CHEMICAL & LIFE SCIENCES

Roshna Rai
Diploma in Perfumery & Cosmetic Science

I CREATED MY FIRST FORMULATION

Applied Chemistry
Biomedical Science
Chemical Engineering
Common Science Programme
Food Science & Technology
Optometry
Perfumery & Cosmetic Science
I am thankful for the opportunity to train in state-of-the-art facilities such as the Energy & Chemicals Training Centre. Learning how to operate the Integrated Pilot Plant has helped to strengthen my problem-solving and communications skills.

At the School of Chemical & Life Sciences,

YOU CAN UNLOCK THE MYSTERIES OF SCIENCE AND CREATE WONDERS TO IMPROVE QUALITY OF LIFE.

Our robust curriculum, coupled with strong links to industries, gives you an edge in your future workplace. You acquire lifelong skills that empower you to take on and excel in various fields, like applied chemistry, energy and chemicals, food and nutrition, healthcare, medical technology, as well as cosmetics and perfumery!

When you graduate, you can contribute to discoveries that enhance the quality of life.

WHY CLS?

In CLS, we pride ourselves on optimising the human factor.

Our lecturers are well-trained in teaching pedagogies and are richly experienced in their respective fields. Most importantly, they are passionate in their shared purpose to mould you into competent adults ready for the world.

Our graduates have also been admitted to read chemical engineering, chemistry, dentistry, life sciences, medicine and pharmacy at various local and international universities.

Our graduates do not just excel in the academic field. Some have gone on to become award-winning scientists and, having benefitted from being exposed to numerous industry-related projects and collaborations during their studies.

Do not simply take our word for it. Go through this brochure and our website to find out exactly what our graduates think of our courses and lecturers.
DIPLOMA IN
APPLIED CHEMISTRY
(DAPC - S64)

Discover the mysterious and captivating properties of chemicals, drugs and materials by going on an exciting applications-based journey with us. The Diploma in Applied Chemistry (DAPC) is the first diploma in Singapore to focus on building a strong foundation in chemistry which provides you the versatility to work in various chemistry-related sectors.

Through our specially developed progressive learning strategy, you will be imparted with knowledge acquisition skills on fundamental chemistry principles during your first year. In the second year, you will be equipped with the skills to perform chemical investigations and interpretation of results using real-life situations. During your third year, you will be able to develop and optimise new products or methods to improve lives, hence igniting your creativity skills.

Upon graduation, you will be ready to contribute to the chemical, pharmaceutical and materials-related industries or further your studies in tertiary institutions.

SCHOLARSHIPS AVAILABLE
• A*STAR Science Award
• Mitsui Chemicals Process Technology Study Award
• MOH Holdings Scholarships
• Singapore Polytechnic Scholarships

Many of our graduates gain entry into degree programmes at local or international universities. Related degree programmes include Chemistry, Pharmaceutical Science, Materials Science and Engineering.

COURSE HIGHLIGHTS
• First diploma in Singapore on Applied Chemistry
• Course has three specialisations: Pharmaceutical Science, Industrial Chemistry, or Materials Science. Specialisation allocation of students is based on their 1st semester cGPA, specialisation choices and vacancies.
• Course is recognised by the UK Royal Society of Chemistry (RSC) and the UK Institute of Materials, Minerals and Mining (IOM3)
• Work with state-of-the-art equipment in well-designed laboratory suites: Analytical & Forensic Chemistry, Pharmaceutical Chemistry and Materials Science
• Internship opportunities at relevant industries as well as research experience at local or international institutions

ENTRY REQUIREMENTS
Range of Net 2022 JAE ELR2B2: 5 to 9
Aggregate Type: ELR2B2-C

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CAREER OPTIONS
• Application Chemist
• Assistant Engineer
• Chemical Technologist
• Chemist
• Environmental, Safety & Health Officer
• Materials Characterisation/ Failure Analysis Specialist
• Process Designer
• Purchaser/Procurement Engineer
• Quality Assurance/Quality Control Laboratory Analyst
• Regulatory & Compliance Officer
• Research Assistant
• Sales/Business/Marketing Executive
• Technical Specialist

Scan to find out more information about the course
The Diploma in Applied Chemistry is a three-year full-time programme.

