor later, my proudest creation to date is a collection of five fine fragrances based on Rose; one of which is a dedication to my mother, who has always adored Chypres. I am excited to see this collection on shelves at the end of the year.

To all current students and fellow alumni reading this, I encourage you to discover your own journey, trust your curiosity and embrace uncertainty. The future does not belong to those with perfect plans, but rather, to those who refuse to give up.



Vision
with a
Legacy

CLS gave us
the skills to
serve & the
heart to
lead in
community
eye care.

In 2022, we joined forces with our brother to revitalise and launch a renewed brand and mission. Guided by a “patient-first” approach, we have been privileged to serve over 1,000 individuals in our first year. Every consultation is a reminder of why we chose this path.

Our journey is more than a career story. It is a legacy we are proud to build upon. SP gave us the roots, the vision and the values to carry this mission forward. We hope to continue redefining what quality eye care means in our community and to inspire the next generation to serve with heart, just as we were inspired to do.

Goh Wan Ting, SP CLS Alumna, Class of 2012
Goh Shi Song, SP CLS Alumnus, Class of 2019
Optometrists, NOON Eyewear

As children, we spent countless hours in our parents’ optical practice, watching them care for patients with genuine empathy. Our parents, both graduates of SP, showed us that optometry was never just about vision correction, but it was about improving lives. From them, we learned not only the science, but also the responsibility that comes with serving our community.

When it was our turn to chart our path, choosing the Optometry programme at SP felt like a natural continuation of that mission. At SP, we didn’t just learn from textbooks; we worked with real patients at the SP Optometry Centre. Those hands-on experiences were transformative. They challenged us, shaped our clinical thinking and gave us the confidence to serve with both competence and care.

For Wan Ting, that strong foundation made the transition to university a smooth one. Earning First-Class Honours in the Bachelor of Science in Optometry was an achievement built on the skills and mindset developed during my time at SP. Significantly, it deepened our sense of purpose in this profession.

Optometry
has always
been a part
of our
lives.



Turning Uncertainty into
Opportunity

When I first entered SP's DCHE, I felt entirely out of place. I was unsure of my decision, unsure of myself. It felt like life had thrown me a lemon. But over time, with the support of my peers and lecturers, what began as lemons transformed into lemon meringue, surprisingly sweet and fulfilling. That initial uncertainty gave way to an incredible journey of growth, driven by a close-knit community that constantly pushed me to be better.

Dharmen Harish Rupawala, SP CLS Alumnus, Class of 2013
Asia Pacific Customer Service Leader, Infineum

It wasn't just about the technical knowledge gained in labs or lectures; it was about the meaningful relationships that shaped who I am today. It was in those shared moments, the laughter, the late-night cramming and the team projects, that we were truly in it together. Cherish the present, it might just become the foundation of your most significant growth.

To the faculty at CLS, Thank You! Your unwavering commitment to excellence and the countless hours you have poured into nurturing minds and shaping character have left an indelible mark. You taught us not just science, but humanity, compassion and grit.

Looking ahead, I carry these values into every challenge I face. SP DCHE didn't just shape my career, it gave me a lens to view life through resilience, gratitude and purpose.

Here's to the next 60 years of CLS continuing to inspire transformation, one student at a time.

My time at CLS
taught me that
growth starts
when you step
into the
unknown —
trust the
process.

A young woman with long, straight black hair is smiling at the camera. She is wearing a white, textured cable-knit sweater with a small bow at the neckline. The background is a plain, light gray.

Sensing the Future

My journey into sensory science began at SP CLS, where I found myself immersed in a multidisciplinary field that blended food science, analytical thinking and human behaviour.

It connected the dots between product design, consumer perception and strategic decision-making. It taught me to analyse flavour delivery over time, understand ingredient interactions and apply methods to validate products from trials to full-scale production.

At CLS, I discovered that data and perception are not opposites—they are partners in innovation.

Valerie Tham, SP CLS Alumna, Class of 2014
Senior Sensory Scientist, Kerry

With every experiment, I learned to see food through both a sensory and data-driven lens. The curriculum instilled in me a sense of curiosity to unlock hidden patterns, translate human perception into measurable outcomes and draw insights that could shape market success.

Congratulations to CLS on six decades of shaping curious, capable and insight-driven professionals. I am proud to be part of that legacy.



Engineering
a Life of
Purpose

SP played a pivotal role in laying the foundation for my professional life. The DCHE programme equipped me with skills that seamlessly bridged theory with industry demands. From handling welding torches to starting up a heat exchanger, every practical experience became a stepping stone in my journey into the chemical industry. These skills made learning enjoyable, relatable and directly applicable to my future career.

