



The reliance on food, chemicals and medicinal drugs is becoming increasingly real today. With Singapore being resource-scarce, it is crucial for us to develop expertise in chemical and pharmaceutical engineering as well as food technology

to sustain both the growth of our population as well as the economy. These sectors provide careers with lots of opportunities for innovation, where new sources of sustenance can be developed and old ones improved upon, without impacting too much on nature. The pharmaceutical, chemical and food industries are constantly on the lookout for the next innovative drug, alternative energy that is sustainable and economical, and new and healthier food products.



2017

# CHEMICAL ENGINEERING AND FOOD TECHNOLOGY

SINGAPORE INSTITUTE OF TECHNOLOGY



Pharmaceutical Engineering, BEng (Hons)



SINGAPORE INSTITUTE OF TECHNOLOGY – MASSEY UNIVERSITY

Food Technology, BFoodTech (Hons)

SINGAPORE INSTITUTE OF TECHNOLOGY – NEWCASTLE UNIVERSITY

Chemical Engineering, BEng (Hons)



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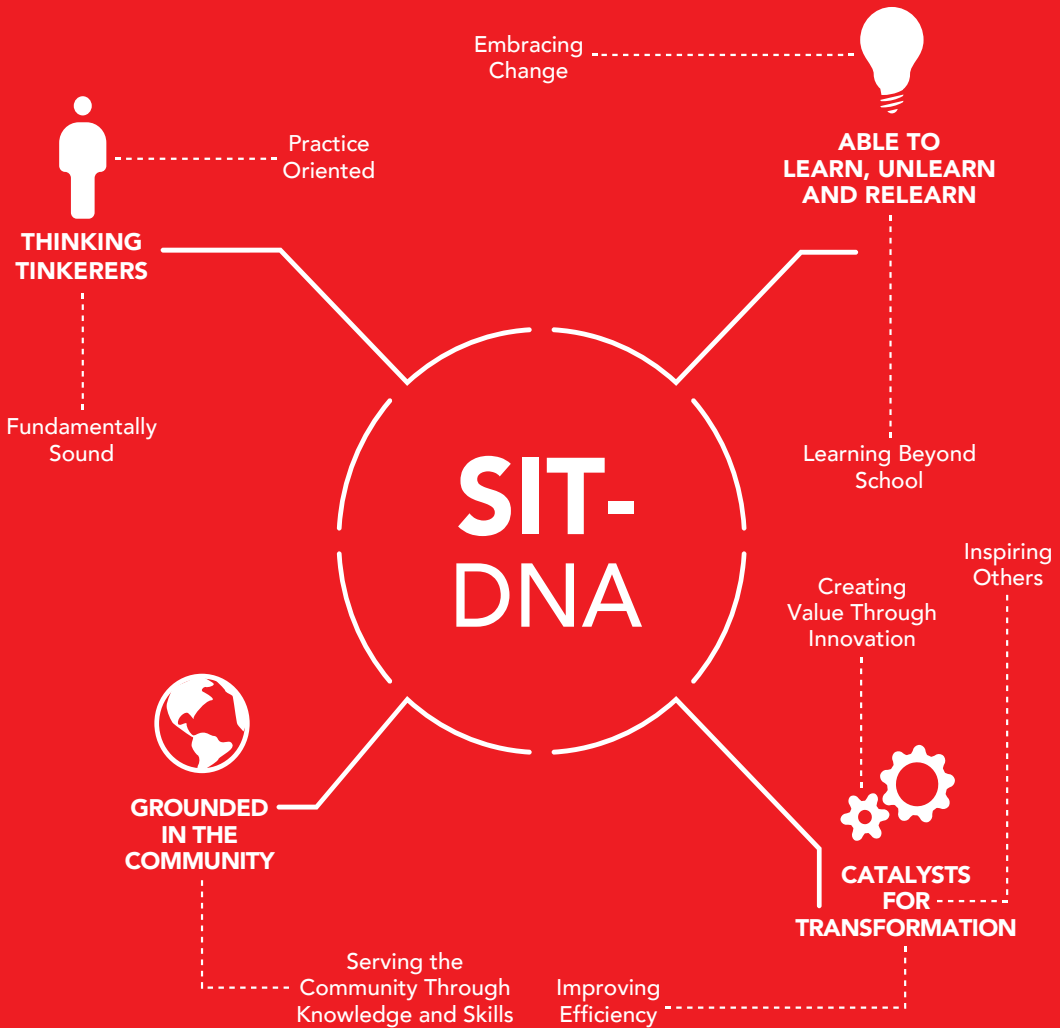
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# ABOUT SIT



Singapore Institute of Technology (SIT) is Singapore's university of applied learning. SIT upholds the vision of being a leader in innovative learning by integrating learning, industry and community.