**First Year**

- **Common**
  - Basic Mathematics
  - Biochemistry & Cell Biology
  - Chemical Safety & Biosafety
  - Chemistry I
  - Chemistry II
  - Communicating for Project Effectiveness (Proposal)
  - Elective 1
  - Engineering Mathematics

- **Common for Industrial Chemistry and Pharmaceutical Science Specialisations**
  - Chemistry III
  - Communicating for Professional Effectiveness
  - Elective 2
  - Engineering Mathematics II
  - Environmental and Water Technology
  - Forensic Chemistry
  - Further Chemistry I
  - Further Chemistry II
  - Laboratory Management
  - Pharmacology & Pharmaceutical Chemistry
  - Quality Assurance & Statistics
  - Sustainable Innovation Project
  - Materials Science Specialisation
    - Chemistry III
    - Communicating for Professional Effectiveness
    - Elective 2
  - Engineering Mathematics II
  - Further Chemistry I
  - Materials Characterisation & Failure Analysis
  - Materials Laboratory Skills
  - Materials Processing
  - Materials Processing Skills
  - Mechanics of Materials
  - Metallic and Ceramic Materials
  - Polymeric Materials
  - Quality Assurance & Statistics
  - Sustainable Innovation Project

**Second Year**

- **Industrial Chemistry Specialisation**
  - Advanced Instrumental & Lab Techniques
  - Advanced Organic Chemistry
  - Elective 3
  - cGMP and Validation
  - Internship Programme
  - Petrochemicals and its Applications
  - Specialty Chemicals
  - Advanced Instrumental & Lab Techniques
  - Advanced Organic Chemistry
  - Biopharmaceutical Engineering
  - cGMP and Validation
  - Elective 3
  - Internship Programme
  - Pharmaceutical Engineering

- **Pharmaceutical Science Specialisation**
  - Advanced Instrumental & Lab Techniques
  - Advanced Organic Chemistry
  - Biopharmaceutical Engineering
  - cGMP and Validation
  - Elective 3
  - Internship Programme
  - Pharmaceutical Engineering

- **Materials Science Specialisation**
  - Advanced Materials
  - Capstone Project
  - Coating, Adhesives & Elastomers
  - Elective 3
  - Internship Programme
  - Laboratory Management
  - Materials Innovation and Design

**Third Year**

- **Industrial Chemistry Specialisation**
  - Advanced Instrumental & Lab Techniques
  - Advanced Organic Chemistry
  - Elective 3
  - cGMP and Validation
  - Internship Programme
  - Petrochemicals and its Applications
  - Specialty Chemicals
  - Materials Processing Skills
  - Materials Laboratory Skills
  - Materials Processing
  - Materials Processing Skills
  - Mechanics of Materials
  - Metallic and Ceramic Materials
  - Polymeric Materials
  - Quality Assurance & Statistics
  - Sustainable Innovation Project

- **Pharmaceutical Science Specialisation**
  - Advanced Instrumental & Lab Techniques
  - Advanced Organic Chemistry
  - Biopharmaceutical Engineering
  - cGMP and Validation
  - Elective 3
  - Internship Programme
  - Pharmaceutical Engineering

- **Materials Science Specialisation**
  - Advanced Materials
  - Capstone Project
  - Coating, Adhesives & Elastomers
  - Elective 3
  - Internship Programme
  - Laboratory Management
  - Materials Innovation and Design

ELECTIVES

The SP elective framework offers students options to pursue their passion and/or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, lifelong learners, which are essential in today’s volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Please visit [https://www.sp.edu.sg/sp/education/elective-modules](https://www.sp.edu.sg/sp/education/elective-modules) for details of this elective scheme and the full list of electives.

All full-time diploma students are required to take two compulsory Education and Career Guidance Modules in SP. Students will take Education and Career Guidance 1 — Personal Development (30 hours) in their first year. In their second year, students will take Education and Career Guidance 2 — Career Development (45 hours).