Each day was something I eagerly anticipated. The passionate lecturers were more than teachers. They were motivators and mentors who genuinely cared about their students. Their dedication to our success and the engaging classroom environment made learning a truly enjoyable experience. Activities like the Polytechnic Forum and Freshmen Orientation Camp created unforgettable memories and lifelong friendships that I still cherish today.

**SP CLS gave me more than a diploma —
it gave me a mindset to learn, lead and
serve.**

David Kan Yeu Zhou, SP CLS Alumnus, Class of 2001
Production Manager, Infineum

I am deeply grateful to the dedicated lecturers who played a pivotal role in shaping my educational journey. Your belief in us was empowering and transformative! You consistently went above and beyond, creating a supportive environment where every student felt seen, heard and encouraged to grow.

The SP spirit lives on in how I work, lead and give back. Every time I train a junior or solve a complex issue at work, I am reminded of how well-prepared I was.

Thank you, SP CLS, for turning an ordinary student into a lifelong learner and a proud professional.



Journey of Sight and Purpose

My journey in optometry began at SP, where I gained not only a solid technical foundation but also a deeper understanding of the profession's potential. After graduating, I worked across various sectors of the optical industry, which gave me valuable insights into both clinical care and the business dimensions of eye health. This experience inspired me to start eyesight.sg, shifting the focus from simply selling glasses to promoting preventative eye care. I believe good vision is more than clear sight. It influences learning, work and overall quality of life. Early detection and management can truly make a difference.

One of the most rewarding parts of this journey has been mentoring young optometrists. I recall how uncertain I was as a student, and now I'm grateful to help others realise that optometry is more than just a job. Optometry is a meaningful profession with a lasting impact.

Volunteering overseas opened my eyes to the vital role optometrists play in communities with limited access to care. A simple pair of glasses or early diagnosis can change a person's future. These experiences deepened my conviction that optometry is a healthcare profession with the real power to transform lives globally.

As CLS celebrates its 60th anniversary, I am proud of the foundation it gave me and hopeful that more students will embrace the challenge to advance this field. Optometry is not just about sight; it's about giving people the vision to live fully.

Ken Tong Wei Jian, SP CLS Alumnus, Class of 2007

Founder & Optometrist, Eyesight.sg

CLS shaped me into more than a clinician —
it taught me to be a changemaker.

SCENT JOURNER

Nestled within nature's embrace in Singapore, discover a world of mindful scents as the

SCENT JOURNER bird chirps reminder to slow down, breathe, feel, and be present.

Our story

SCENT JOURNER

BEST
SELLER

1

2

3

**When
passion
aligns with
purpose, even
the simplest
ingredient
becomes a
masterpiece**

Joyce Lian, SP CLS Alumna, Class of 2016
Founder, Scent Journey

After completing my O-Levels, I vividly recall attending several polytechnic open houses. Still, only one course truly resonated with me: the Diploma in Perfumery & Cosmetic Science at the School of Chemical & Life Sciences, Singapore Polytechnic. It was my first deep dive into the world of perfumery and I was instantly captivated. That was where my passion for fragrance began.

Years later, I began exploring opportunities in entrepreneurship and came across a venture-building programme that supported aspiring founders. With a vision to create a mindful fragrance brand, I pitched the idea that would eventually become Scent Journey, a part of Sephora Online.

Launching a brand from scratch presented its own challenges, from product development to building trust in a highly competitive market. What kept me grounded was the strong foundation in perfumery and cosmetic science, as well as the hands-on training I gained from CLS, which gave me both confidence, credibility and the ability to approach formulation with authentic creativity.

Congratulations to CLS on 60 inspiring years. I'm proud to be an alumna of a school that not only equipped me with practical skills but also laid the foundation for a purposeful journey.

**SP CLS didn't
just teach me
perfumery — it
gave me the
courage and
clarity to
create a brand
with soul.**



Curious Mind, Skincare Innovation

My journey into the skincare industry began with a simple moment — holding my mother’s facial cream and wondering, “Wouldn’t it be wonderful to create something like this?”

That childhood curiosity sparked my dream to become a skincare formulator. When SP launched the Diploma in Perfumery & Cosmetic Science, it felt like fate. I joined the pioneer batch, laying the foundation for my future.

I started my career at Procter & Gamble (P&G) as a Clinical Trials Manager, leading studies to support skincare claims. While it was insightful, I longed to be closer to the creation process. I pursued a part-time Master’s in Cosmetic Science from the University of Cincinnati, eventually making the leap into the skincare formulation team at P&G.