Our mission is to nurture and develop individuals who build on their interests and talents to impact society in meaningful ways. The university also aims to cultivate in its students four distinctive traits, or the SIT-DNA, which will prepare them to be 'Thinking Tinkerers', 'Able to Learn, Unlearn and Relearn', 'Catalysts for Transformation' and 'Grounded in the Community'.

The university's applied degree programmes offer you a chance to experience a unique pedagogy that integrates work and study. SIT's degree programmes feature an eight- to 12-month Integrated Work Study Programme (IWSP) which exemplifies the best of university-industry collaboration.

# WHY CHEMICAL ENGINEERING AND FOOD TECHNOLOGY?

## KEY PILLARS IN SINGAPORE'S ECONOMY

The chemical, pharmaceutical and food sectors form key pillars of the Singapore economy. SIT's Chemical Engineering and Food Technology Cluster offers programmes in Chemical Engineering, Pharmaceutical Engineering and Food Technology, with the aim to produce graduates who can solve complex and interdisciplinary problems in the chemical, energy, pharmaceutical and food industries. Graduates can look forward to careers that will contribute towards the sustainable production of chemicals, pharmaceuticals and food, address energy and food security challenges, and develop innovative solutions and new products that will address today's challenges and tomorrow's needs.

## APPLIED LEARNING PEDAGOGY

We take pride in training our students through our applied learning pedagogy to educate and produce industry-fit graduates. We scaffold specialist training onto fundamentals grounding to endow our students with specialist knowledge that is built on the rudiments of a discipline. Students will have the opportunity to learn in both the classroom and industrial setting. Our seven- to eight-month Integrated Work Study (IWSP) programme allows students to contextualise their learning and integrate theoretical knowledge with industry solutioning.

## MEANINGFUL CAREER PROSPECTS

Graduates can apply their integrated knowledge in science, technology and engineering, to develop and improve products and processes without compromising the environment. We believe that our unique pedagogy coupled with an industry-centric curriculum will give our students a competitive edge in the job market.

*"Each year, we welcome more than*

*300 new undergraduates into the cluster.*

*We also welcome industry practitioners and visiting academics*

*in a variety of platforms within the university.*

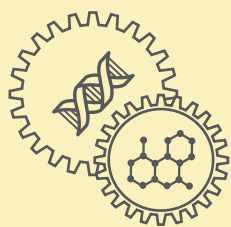
*I invite you to share in the SIT experience through our programmes!"*

**Associate Professor Susanna Leong**  
**Cluster Director**  
**Chemical Engineering and Food Technology**  
**Singapore Institute of Technology**



# BACHELOR OF ENGINEERING WITH HONOURS IN PHARMACEUTICAL ENGINEERING

## PROGRAMME INFORMATION



As the first Pharmaceutical Engineering (PharmE) programme in Singapore, this programme is built on an interdisciplinary curriculum that intersects engineering, life sciences and chemistry, with the aim to deliver a rigorous education that has a strong industry focus. The goal of this programme is to produce graduates who are both theoretically grounded and practice-oriented for the knowledge-intensive pharmaceutical industry and related sectors.

Distinguished by a curriculum that is strongly girded with cutting-edge, industry-compliant concepts and know-how, students will be trained in core competencies in the development and manufacturing of the two largest classes of pharmaceutical drugs – (i) biologics and (ii) small molecule drugs.

The curriculum's strong grounding in both engineering and science will underpin the programme's foundation, upon which students will be trained in the full spectrum of skill sets pertinent to drug manufacturing. This ranges from drug development and production to process development, operations, validation, regulation, and compliance.

Modules to develop students' business and management acumen will also be offered to add breadth to the technical specialisation of the programme, allowing them to gain an understanding of the expectations of commercial environments and productivity management. The translational nature of PharmE's curriculum will allow students to readily apply their science and engineering knowledge in the highly advanced and regulated pharmaceutical manufacturing environment, thus grooming graduates who can make impactful contributions to industry from day one.

## PROGRAMME HIGHLIGHTS

### STRONG INDUSTRIAL ALIGNMENT



Strong industry partnership in curriculum development and industrial case-study sharing.



Students can obtain industry-endorsed competency-based certifications upon the completion of certain modules of the programme, allowing them to obtain industry-validated skills that are attuned to employers' needs.



Students will complete Capstone Projects that are centred on solving industry problems, with an emphasis on innovation.