All students are required to take one compulsory Sports for Life (SFL) module for one semester in their first year in SP. In their second and third year, students may sign up for SFL module as an optional module.

"The DAPC course has been very inspiring to me. I have passionate lecturers who constantly encourage me to step out of my comfort zone to grow as an individual. They also provided multiple opportunities for me to sharpen my leadership, communication and critical thinking skills. I highly encourage juniors who have an interest in Science to take up this course. You may just be using your knowledge to change the world one day."
DIPLOMA IN
BIOMEDICAL SCIENCE
(DBS - S98)

Biomedical Science is all about the science that ‘saves lives’ — from the research activities for knowledge and application in the life sciences and biopharmaceutical industries, to medical testing for diagnosis, management and prevention of diseases.

Our students can choose from three exciting specialisations:

- **Medical Technology** — Medical testing for diagnosis and management of human diseases
- **Cardiac Technology** — Cardiac functions testing for diagnosis and intervention of heart related diseases
- **Biotechnology** — Focuses on life sciences that exploit biological processes of living organisms to improve the quality of human life

The Diploma in Biomedical Science is recognised by the American Society for Clinical Pathology (ASCP), USA.

**SCHOLARSHIPS AVAILABLE**
- A*STAR Science Award
- MOH Holdings Scholarships
- Singapore Polytechnic Scholarships

**COURSE HIGHLIGHTS**
- Internship at top-notch laboratories including A*STAR institutes and top-ranked overseas universities
- Training partnership with the National Heart Centre Singapore for Cardiac Technology specialisation provides an authentic learning experience
- Head-start to a career in an MNC: Internship at multinational biopharmaceutical companies
- Opportunity to expand interests through elective modules in Forensic Biology, Cytogenetics or Introductory Pharmacology

**ENTRY REQUIREMENTS**

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One of the following 3rd relevant subjects:
- Biology
- Biotechnology
- Chemistry
- Food & Nutrition
- Physics
- Science (Chemistry, Biology)
- Science (Physics, Biology)
- Science (Physics, Chemistry)

**CAREER OPTIONS**

- Assistant Biotechnologist
- Assistant Quality Control Laboratory Analyst
- Clinical Research Coordinator
- Phlebotomist
- Cardiac Technologist
- Medical Technologist
- Quality Assurance Assistant
- Research Assistant
- Sales and Marketing Executive
- Technical Specialist

**FURTHER STUDIES**

A high percentage of our graduates are offered admission to local universities. You have the flexibility to pursue Biomedical Sciences related programmes or other disciplines such as Medicine, Dentistry and Pharmacy. You may also be granted direct entry into the second or third year of degree programmes in international universities.

**FURTHER INFORMATION**

Scan to find out more information about the course

School of Chemical & Life Sciences  •  Singapore Polytechnic
**ELECTIVES**

The SP elective framework offers students options to pursue their passion and/or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, lifelong learners, which are essential in today's volatile and changing societal as well as their development as self-directed, versatile, lifelong learners, which are essential in today's volatile and changing societal and institutional landscapes.

Students will have the opportunity to take up five electives of their choice to broaden or deepen skills learnt in their diploma course. Please visit [https://www.sp.edu.sg/sp/education/elective-modules](https://www.sp.edu.sg/sp/education/elective-modules) for the full list of electives and for details of this elective scheme.

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Marcia Zhang
DBS Gold Medallist
Class of 2021
Currently pursuing a Bachelor of Science (Life Sciences) at NUS

"I live by the quote “to put patients at the heart of all we do.”

The DBS course has taught me meaningful science that transcends beyond saving lives — it touches lives as well. I will always be thankful to my SP lecturers and supervisors during my time in the National Heart Centre Singapore who have instilled in me a love for science and healthcare, and encouraged me to be the best version of myself!"
DIPLOMA IN
CHEMICAL ENGINEERING
(DCHE - S70)

Chemical engineering is the discipline which integrates sciences with applied mathematics and engineering principles. It takes laboratory ideas and turns them into value-added products using cost-effective, safe and cutting-edge processes for the chemical industry.