Today, I have spent nearly a decade at P&G and three years in formulation! During this time, I have launched three products and am living the dream I once imagined.

Seeing my creations on store shelves and knowing they bring confidence to others is incredibly fulfilling.

Eileen Chew, SP CLS Alumna, Class of 2013

Skincare Formulator, Procter & Gamble

I didn’t just find a course, I found my calling,
right when SP launched its pioneer batch in
Cosmetic Science.



From CLS Classrooms to Global Impact **CLS shaped our technical foundations, values and resilience that continue to guide us in leadership and life**

When I first joined CLS through the NITEC pathway, I wasn't sure if I could keep up, but with the support of my lecturers and peers, I found my confidence. It was during my internship at Grundfos that I discovered how much I enjoyed connecting with people, a skill that has become central to my role as a Sales Manager today. Looking back, CLS was more than just a school; it was a community. It was the place where I discovered who I could become. Our stories are a testament to how the values instilled at CLS — resilience, teamwork, humility and a passion for learning.

Eugenia Tan, SP CLS Alumna,
Class of 2016

Sales Manager, GRUNDFOS

In my current role as President of the Danish Water Alliance China and Vice President at Grundfos, I work closely with global partners to drive sustainable water solutions and industry innovation. Looking back, much of what I do today was seeded during my time at CLS. The hands-on labs and the way our lecturers encouraged real-world thinking gave me the foundation to approach problems with both curiosity and a systematic approach. Collaborating with classmates taught me the value of teamwork and perseverance, skills I carry with me into every strategic decision and partnership I lead. CLS didn't just prepare me for my first job; it shaped the way I think and lead today.

Eric Lai, SP CLS Alumnus
Class of 1994

Vice President
Head of Industry Sales APAC and China
GRUNDFOS

First Step to Frontline

A Lifelong Journey in Cardiac Diagnostics

Starting as the pioneering batch in cardiac technology specialisation, I had faced uncertainty and there were no seniors to guide us. However, being first also brought a sense of purpose and excitement in my learning at SP. It's during clinical attachments that everything starts to come together where theory turns into real world applications. You start understanding not just the rhythm strips, but the people behind them.

My first job at the National Heart Centre Singapore allowed me to learn from rookie mistakes, but small achievements have always kept me motivated in this profession. As years passed by, I have gained confidence and instinctive skills, witnessing the evolution of technology and digitalization in the healthcare industry. However, what has stayed the same is the 'WHY' behind it all: Helping people, one beat at a time.

In recent years, I've had the privilege of speaking at conferences and connecting with like-minded peers who are passionate in cardiac diagnostics locally and worldwide. Looking back 25 years ago till where I am now, I've seen myself transformed from a nervous student to being a confident professional, mentor and lifelong learner. All I can say is that it's been an incredible ride!



Liang Shufen, SP CLS Alumna, Class of 2002
Principal Cardiac Physiologist, National Heart Centre Singapore

I entered without a roadmap, but SP taught me how to listen — to the heart, to patients and to my own growth.

The Heart of the School

Student Life and Community



Chemical & Life Sciences Club

(CLSC) is a club where all members have the opportunity to hone their leadership skills and showcase their strengths through various leadership platforms, such as the SP Student Leadership Programme (LEAP).

In CLSC, every member strives for excellence and is committed to upholding the club's strong reputation and legacy. Through teamwork, dedication and a shared passion for growth, CLSC continues to build a vibrant and inspiring student community. Our hard work has not gone unnoticed, SP has proudly recognised CLSC with the Excellent Award for two consecutive years.

CLSC is passionate about driving sustainability efforts and creating a positive impact on the environment. As part of our commitment to green initiatives, we actively organise eco-friendly activities such as beach clean-ups and upcycling events. These efforts promote environmental awareness and encourage students to adopt greener habits, fostering a culture of responsibility within the CLS community.



The Freshmen Orientation Camp is an exciting two-day event designed to kickstart the polytechnic journey for incoming CLS students, offering memorable and engaging experience. This camp offers a valuable opportunity for freshmen to form new friendships and ease into the CLS community through a variety of interactive bonding activities, team-building games and icebreakers. Beyond the fun, the camp also serves as an introduction to the vibrant campus culture, helping students feel more confident and connected as they begin their new academic chapter at SP.



CLSC organises community service initiatives for CLS students, such as visits to senior care centres. These activities aim to spread kindness and give back to the community. Beyond contributing to a good cause, students also have the opportunity to make new friends and interact with people outside of their usual classes, fostering a deeper sense of relationship and empathy.