# BACHELOR OF ENGINEERING WITH HONOURS IN PHARMACEUTICAL ENGINEERING

## CURRICULUM STRUCTURE

<b>YEAR</b> <b>1</b>	<b>Trimester 1</b>	<b>Fundamentals</b> <ol style="list-style-type: none"> <li>1. Engineering Mathematics I</li> <li>2. Statistics</li> <li>3. Chemistry</li> <li>4. Mass and Energy Balance</li> <li>5. Biomolecular Science I</li> </ol>	
	<b>Trimester 2</b>	<b>Core I</b> <ol style="list-style-type: none"> <li>1. Engineering Mathematics II</li> <li>2. Organic Chemistry</li> <li>3. Organic Chemistry Lab</li> <li>4. Programming for Pharmaceutical Engineering</li> <li>5. Engineering Principles I</li> </ol>	
	<b>Trimester 3</b>	<b>Core II</b> <ol style="list-style-type: none"> <li>1. Engineering Mathematics III</li> <li>2. Engineering Thermodynamics</li> <li>3. Engineering Thermodynamics Lab</li> <li>4. Biomolecular Science II</li> <li>5. Engineering Principles II</li> </ol>	
<b>YEAR</b> <b>2</b>	<b>Trimester 1</b>	Break	
	<b>Trimester 2</b>	<b>Core III</b> <ol style="list-style-type: none"> <li>1. Operational Excellence</li> <li>2. Current Good Manufacturing Practice</li> <li>3. Technical Writing and Communications</li> <li>4. Engineering Principles III</li> <li>5. Career and Professional Development</li> </ol>	
	<b>Trimester 3</b>	<b>Biologics Specialisation I</b> <ol style="list-style-type: none"> <li>1. Expression Engineering</li> <li>2. Bioprocess Engineering</li> <li>3. Molecular Biology and Fermentation Lab</li> <li>4. Bioseparations I</li> <li>5. Foundations of Finance</li> </ol>	<b>SMD Specialisation I</b> <ol style="list-style-type: none"> <li>1. Medicinal Chemistry</li> <li>2. Unit Operations I</li> <li>3. Unit Operations II</li> <li>4. Downstream Processing I</li> <li>5. Foundations of Finance</li> </ol>



# BACHELOR OF ENGINEERING WITH HONOURS IN PHARMACEUTICAL ENGINEERING

<b>YEAR 3</b>	<b>Trimester 1</b>	<b>Biologics Specialisation II</b> <ol style="list-style-type: none"> <li>1. Bioanalytics</li> <li>2. Bioseparations II</li> <li>3. Bioseparations Lab</li> <li>4. Biosafety</li> <li>5. Process Automation, Monitoring and Control</li> </ol>	<b>SMD Specialisation II</b> <ol style="list-style-type: none"> <li>1. Analytical Chemistry</li> <li>2. Downstream Processing II</li> <li>3. Unit Operations and Downstream Processing Lab</li> <li>4. Process Safety</li> <li>5. Process Automation, Monitoring and Control</li> </ol>
	<b>Trimester 2</b>	Integrated Work Study Programme (IWSP)	
	<b>Trimester 3</b>	Integrated Work Study Programme (IWSP)	
<b>YEAR 4</b>	<b>Trimester 1</b>	<b>Operations Management</b> <ol style="list-style-type: none"> <li>1. Process Validation</li> <li>2. Plant Design and Operations</li> <li>3. Quality by Design in Pharmaceutical Development</li> <li>4. Project Management</li> </ol>	
	<b>Trimester 2</b>	GRADUATE	



# BACHELOR OF ENGINEERING WITH HONOURS IN PHARMACEUTICAL ENGINEERING

## INTEGRATED WORK STUDY PROGRAMME (IWSP)



Students will be involved in two trimesters of uninterrupted work placement which is a graduation requirement of the degree programme. The IWSP is an avenue to undertake work and develop their career and professional skills in the pharmaceutical manufacturing and related sectors.

Students will gain hands-on experience in operating manufacturing processes on an industrial scale, complementing and reinforcing classroom theory and concepts. They will also complete a Capstone Project that is focussed on solving real industry problems.

## OVERSEAS STUDY TRIP



During the trimester break, students may opt to embark on a short training attachment at pharmaceutical manufacturing facilities overseas. They will have the opportunity to work with modern industrial-scale unit operations in Good Manufacturing Practice (GMP) or GMP-simulated pharmaceutical manufacturing environments and pick up best industry practices. Students will also have the opportunity to learn state-of-the-art analytical technologies for pharmaceutical product monitoring and certification.

## CAREER OPPORTUNITIES



SIT's PharmE programme aims to nurture and groom skilled professionals for the pharmaceutical industry in Singapore. The rigorous engineering training provided in this programme also provides fundamental grounding and a unique opportunity for students who are interested in pursuing careers in other relevant industries, including the chemicals, biotechnology, life sciences, nutraceutical, as well as flavours and fragrances sectors. In-depth training across the full value stream of pharmaceutical manufacturing will allow graduates to directly apply their knowledge in advanced and regulated manufacturing environments, giving them a competitive advantage in the market.