Some famous chemical engineers in history include John McKeen, who designed the first industrial-scale production of penicillin that saved thousands of soldiers’ lives during World War II; Carl Bosch who invented the Haber-Bosch process to produce ammonia, a critical ingredient in synthetic fertilisers that enable us to produce enough food to feed the Earth’s growing population.

Join us if you aspire to be like the above prominent chemical engineers who make real, significant impact in improving our world for a better tomorrow!

SCHOLARSHIPS AVAILABLE
- A*STAR Science Award
- Mitsui Chemicals Process Technology Study Award
- Singapore Polytechnic Scholarships

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- A*STAR Science Award
- Mitsui Chemicals Process Technology Study Award
- Singapore Polytechnic Scholarships

CAREER OPTIONS
- Assistant Biotechnologist
- Business Development Executive
- Engineering, Procurement and Construction (EPC) Engineer
- Health, Safety Environmental (HSE) Officer
- Laboratory Technologist
- Logistics and Supply Chain Specialist
- Maintenance Specialist/Technician
- Process Engineer/Technician/Technologist
- Production Technician
- Project Management Engineer
- Quality Assurance/Control Engineer
- Sales and Marketing Engineer

FURTHER STUDIES
Each year, more than half of our graduates are successfully accepted into well established local and international universities. Many of them are also offered module exemptions or direct entry into the second or third year of their university degree programmes.

Our graduates can also apply for either a 2.5-year degree programme in chemical engineering that is offered by Technical University of Munich (TUM), Germany and Singapore Institute of Technology (SIT) or a 2-year degree programme in chemical engineering that is offered by Newcastle University (NU), United Kingdom and SIT.

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The Diploma in Chemical Engineering is a three-year full-time programme.

### COURSE MODULES

The Diploma in Chemical Engineering is a three-year full-time programme.

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| - Basic Mathematics  
- Chemical Engineering Thermodynamics  
- Chemistry I  
- Chemistry II  
- Common Core Modules  
- Engineering Mathematics | - Chemical Engineering Design Calculations and Simulation  
- Chemical Product Design and Development  
- Chemical Reaction Engineering  
- Common Core Modules  
- Elective 1  
- Elective 2 | - Biopharmaceutical Engineering  
- Capstone Project  
- Common Core Modules  
- Elective 3  
- Internship Programme |
| - Fluid Flow and Equipment  
- Heat Transfer and Equipment  
- Introduction to Chemical Engineering  
- Laboratory and Process Skills 1 | - Engineering Mathematics II  
- Introduction to Chemical Product Design  
- Process Instrumentation and Control  
- Process Operation Skills 1  
- Process Operation Skills 2  
- Separation Processes | - Pharmaceutical Engineering  
- Plant Design, Economics & Sustainable Development  
- Process Plant Safety & Engineering Ethics |

### ELECTIVES

The SP elective framework offers students options to pursue their passion and/or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, lifelong learners, which are essential in today’s volatile and changing societal as well as occupational landscape.

For a list of electives offered, please visit [www.sp.edu.sg/sp/education/elective-modules](http://www.sp.edu.sg/sp/education/elective-modules).

Common Core Curriculum

The Common Core Curriculum is designed to prepare students for a disruptive world that is ever-changing. Comprising critical human and emerging digital skills, the common core modules offer students an integral and inter-disciplinary learning experience to address the wicked problems of the world (framed by the United Nations’ Sustainable Development Goals).

Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit [https://www.sp.edu.sg/sp/education/common-core-curriculum](https://www.sp.edu.sg/sp/education/common-core-curriculum).

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**Huang Zhenqi**  
DCHE Gold Medallist  
Class of 2021  
Currently pursuing a Bachelor of Computing in Computer Science at NUS

The three years in SP Chemical Engineering have nurtured me to be a more confident individual. The rigorous yet interesting curriculum taught me to persevere while the numerous group projects allowed me to improve my teamwork and collaboration skills. I am grateful for the guidance the lecturers have given me and thankful to have met various people during the course of study.
COMMON SCIENCE PROGRAMME (DCSP - S28)

Are you passionate about science but need more exposure and hands-on experience to decide which scientific discipline to specialise in? The Common Science Programme (DCSP) is the right place for you!