Interaction Race is a bonding event specially designed to foster meaningful closeness and interactions among CLS students. It also serves as a refreshing break from academic routines, providing students with a chance to unwind and recharge. Through interactive team-based activities, participants are encouraged to communicate and collaborate with peers from different CLS courses, promoting unity, cross-course friendships and a stronger sense of harmony within the CLS community.

In addition to organising internal events for the CLS student body, CLSC also collaborates with other constituent clubs in SP to host exciting cross-club events, such as Council Halloween. These collaborative events aim to enhance student welfare while also expanding CLSC's network. They provide a platform for CLSC EXCOs to build connections with other clubs, fostering greater collaboration and a stronger sense of community across the SP campus.

Looking Ahead

Vision for the Future



Looking ahead, CLS is committed to driving innovation, strengthening industry ties and preparing students for tomorrow's challenges

The next phase will integrate cutting-edge technologies, such as AI in chemical analysis, bioinformatics and nanotechnology — fields poised to transform healthcare, environmental management and beyond.

Sustainability and ethical science remain top priorities, with ongoing research in renewable energy, waste reduction and green industrial processes.

By nurturing innovation, collaboration and global engagement, CLS is shaping the future leaders who will redefine science and technology.

Our vision is to ensure our diploma programmes remain leaders in scientific education and innovation. This is driven by a strategy focused on student engagement, industry collaboration and academic excellence. We are expanding research opportunities through initiatives like Industry Now Curriculum, giving students hands-on, real-world experience alongside industry partners.

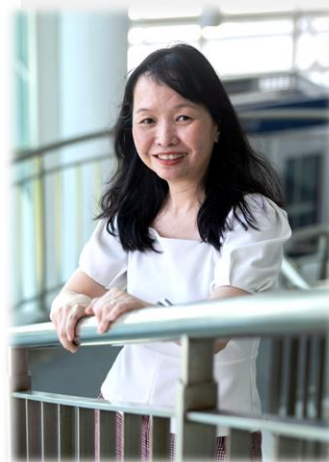
To stay agile, we are building ecosystems that connect industry, departments and emerging technologies such as AI, biotechnology and sustainable food systems — preparing students for tomorrow's workforce.

We are also optimising resources by aligning teams, CET programmes and elective offerings to create greater impact and value.

Sustainability is a core principle, embedded in all programmes to cultivate responsible, future-ready graduates.

Above all, we believe in fostering a supportive and collaborative culture where educators thrive, ultimately leading to improved outcomes for students.

Vision for the Future



Jessie Tong
Deputy Director
Chemical & Life Sciences

As CLS commemorates its 60th anniversary, we take this opportunity to reflect on our rich legacy and reaffirm our commitment to shaping the future. The Chemical Engineering and Health Sciences Division continues to play a pivotal role in nurturing the next generation of chemical engineers and optometrists.

Our Diplomas in Chemical Engineering (since 1986) and Optometry (since 1994) are the longest-running programmes of their kind in Singapore. These enduring foundations are a testament to our dedication to academic excellence and industry relevance.

Looking ahead, we remain steadfast in our commitment to innovate our curriculum to meet the evolving demands of digitalisation, sustainability and the challenges posed by an ageing population and rising myopia rates in Singapore. By strengthening our partnerships with key stakeholders, we strive for our programmes and graduates to remain the preferred choice among students, parents, academia and industry.

As we continue to cultivate graduates who are work, life and world-ready to support the transformation of Singapore, we aspire to instil in them a spirit of lifelong learning, humility, empathy and a deep sense of community. These values will empower our future leaders not only to adapt to change but to lead with vision, integrity and compassion.



Koh Hong Wee
Deputy Director
Chemical & Life Sciences

Building on strong foundations in Pre-Employment Training, CLS continues to advance SP's mission through deep industry partnerships and expanding lifelong learning opportunities. Since launching Singapore's first Work-Study Programme in 2013, benefiting over 200 graduates and 100 employers, CLS has empowered learners to gain academic qualifications while excelling professionally.

CLS leads Career Conversion Programmes across diverse sectors, equipping over 400 alumni and mid-career professionals with vital skills through combined classroom and on-the-job training. Our Continuing Education and Training initiatives, including SkillsFuture Career Transition Programmes, corporate training, micro-credentials, and e-learning, keep pace with industry needs and workforce transformation.

In 2022, CLS strengthened its commitment to sustainability with the Centre for Environmental Sustainability and Energy Efficiency (ESEE), collaborating with government and businesses to drive decarbonisation, sustainability reporting, energy efficiency assessment and promote green innovation, technology and solutions.