# BACHELOR OF ENGINEERING WITH HONOURS IN PHARMACEUTICAL ENGINEERING

## INDUSTRY ADVISORY COMMITTEE

The members of the Industry Advisory Committee for this programme are:

**Ms HO Wengsi**  
Director, Biomedical Sciences  
Economic Development Board

**Mr Matthew LECLAIR**  
Plant Manager  
Technical Operations  
Shire

**Mr LIM Hock Heng**  
Vice President and Managing Director  
Glaxo Wellcome Manufacturing, Singapore

**Mr George ROUTHIER**  
Managing Director/Site Leader  
Pfizer Asia Pacific Pte Ltd

**Mr Jose SANCHEZ**  
Site Head  
Novartis Singapore Pharmaceutical Manufacturing Pte Ltd

**Mr John SMITH**  
Managing Director  
MSD International GmbH (Singapore)

# ABOUT MASSEY UNIVERSITY



**MASSEY  
UNIVERSITY**  
TE KUNENGA KI PŪREHUROA

UNIVERSITY OF NEW ZEALAND

Massey University is New Zealand's defining university, with three major campuses in Auckland, Palmerston North and Wellington. Recognised for its expertise in the fields of Food Technology, Sciences, Health, Social Sciences, Creative Arts, Education and Business, students will be taught by internationally renowned academic staff who lead cutting-edge research across its colleges, often in collaboration with other universities, research institutes and industry through the applied nature of its teaching and research programmes.

Ranked in the top 3% of universities worldwide\*, Massey has a proud heritage of employing its expertise to work with developing countries. With its focus on technology and business, students will meet the highest international standards.

\*QS World University Rankings 2016



[www.massey.ac.nz](http://www.massey.ac.nz)



# BACHELOR OF FOOD TECHNOLOGY WITH HONOURS

## PROGRAMME INFORMATION



The SIT-Massey University joint degree programme in Food Technology offers a curriculum focussed on Food Product Technology, combining food science, food engineering and food business. The programme educates and equips students with the fundamentals of food science and applied food technology skills required for a global career in the food industry. Beyond the classroom, students will learn through practical laboratory and workshop sessions that focus on industry problems and solutions. Students will obtain hands-on experience in industrial-standard food processing plants under the mentorship of highly qualified lecturers who have valuable work experience in international food industries.

With the growing worldwide focus on health and well-being through food consumption as well as food development and manufacturing, there is a demand for graduates to fill vacancies. Through the joint degree programme in Food Technology, students are trained to be innovators and agents of change in the food industry where they apply scientific and engineering principles, as well as recognise and create what is needed in the marketplace. Students will also gain the entrepreneurial skills needed to bring new ideas to the consumer successfully.

## PROGRAMME HIGHLIGHTS



### PRACTISE FOOD TECHNOLOGY FROM DAY ONE

Modules are practical and applied, providing valuable, hands-on experience in food technology from day one.



### BALANCE OF SCIENCE, TECHNOLOGY AND BUSINESS

Students will gain an integrated understanding of food science and the way it is applied through technology and business in actual manufacturing scenarios.



### REAL WORLD PROBLEM-SOLVING

Students will work on industry food science and technology projects including the development of safe, healthy, nutritious, environmentally-friendly and sustainable solutions for different communities around the world.



### GAIN WORK EXPERIENCE WHILE STUDYING

Students will gain 28 weeks of work experience in the food industry under the Integrated Work Study Programme (IWSP), providing a unique opportunity to work on industry projects and solve real industry problems.

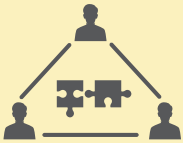


# BACHELOR OF FOOD TECHNOLOGY WITH HONOURS



## A BUSINESS AND MANAGEMENT FOCUS

Students will develop a powerful mix of business and managerial skills applied to real industry projects, allowing them to develop and practise their professional strategies and skills, helping them succeed in their future careers.



## CLASSES FOCUSED ON PROBLEM-SOLVING

As part of the applied learning pedagogy, students will be engaged through many practical and laboratory sessions to complement their lectures and gain a holistic approach to learning.