The DCSP provides a specially crafted curriculum with curated taster modules and Diploma Exposure Programme, to provide you with insights on the different scientific disciplines before you make an informed choice to pursue your diploma at the end of year 1.

DCSP students go through a common year one curriculum as students from the diploma in Applied Chemistry, Biomedical Science, Food Science & Technology and Perfumery & Cosmetic Science.

Towards the end of their first year, DCSP students will be invited to rank their preferences among the four constituent full-time diploma courses offered by CLS:

- Diploma in Applied Chemistry (DAPC – S64)
- Diploma in Biomedical Science (DBS – S98)
- Diploma in Food Science & Technology (DFST – S47)
- Diploma in Perfumery & Cosmetic Science (DPCS – S38)

* Please note that the Diploma in Optometry and Diploma in Chemical Engineering under the School of Chemical & Life Sciences are not part of SP’s Common Science Programme due to curricula differences.

DCSP students will then undergo a seamless transition into the year two curriculum with their fellow peers whom had enrolled directly into the respective diploma courses from year one.

Depending on your choice of diploma, you can continue to pursue your respective science degree programme at a local or international university.
The Common Science Programme is a one year full-time programme, which forms the first year of students’ three-year diploma journey in SP.

**FIRST YEAR**

- Basic Mathematics
- Biochemistry & Cell Biology
- Chemical Safety & Biosafety
- Chemistry I
- Chemistry II
- Communicating for Project Effectiveness (Proposal)
- Critical & Analytical Thinking
- Elective 1
- Engineering Mathematics
- Instrumental Analysis
- Microbiology & Genetics
- Narrative Thinking
- Process Principles
- Scientific Applications

All full-time diploma students are required to take two compulsory Education and Career Guidance Modules in SP. Students will take Education and Career Guidance 1 — Personal Development (30 hours) in their first year. In their second year, students will take Education and Career Guidance 2 — Career Development (15 hours).

Students will have the opportunity to take up five electives of their choice to broaden or deepen skills learnt in their diploma course. Please visit [https://www.sp.edu.sg/sp/education/elective-modules](https://www.sp.edu.sg/sp/education/elective-modules) for the full list of electives and for details of this elective scheme.

**ELECTIVES**

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The SP elective framework offers students options to pursue their passion and/or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, lifelong learners, which are essential in today’s volatile and changing societal as well as occupational landscape.

Students will have the opportunity to take up five electives of their choice to broaden or deepen skills learnt in their diploma course. Please visit [https://www.sp.edu.sg/sp/education/elective-modules](https://www.sp.edu.sg/sp/education/elective-modules) for the full list of electives and for details of this elective scheme.

**YEAR 1**

Common Science Programme (S28)

Students begin their Science journey by going through a common first year curriculum.

Towards the end of Year 1 Semester 2
Select 1 of 4 CLS diplomas to specialise

**YEAR 2 & 3**

Seamless transition into the year two curriculum with their peers who are enrolled directly into the respective diploma courses.

- Diploma in Applied Chemistry $64
- Diploma in Biomedical Science $98
- Diploma in Food Science & Technology $47
- Diploma in Perfumery & Cosmetic Science $38
DIPLOMA IN
FOOD SCIENCE & TECHNOLOGY
(DFST - S47)

Want to uncover the mysteries behind the food we eat or excite the taste buds of consumers? Come join the Diploma in Food Science & Technology (DFST) at SP.

SCHOLARSHIPS AVAILABLE
- A*STAR Science Award
- BASF Scholarship
- MOH Holdings Scholarships
- SFMA – Pek Cheng Chuan Scholarship
- SIFST Best Student Award cum Rintoul Memorial Scholarship
- Singapore Polytechnic Scholarships
- Tai Hua Scholarship

You will discover the world of food — from raw ingredients, processes, packaging to finished consumer products, through our carefully designed curriculum, with a strong emphasis on design thinking and industry-linked projects.

In year 2, students can opt into an Industry Now Curriculum (INC) where they will acquire skills and knowledge through exciting industry projects under the supervision of Food Scientists at Food Innovation Resource Centre (FIRC).