Through industry-led projects and curriculum integration, CLS prepares PET and CET students and professionals to tackle environmental challenges with green knowledge and skills that are in demand. Supported by strong alumni and industry networks, CLS is poised for continued growth, nurturing talents and sustainability innovation that will shape a sustainable and resilient future.

I look forward to CLS continuing its upward trajectory and achieving even greater successes in the years ahead. Here's to the continued excellence and growth of CLS!

Vision for the Future



Lam Kok Seng
Deputy Director
Chemical & Life Sciences

As the School of Chemical and Life Sciences celebrates its 60th anniversary, we are looking ahead with a renewed commitment to becoming a school for the future – one that empowers learners at every stage of life through smart, sustainable and industry-aligned learning environments.

In the coming decade, our operational priorities will focus on lab digitalisation and sustainability, ensuring our facilities are equipped to support both full-time students preparing for their first careers and adult learners upskilling for new opportunities. By integrating AI-enabled lab systems, digital resource management, and smart tools such as automated data logging and equipment tracking, we aim to deliver more efficient, engaging and authentic practical experiences that reflect real-world industry settings. At the same time, we are embedding sustainable practices into our lab operations - reducing waste, conserving energy, and promoting responsible lab behaviours.

Through these efforts, CLS is building a resilient and forward-looking foundation that prepares learners to thrive in a dynamic world and positions the school as a model for tomorrow's applied science education.



Wan Baoshuang
Deputy Director
Chemical & Life Sciences

Epilogue

Designing a Lasting Impression



Celeste & Solace: A Celebration of Duality



As CLS looks boldly toward the future, this milestone celebration has also invited us to pause and appreciate the thoughtful, often unseen, efforts that shaped the experience of our 60th anniversary. Among them are two commemorative pieces, each distinct, yet united in their intent to embody the values, creativity and spirit of CLS.

To mark our 60th year, *Celeste* and *Solace* were crafted as signature scents that reflect the identity of CLS through the lens of sensory design. This initiative began as a ground-up co-creation with students from the DPCS, who unearthed a striking duality in how the school is experienced: both *fresh and energetic*, yet *calm and mature*. This paradox, where loud curiosity thrives alongside quiet introspection, inspired the creation of two deliberately contrasting but deeply complementary fragrances.

Solace radiates warmth and vitality. Like sunrise, this floramber-woody scent opens with sparkling mandarin and pink pepper before unfolding into a solar floral bouquet of orange flower and ylang-ylang. A comforting base of coffee, vanilla and sandalwood, featuring an upcycled coffee absolute extracted in-house from post-consumer food waste makes *Solace* a tribute to resilience, optimism and our forward drive.

Celeste, in contrast, embodies serenity. Drawing inspiration from moonlight and introspection, it blends crisp citrus and aquatic notes with a luminous heart of jasmine, peony and lily. It settles into soft woods, powdery musk and a black tea absolute sustainably extracted from post-consumer tea dust, reflecting the nurturing and reflective side of the CLS spirit.

Both fragrances are housed in pill-shaped packaging, a nod to biomedical precision, 3D printed with sustainable bioplastic (PLA), showcasing a collaborative process that integrated green chemistry and engineering innovation. More than commemorative scents, *Celeste* and *Solace* are an olfactory representation of the multifaceted CLS identity — bold and quiet, scientific and human.

Celeste & Solace: A Celebration of Duality



In every thoughtful detail, be it scent, symbol, or shared effort, we carry forward not just memories, but the spirit of who we are and who we strive to become.

Beyond the fragrances, CLS 60th anniversary door gift was a symbol of purpose, craftsmanship and community. What began as a simple idea became a meaningful journey, one that celebrated collaboration and intention in every detail. Together, *Celeste and Solace* remind us that even the smallest touches can carry deep meaning.

At CLS, science is not only learned, but lived, shared and celebrated!



Acknowledgments & Gratitude

As we celebrate 60 years of innovation, education and impact at the School of Chemical & Life Sciences, we would like to express our heartfelt gratitude to the many individuals and groups who made this commemorative e-Book possible.

Special thanks to:

Our founding members, past and present staff whose dedication and pioneering spirit laid the foundation for CLS.

Alumni who continue to inspire us with their achievements and support.

Students whose energy and curiosity drive our constant evolution.

Industry partners and collaborators for their invaluable contributions to our growth and relevance.

The editorial and design team for their creative direction, as well as all contributors, in bringing this e-Book to life.

Singapore Polytechnic leadership and corporate communications for their support and guidance.

Your contributions - past and present - are what make CLS a vibrant community of learning and discovery.