## CURRICULUM STRUCTURE

<b>YEAR</b> <b>1</b>	<b>Trimester 1</b>	<b>Fundamentals I</b> <ol style="list-style-type: none"> <li>1. Chemistry for Food Technology</li> <li>2. Biomolecular Science for Food Technology</li> <li>3. Mass and Energy Balance</li> <li>4. Food Technology 1 and 2: Global and Creative Solutions</li> <li>5. Engineering Mathematics 1</li> </ol>
	<b>Trimester 2</b>	<b>Fundamentals II</b> <ol style="list-style-type: none"> <li>1. Engineering Fundamentals (Mechanics and Electricity)</li> <li>2. Food Technology 3: Product Development</li> <li>3. Programming for Engineering</li> <li>4. Industrial Microbiology</li> </ol>
	<b>Trimester 3</b>	Break



# BACHELOR OF FOOD TECHNOLOGY WITH HONOURS

<b>YEAR 2</b>	<b>Trimester 1</b>	<b>Core I</b> <ol style="list-style-type: none"> <li>1. Chemical Energetics</li> <li>2. Molecules to Materials</li> <li>3. Technical Writing and Communication</li> <li>4. Heat and Mass - Conservation and Transfer</li> <li>5. Fluid Flow and Particle Technology</li> </ol>
	<b>Trimester 2</b>	<b>Core II</b> <ol style="list-style-type: none"> <li>1. Food Technology 4: Manufacturing</li> <li>2. Food Technology 5: Food Microbiology and Safety</li> <li>3. Food Chemistry</li> <li>4. Career and Professional Development</li> <li>5. Engineering Mathematics 2</li> </ol>
	<b>Trimester 3</b>	<b>Specialisation I</b> <ol style="list-style-type: none"> <li>1. Food Technology 6: Food Characterisation</li> <li>2. Food Formulation Technology</li> <li>3. Nutrition and Food Choice</li> <li>4. Statistical Modelling for Engineers and Technologists</li> </ol>
<b>YEAR 3</b>	<b>Trimester 1</b>	<b>Specialisation II</b> <ol style="list-style-type: none"> <li>1. Food Packaging Engineering and Legislation</li> <li>2. Industrial Systems Improvement</li> <li>3. Process Engineering Operations</li> <li>4. Reaction Technology and Process Modelling</li> </ol>
	<b>Trimester 2</b>	Integrated Work Study Programme (IWSP)
	<b>Trimester 3</b>	Integrated Work Study Programme (IWSP)
<b>YEAR 4</b>	<b>Trimester 1</b>	<b>Development and Management</b> <ol style="list-style-type: none"> <li>1. Food Technology Project</li> <li>2. Prescribed Elective</li> </ol>
	<b>Trimester 2</b>	<b>Development and Management</b> <ol style="list-style-type: none"> <li>1. Advanced Food Technology</li> <li>2. Innovative Food Design and Development</li> </ol>
	<b>Trimester 3</b>	GRADUATE



# BACHELOR OF FOOD TECHNOLOGY WITH HONOURS

## INTEGRATED WORK STUDY PROGRAMME (IWSP)



Students will spend 28 weeks (nearly two trimesters) of uninterrupted work placement within the food industry under the IWSP. They will work and acquire invaluable food industry experience and contacts, as well as develop a broader understanding of the food industry, enhancing their employability from the day they graduate.

## OVERSEAS STUDY TRIP



Students have the opportunity to travel to New Zealand to complete one trimester at one of two Massey University campuses in Auckland or Palmerston North for their Food Technology Project.

## CAREER OPPORTUNITIES



This joint honours degree programme will deliver confident graduates with the ability to co-ordinate the development and introduction of new products, processes and packaging which are in compliance with legal requirements which meet safety, quality, nutrition, hygiene, cost and environmental needs.

Students will embark on an exciting pathway leading to a wide variety of professions in the food industry, which include:

Food Technologist, Product Development Technologist, Process Engineer, Production Engineer, Flavour Technologist, Packaging Technologist, Quality Specialist, Food Safety Specialist, Sensory Specialist, as well as Food Microbiologist or Food Chemist.

Students will also have the opportunity to further their studies in postgraduate research.



# BACHELOR OF FOOD TECHNOLOGY WITH HONOURS

## INDUSTRY ADVISORY COMMITTEE

The members of the Industry Advisory Committee for this programme are:

**Mr Philip HO**

Commercial Lead Asia Pacific  
Tereos Asia Pte Ltd

**Ms KHOO Gek Hoon**

Director, Post-Harvest Technology Department  
Agri-Food & Veterinary Authority

**Dr Allan LIM**

Group Manager, Intellectual Asset, Regulatory and Nutrition  
Nestlé R&D Center (Pte) Ltd

**Mr LIM Kay Kong**

Executive Director and Group Research and Development Manager  
Prima Limited

**Ms TONG Shuh Lan**

Director, Food, Industry and Enterprise Development Group  
SPRING Singapore

# ABOUT NEWCASTLE UNIVERSITY



Newcastle University (NU) is a member of the Russell Group, comprising the United Kingdom's 24 leading research-intensive universities, and is acclaimed for its multidisciplinary research, focussing on three societal challenges — ageing and health, sustainability and social inclusion. Noted for its teaching excellence and preparedness of its graduates for their professional careers, NU has attained the highest rating of five plus QS Stars by QS World University Rankings. Besides its home base in the city of Newcastle upon Tyne, NU now has a strong and growing presence in London, Malaysia and Singapore, with a total student population of around 25,000.