Upon graduation, you will be equipped with relevant knowledge and skills to join the ranks of food technologists to innovate and produce foods that are safer, healthier and tastier!

COURSE HIGHLIGHTS
- Well-equipped facilities such as the Food Creation Lab, Dough and Roll Studio, Food Analysis Lab, Food Processing & Packaging Lab and Biotransformation Lab
- Opportunity to participate in a work-based learning programme — Industry Now Curriculum (INC) jointly offered by DFST and SP’s Food Innovation Resource Centre (FIRC)
- This course is certified by the International Union of Food Science & Technology (IUFoST) for having met international standards and guidelines
- Opportunities to acquire local/global perspective on research, product development and food operations through internships and learning journeys
- Successful commercialisation of food products such as the XO Kaya and Lemon & Kalamansi drink through industry-linked Final Year Projects

FURTHER STUDIES
You can apply for related degree programmes at local or international universities such as:
- Bachelor of Science (Food Science and Technology) at NUS
- Degree in Biological Sciences/Chemical and Biomolecular Engineering/Chemistry and Biological Chemistry with a Second Major in Food Science and Technology at NTU
- Bachelor of Food Technology (Hons) or Bachelor of Professional Studies in Culinary Arts Management at SIT
- Bachelor of Science (Food Technology Major), University of Queensland

ENTRY REQUIREMENTS

Range of Net 2022 JAE ELR2B2: 5 to 13
Aggregate Type: ELR2B2-C

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CAREER OPTIONS

- Assistant Food Technologist/ Food Technologist
- Food Audit Officer
- Food Hygiene Officer
- Food Safety Officer
- Laboratory Technologist
- Market Development Executive
- Packaging Technologist
- Quality Assurance/Quality Control Executive
- Research & Development Technologist
- Sales & Marketing Executive

Scan to find out more information about the course
All full-time diploma students are required to take two compulsory Education and Career Guidance Modules in SP. Students will take Education and Career Guidance 1 — Personal Development (30 hours) in their first year. In their second year, students will take Education and Career Guidance 2 — Career Development (15 hours).

All students are required to take one compulsory Sports for Life (SFL) module for one semester in their first year in SP. In their second and third year, students may sign up for SFL module as an optional module.

The Diploma in Food Science & Technology is a three-year full-time programme.

**FIRST YEAR**
- Basic Mathematics
- Biochemistry & Cell Biology
- Chemistry I
- Chemistry II
- Chemical Safety & Biosafety
- Communicating for Project Effectiveness
- Critical & Analytical Thinking
- Elective 1
- Engineering Mathematics
- Instrumental Analysis
- Microbiology & Genetics
- Narrative Thinking
- Process Principles
- Scientific Applications

**SECOND YEAR**
- Chemistry III
- Elective 2
- Food Chemistry
- Food Ingredients
- Food Microbiology
- Food Preservation
- Food Process Engineering
- Food Safety & Quality Management
- Food Product Development & Packaging
- Nutrition
- Sustainable Innovation Project
- Statistics & Analytics

**THIRD YEAR**
- Communication for Professional Effectiveness
- Elective 3
- Internship Programme
- Project
- Internship Programme
- Project

The SP elective framework offers students options to pursue their passion and/or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, lifelong learners, which are essential in today’s volatile and changing societal as well as occupational landscape.

Students who are interested to explore additional new skills and abilities will have the opportunity to take up to five electives. Please visit https://www.sp.edu.sg/sp/education/elective-modules for details of this elective scheme and the full list of electives.
Due to the high prevalence of myopia in children and a rapidly aging population, quality optometrists are highly sought after to provide quality eye care to the community. Our three-year Diploma in Optometry (DOPT) course aims to produce professionally competent optometrists.

The scope of Optometry includes managing refractive errors (such as myopia and presbyopia) through spectacle and contact lens correction, and detecting common eye diseases (such as cataract, diabetic retinopathy and glaucoma).

Upon graduation, you would be able to register as a provisional optometrist with the Optometrists and Opticians Board.