With its origins tracing back to 1834, the founding of Armstrong College in 1871 propelled the introduction of fundamental subjects such as chemistry, mathematics and physics to the university. NU collaborates with SIT to jointly deliver six undergraduate programmes in Singapore that offer a modern and industrially relevant interpretation of the subject in which students will develop skills, knowledge and understanding, in preparation for a successful and satisfying professional career ahead.

 [www.ncl.ac.uk](http://www.ncl.ac.uk)





# BACHELOR OF ENGINEERING WITH HONOURS IN CHEMICAL ENGINEERING

## PROGRAMME INFORMATION



The SIT-Newcastle University (NU) joint degree programme in Chemical Engineering aims to produce graduates who have a clear understanding of Chemical Engineering, combining a sound theoretical grasp of the subject with practical experience and an awareness of their responsibility to society and the environment. Consisting of key, traditional Chemical Engineering topics such as Transfer Processes and Unit Operations, and including contemporary and globally important areas such as Sustainable Design and Clean Technology, students will learn how to critically analyse real-world process engineering problems through the use of computational tools.

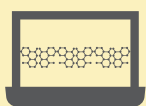
Assessment will be based on several components such as coursework and written examinations. Students will have the opportunity to creatively apply what they have learnt to solve challenges posed by their final year Capstone Project on plant design. The academic training and soft skills acquired through the programme will produce capable graduates who will go on to become professional chemical engineers in the industry. Graduates may also eventually choose to pursue industrial research to develop new solutions and innovative processes or a postgraduate route to an academic career.

## PROGRAMME HIGHLIGHTS



### PRACTICAL BIAS

Subjects are taught with a practical bias and the majority of modules have a substantive coursework component, complementing theory with practice.



### PROBLEM-SOLVING AND THE USE OF COMPUTATIONAL TOOLS

Students will develop problem-solving skills and gain valuable experience through the use of commercial computational tools to solve chemical engineering problems.



### GAIN WORK EXPERIENCE WHILE STUDYING

Students will gain six to eight months of work experience under the Integrated Work Study Programme (IWSP) in the process engineering industry, with the unique opportunity to work on industry projects and solve problems.



# BACHELOR OF ENGINEERING WITH HONOURS IN CHEMICAL ENGINEERING

## CURRICULUM STRUCTURE

<b>YEAR 1</b>	<b>Trimester 1</b>	<ol style="list-style-type: none"> <li>1. Mass and Energy Balance</li> <li>2. Technical Writing and Communication</li> <li>3. Biomolecular Science 1</li> <li>4. Statistics</li> <li>5. Engineering Mathematics I</li> </ol>
	<b>Trimester 2</b>	<ol style="list-style-type: none"> <li>1. Organic Chemistry</li> <li>2. Organic Chemistry Laboratory</li> <li>3. Engineering Mathematics 2</li> <li>4. Computing and Simulation</li> <li>5. Thermodynamics</li> </ol>
	<b>Trimester 3</b>	Break
<b>YEAR 2</b>	<b>Trimester 1</b>	<ol style="list-style-type: none"> <li>1. Separation Processes 1</li> <li>2. Heat and Mass Transfer</li> <li>3. Reactor Engineering</li> <li>4. Fluid Mechanics</li> <li>5. Engineering Practice</li> </ol>
	<b>Trimester 2</b>	<ol style="list-style-type: none"> <li>1. Engineering Practice</li> <li>2. Process Measurement, Modelling and Control</li> <li>3. Separation Processes 2</li> <li>4. Reactor Engineering 2</li> <li>5. Process Safety</li> <li>6. Career and Professional Development</li> </ol>
	<b>Trimester 3</b>	Overseas Immersion Programme (OIP) Integrated Work Study Programme (IWSP)



# BACHELOR OF ENGINEERING WITH HONOURS IN CHEMICAL ENGINEERING

<b>YEAR</b> <b>3</b>	<b>Trimester 1</b>	Integrated Work Study Programme (IWSP)
	<b>Trimester 2</b>	<ol style="list-style-type: none"> <li>1. Process Control 2</li> <li>2. Process Design, Economics and Project Management</li> <li>3. Solids Handling</li> <li>4. Chemical Process Optimisation</li> <li>5. Renewable Energy Technologies and Clean Technology Applications</li> </ol>
	<b>Trimester 3</b>	<ol style="list-style-type: none"> <li>1. Final Year Plant Design Project</li> <li>2. Sustainable Industry, Design and Manufacture</li> </ol>



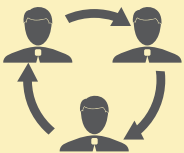
# BACHELOR OF ENGINEERING WITH HONOURS IN CHEMICAL ENGINEERING

## INTEGRATED WORK STUDY PROGRAMME (IWSP)



Students will undergo a credited, minimum 26 weeks of full-time employment at an organisation relevant to their area of study. The IWSP provides students the opportunity to apply their engineering knowledge and practice professional skills learned through the programme, at the same time gaining valuable work and first-hand industry experience.