**Scholarships Available**
- MOH Holdings Scholarships
- Singapore Polytechnic Scholarships

**CAREER OPTIONS**
- Clinical optometrist
- Community-based optometrist
- Lens Consultant
- Marketing and Customer Development Executive
- Professional Affairs Executive
- Research Optometrist

**FURTHER STUDIES**
You can apply for related degree programme at international universities such as the Bachelor of Science in Optometry in United Kingdom or Australia. Many of our graduates are offered module exemptions or direct entry into the second or third year of their university degree programmes. You are also eligible to apply for many non-optometry undergraduate programmes in the areas of biological sciences and allied health services at local universities.

**Entry Requirements**

**Course Highlights**
- First tertiary institution in Singapore to offer this course since 1994
- Our students start working with patients in the first year and continue with greater responsibilities in the subsequent years
- Excellent clinical and laboratory facilities and SP Optometry Centre provides you with hands-on experience using state-of-the-art precision instruments and equipment
- Regular industrial attachments at hospitals, optometric practices, contact lens or ophthalmic lens companies to widen your scope and experience in optometry
- 17-week-long internship in the final semester is a key component
- Opportunities for overseas exposure via community service projects or attachments to optometry schools and research institutions abroad

**Scholarships Available**
- MOH Holdings Scholarships
- Singapore Polytechnic Scholarships

**Subject Grade**
- English Language 1 – 7
- Mathematics (Elementary/Additional) 1 – 6
- One of the following 3rd relevant subjects: 1 – 6
  - Biology
  - Biotechnology
  - Chemistry
  - Food & Nutrition
  - Physics
  - Science (Chemistry, Biology)
  - Science (Physics, Biology)
  - Science (Physics, Chemistry)

**Range of Net 2022 JAE ELR2B: 6 to 12**
Aggregate Type: ELR2B2-C

Applicants with severe vision impairment may encounter difficulties meeting the course requirements and expectations. Please refer to the Ministry of Health (MOH) website on “Fitness to Practice” for registered Optometrists.
The Diploma in Optometry is a three-year full-time programme.

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| - Basic Mathematics  
- Clinical Optometry 1  
- Clinical Optometry 2  
- Common Core Modules  
- Engineering Mathematics |
| - Geometrical & Physical Optics  
- Human Anatomy, Physiology & General Medical Disorders  
- Ocular Anatomy & Physiology  
- Ophthalmic Dispensing  
- Ophthalmic Optics  
- Physiological & Visual Optics |

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| - Binocular Vision  
- Chemistry I  
- Chemistry II  
- Clinical Optometry 3 |
| - Clinical Practice 1  
- Common Core Modules  
- Contact Lens Practice 1  
- Contact Lenses |
| - Elective 1  
- Elective 2  
- Ocular Disease 1 |

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| - Clinical Practice 2  
- Common Core Modules  
- Contact Lens Practice 2  
- Elective 3 |
| - Internship Programme  
- Low Vision & Community Health Optometry  
- Ocular Disease 2 |
| - Ocular Pharmacology  
- Paediatric Optometry |

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For a list of electives offered, please visit [https://www.sp.edu.sg/sp/education/elective-modules](https://www.sp.edu.sg/sp/education/elective-modules).

Common Core Curriculum

The Common Core Curriculum is designed to prepare students for a disruptive world that is ever-changing. Comprising critical human and emerging digital skills, the common core modules offer students an integral and inter-disciplinary learning experience to address the wicked problems of the world (framed by the United Nations’ Sustainable Development Goals).

Through the Common Core modules, students will think critically about real-world problems, empathise with local and global communities and be challenged to effect change. For more information on the Common Core Curriculum, please visit [https://www.sp.edu.sg/sp/education/common-core-curriculum](https://www.sp.edu.sg/sp/education/common-core-curriculum).

All full-time diploma students are required to take a compulsory Education and Career Guidance module in SP. Students will take Education and Career Guidance – Personal Development (30 hours) in their first year.

All students are required to take one compulsory Sports for Life (SFL) module for one semester in their first year in SP. In their second and third year, students may sign up for SFL module as an optional module.