## OVERSEAS IMMERSION PROGRAMME (OIP)



Students will undergo a three-week Overseas Immersion Programme (OIP) at the home campus in Newcastle, United Kingdom during which they will have the opportunity to participate in personal and career development workshops and other academic activities. The OIP also presents students with sufficient time to travel around the region, and participate in cultural and social events.

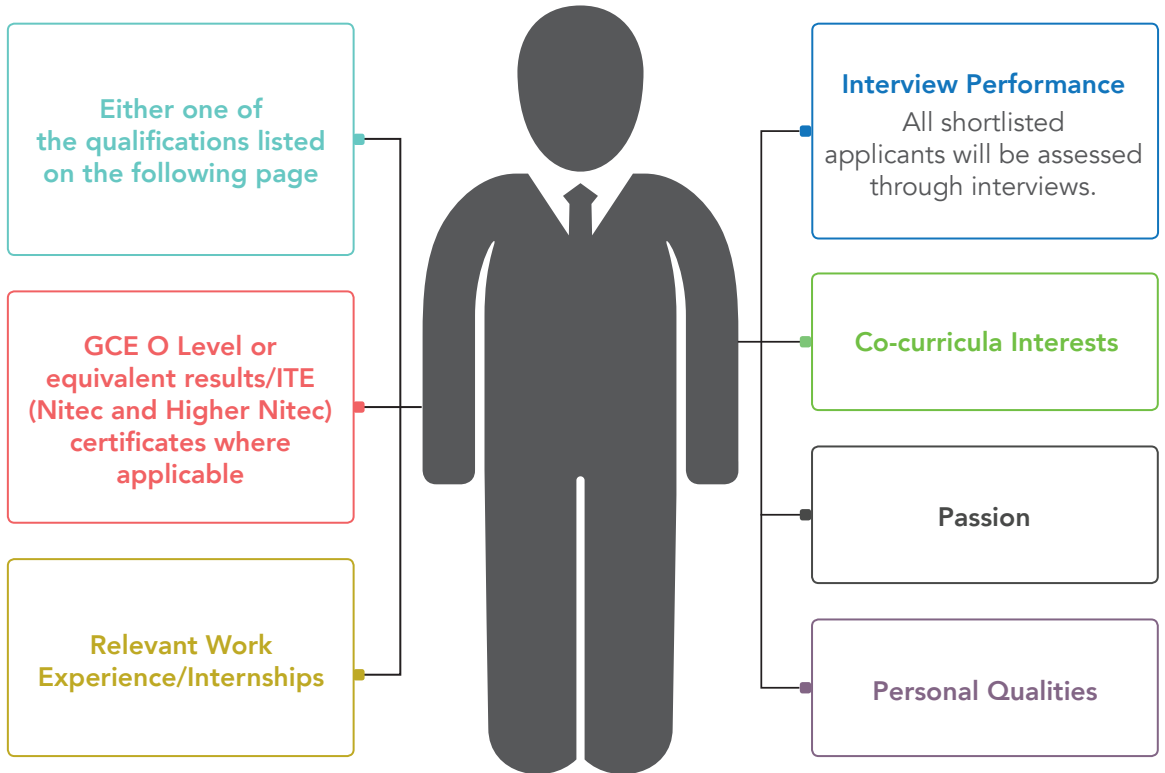
## CAREER OPPORTUNITIES



Graduates from the SIT-NU joint degree programme will be technically competent and confident to tackle modern process-engineering challenges. These range from troubleshooting and day-to-day operational problems, to the development of new, environmentally-friendly products and processes. Exciting and rewarding careers await graduates in a myriad of sectors including, but not limited to, the oil and gas, pharmaceutical, fine chemicals, polymers, food and beverages, personal care, energy, semi-conductors, environment and water sectors.

# ADMISSION REQUIREMENTS

SIT adopts a holistic approach in assessing applicants for admission by considering the following criteria:



# ADMISSION REQUIREMENTS

Qualifications	Pharmaceutical Engineering, BEng (Hons)	Food Technology, BFoodTech (Hons) (SIT-Massey Joint Degree)	Chemical Engineering, BEng (Hons) (SIT-NU Joint Degree)
<b>Full-Time Polytechnic Diploma from Singapore</b>	<p>Subject to approval, diploma applicants may be granted module exemptions, based on the modules taken during their diploma.</p> <p>Exemptions may also be considered for relevant professional or industrial certifications.</p>	<p>Subject to approval, diploma applicants may be granted module exemptions, based on the modules taken during their diploma.</p> <p>Applicants with articulated diplomas such as Food Science and Nutrition (NYP), Food Science and Technology (SP), and Applied Food Science and Nutrition (TP) may gain direct entry to Year Two of the programme.</p>	<p>Subject to approval, diploma applicants may be granted module exemptions, based on the modules taken during their diploma.</p>
<b>GCE A Level</b>	Obtain passes in at least two A/H2 Level subjects and offered General Paper (GP) or Knowledge & Inquiry (KI) in the same sitting while satisfying the Mother Tongue (MTL) requirements.		
<b>International Baccalaureate Diploma (IB)</b>	Obtain a grade five for at least two Higher Level (HL) and one Standard Level (SL) subjects and the IB Diploma while satisfying the Mother Tongue (MTL) requirements.		
<b>NUS High School Diploma</b>	Obtain the NUS High School Diploma while satisfying the Mother Tongue (MTL) requirements.		
<b>Other International Qualifications</b>	Must have completed at least 12 years of formal education deemed as acceptable, equivalent qualifications to be considered for admission.		

For up-to-date information, please refer to [SingaporeTech.edu.sg](http://SingaporeTech.edu.sg).

# OTHER PROGRAMMES OFFERED UNDER CHEMICAL ENGINEERING AND FOOD TECHNOLOGY



## ELIGIBILITY

- Polytechnic Diploma Holders
- A Level/IB Diploma/NUS High School Diploma Holders

## BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Chemical engineering and process engineering involve the conversion of basic raw materials into a wide variety of useful intermediate or end products such as fuels, cosmetics, dyes, foods and medical preparations. In addition to improving existing processes, TUM Chemical Engineering students will also learn to develop new process engineering applications in response to changes in safety and environmental protection requirements.

SIT's overseas university partners may have programme-specific admission requirements. Applicants must ensure that all additional requirements are met in order to be considered for admission.

For details of the relevant diplomas and programme-specific admission requirements, please visit: [SingaporeTech.edu.sg](http://SingaporeTech.edu.sg).

# SCHOLARSHIPS AT A GLANCE

SIT believes in creating opportunities for students to develop and achieve their goals, cultivating future leaders for Singapore's growing industries. With this vision, SIT substantially invests in its own scholarships, which aim to recognise students for their academic excellence, robust co-curricular record and strong leadership qualities. SIT scholars will contribute to the SIT community and be responsible global citizens.

Applications are open for the following SIT Scholarships:

	SIT Scholarship	SIT Mid-Term Scholarship	SIT Final-Year Scholarship
<b>Coverage</b>	<ul style="list-style-type: none"> <li>Subsidised tuition fees based on the prevailing cost of the degree programme for Singapore Citizens</li> <li>Other miscellaneous fees</li> </ul>		
<b>Degree programme</b>	All programmes	SIT-conferred degree programmes or SIT-joint degree programmes	All OU degree programmes
<b>Eligibility</b>	<ul style="list-style-type: none"> <li>SC or SPR</li> <li>Outstanding academic results</li> <li>Strong leadership qualities</li> <li>Good CCA records</li> </ul>	<ul style="list-style-type: none"> <li>SC or SPR</li> <li>Outstanding academic results</li> <li>Strong leadership qualities</li> <li>Good CCA records</li> <li>Completed 60 credits</li> </ul>	<ul style="list-style-type: none"> <li>SC or SPR</li> <li>Outstanding academic results</li> <li>Strong leadership qualities</li> <li>Good CCA records</li> <li>Entering final year of degree programme</li> </ul>

**KEY: SC = Singapore Citizen**

**SPR = Singapore Permanent Resident**

## SCHOLARSHIPS ADMINISTERED BY MOE-APPOINTED SECRETARIAT OFFICE

- Lee Kuan Yew-STEP Award
- Lee Hsien Loong Award
- University Engineering Scholarship

## EXTERNAL AND BOND-FREE SCHOLARSHIPS SUPPORTED BY DONORS

For an extensive list of external and bond-free scholarships and details on how to apply, please refer to [SingaporeTech.edu.sg](http://SingaporeTech.edu.sg).

For the most up-to-date information on our scholarships, please visit [SingaporeTech.edu.sg](http://SingaporeTech.edu.sg).



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