“SP Optometry has equipped me with the necessary knowledge and skills required for me to be an optometrist. With the availability of the SP Optometry Centre, a wide range of diagnostic instruments and quality lectures provided by passionate lecturers, I am confident that I am able to provide detailed eye examinations, eye care services and recommend optical appliances for the public.”

Ong Li Lin
DOPT Gold Medallist
Class of 2021
Currently pursuing a Bachelor of Computing in Information Security at NUS
DIPLOMA IN
PERFUMERY &
COSMETIC SCIENCE
(DPCS – S38)

This is the course for you if you have the passion to formulate products that can provide age-defying looks or uncover the secrets of fragrance creation.

We invite you to begin your journey with the Diploma in Perfumery & Cosmetic Science (DPCS) at SP.

It is the only local diploma programme that provides training in chemistry with applications in perfumery and cosmetic science. You will have an integrated learning experience where you will build a strong chemistry foundation and apply your knowledge in specific applications using your senses.

With this unique training in SP, your skills will be highly sought after not just locally but internationally in the lucrative and stable fragrance and cosmetic industries.

SCHOLARSHIPS AVAILABLE
- A*STAR Science Award
- Singapore Polytechnic Scholarships
- Society of Cosmetic Scientists (Singapore) Merit Award

COURSE HIGHLIGHTS
- Get trained in our state-of-the-art Consumer Chemicals Technology Centre (CCTC) and Perfumery & Cosmetic Science Centre (PCSC)
- Collaborate with industry partners for real and exciting experiences in making perfumes and cosmetic products, producing fragrance raw materials through organic synthesis and extraction of essential oils
- Internship with perfumers, chemists or product formulators in specialty chemical companies, flavour and fragrance houses or fast moving consumer goods companies
- Course is recognised by the UK Royal Society of Chemistry (RSC)

ENTRY REQUIREMENTS
Range of Net 2022 JAE ELR2B2: 5 to 11
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CAREER OPTIONS
- Chemist
- Formulator
- Fragrance Evaluator
- Procurement Executive
- Product Application Chemist
- Product Development Specialist
- Quality Assurance/Quality Control Laboratory Analyst
- Regulatory and Product Safety Personnel
- Sales/Business/Marketing Executive
- Trainee/Assistant Perfumer

FURTHER STUDIES
Many of our graduates gain entry into degree programmes at local or international universities. You can pursue further studies in the areas of cosmetic science, perfumery and chemistry.
**COURSE MODULES**
The Diploma in Perfumery & Cosmetic Science is a three-year full-time programme.

**FIRST YEAR**
- Basic Mathematics
- Biochemistry & Cell Biology
- Chemical Safety & Biosafety
- Chemistry I
- Chemistry II
- Communicating for Project Effectiveness (Proposal)
- Critical & Analytical Thinking
- Elective 1
- Engineering Mathematics
- Instrumental Analysis
- Microbiology & Genetics
- Narrative Thinking
- Process Principles
- Scientific Applications

**SECOND YEAR**
- Chemistry III
- Chemistry of Cosmetic Raw Materials
- Communicating for Professional Effectiveness
- Elective 2
- Elective 3
- Engineering Mathematics II
- Formulation and Colloidal Science of Cosmetics
- Fragrance and Flavour Chemistry I
- Further Chemistry I
- Fragrance and Flavour Chemistry II
- Quality Assurance & Statistics
- Sustainable Innovation Project
- The Art of Perfumery

**THIRD YEAR**
- Extended Internship Programme
- Safety Assessment, GMP and Cosmetic Regulations

**ELECTIVES**
The SP elective framework offers students options to pursue their passion and/or meet different career needs, and is an integral part of the holistic education we seek to provide to our students. The learning experiences of this elective framework help students in their development as self-directed, versatile, lifelong learners, which are essential in today’s volatile and changing societal as well as occupational landscape.

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Chua Xin Juan  
DPCS Gold Medallist  
Class of 2021  
Currently pursuing a Bachelor of Science in Chemistry and Biological Chemistry at NTU

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The DPCS curriculum has equipped me with a strong scientific foundation alongside sharpened creativity and problem-solving skills to work in the personal care industry.