Chemical and Process Engineering Career Spectrum

A chemical and process engineering degree exposes you to a multitude of career options including chemical processing, process quality assurance and safety, energy management, environmental engineering, consumer goods, polymer, food and beverage manufacture, mineral processing and mining, petrochemicals, oil/gas refining and pharmaceuticals.

Chemical and Process Engineering at University of Peradeniya

University of Peradeniya is one of the two universities in Sri Lanka producing engineers specialized in Chemical and Process Engineering. Our undergraduate programme delivers chemical and processing principals along with other engineering practices, from fundamentals to application and design; enabling a graduate to function comprehensively in a professional environment. The MSc and MPhil programmes allow a candidate to specialize in Environmental Pollution Control Technologies to meet the sustainability requirements of the modern process industry.

Our Chemical and Process Engineering programmes include:

- Diploma in Environmental Pollution Control Engineering
- BSc in Engineering (Chemical and Process)
- BSc (Hons) in Engineering (Chemical and Process)
- MSc / MSc (Eng) / MPhil in Environmental Pollution Control Engineering

Specialisations

As a chemical and process engineer, you could specialize in diverse fields such as:

- **Petroleum and Polymer:** refining crude petroleum into LPG, gasoline, diesel, paraffin and other fuels, and conversion of oil and gas into plastics and synthetic rubber to produce consumer goods.
- **Bioprocess:** pharmaceuticals, food and beverage industries.
- **Chemical Process:** fertilizer industry including pesticides and herbicides, caustic soda, glass and specialty chemicals.
- **Environmental Engineering:** effluent treatment, environmental regulations, bioremediation and recycling.
- **Minerals Energy Management:** energy audits and sustainable engineering practices.
- **Mineral Processing:** major mineral processing industries such as silica, phosphate based minerals, titanium and calcium carbonate.
- **Process Control:** design and application of instrumentation and control systems facilitating manufacturing processes to run smoothly safely and efficiently.
- **Process Design:** design and construction of a process plants and optimization of existing processes.
- **Safety:** ensuring safe operating conditions in process industry.

Career Services

The Department of Chemical and Process Engineering provides students with a continuously updating curriculum and a range of career services to improve industry interactions through

- A dedicated Industrial Training and Career Guidance Unit (ITCGU)
- Industrial Training
- An annual career fair
- Residential Industry Camps
- Industrial Visits
- Guest Lectures from experts in the industry
- Industry Related workshops
- Soft skill development workshops
- Industry collaborated research
- Industry based technical electives

"A new engineering invention is always a result of comprehensive research and design. As a research engineer in Sri Lanka's largest industrial conglomerate, I participate in idea generation and research in the fields of energy generation and storage. As a chemical and process engineer, the experience gained during my undergraduate years in research and design projects serves my present career immensely and I experience the large scale utilization of chemical engineering principles learnt in classroom, in a variety of new inventions and applications.

The exposure I received during my undergraduate life through interacting with academics and industrialists, doing research and engaging in different extracurricular activities built my personality to face challenges and come up with solutions everyday."

Ovinee Wadasinghe - BSc.(Hons) in Engineering (Chemical and Process)
Research Engineer
John Keells Holdings

Sectors & Employers

Sector/Industry	Employer		
Coal/Petroleum	CEYPETCO	Ceylon Electricity Board (Coal Power Plant)	
Plastic, Polymer and Glass	Lalan Group	Pelwatte	Royal Ceramics Ltd
Food and Beverage	Asia Pacific Brewery (Lanka) Ltd	Ceylon Biscuits Ltd	Ceylon Agro Industries (Prima)
	Ceylon Cold Stores	Edna Chocolates Ceylon Limited	Hypromac
	Kotmale Dairy Products	Lanka Canneries Ltd	Maliban Biscuits Ltd
	Milco (Pvt) Ltd	Nestle (Lanka) Ltd	Pelawatte Sugar Industries
	Raigama Industries	Sevanagala Sugar Industries	Ceylon Tobacco Company
	Pelwatte Dairy Industries Ltd		
Chemical Manufacturers	CIC	Lankem Ceylon PLC	LAUGFS Salt and Chemicals Ltd
	MultiChem Industries		
Pharmaceuticals	GSK	Isolez Biotech Pharma AG	State Pharmaceutical Manufacturing Corporation
Consumer Products	Hemas Manufacturing Pvt Ltd	Unilever Sri Lanka Ltd	
Cement	Holcim Lanka Ltd		
Activated Carbon	Haycarb PLC	Jacobi Carbons Lanka (Pvt) Ltd	Bieco Link Carbons (Pvt) Ltd
Ceramics	Lanka Tiles Ltd		
Textiles	MAS Fabric Park (Private) Limited		
Beauty Products	Nature's Secret	Link Naturals	
Environmental Engineering	Puritas Ltd		
Steel	Melwire Rolling (Pvt) Ltd		
Research and Development	IFS	National Engineering R&D Centre	SLINTEC, Tea Research Institute
	National Engineering R&D Centre, Institute of Post-Harvest Technology		

Research Careers

For individuals who are passionate in advancing research skills and in joining the academia, enrolling in a post graduate degree in research is the way forward. A research degree will develop your persistence, creative thinking in problem solving and data analysis. Research careers include

- Academic positions in universities
- Research engineer positions
- Policy making and research positions in public/private sector organizations and projects

Alternative Career Pathways

A chemical and process engineering degree at University of Peradeniya provides an individual with a solid technical and design foundation combined with strong analytical, problem solving and communication skills valued across a range of industries. Some of our graduates choose alternative career pathways such as:

- Management
- Finance, economics and product marketing
- Business analysis
- Project handling
- Software Development and Insurance policy making

"As a doctoral candidate at the University of Melbourne, Australia, I am attached to the Department of Infrastructure Engineering and the Environmental Engineering Group. My research is an investigation of the impact of urbanization on nitrogen cycling in river sediments.

I believe that my undergraduate experience at the Department of Chemical and Process Engineering, University of Peradeniya, was the biggest turning point of my life where I got inspired to start my career as a researcher. Involving in researches, talking with experienced people and the knowledge gained through lectures and design projects helped me to sharpen my research skills and gain entry into an internationally accredited PhD programme. "

Priyaga Fernando – BSc.(Hons) in Engineering (Chemical and Process)
PhD Student
University of Melbourne

"As a chemical and process engineer, I believe a career in health and safety is multidisciplinary and consists of technical, administrative and management aspects. The last long sustainability of an organization does not solely depend on profit maximization, but also on the thorough attention given to all stakeholders in every aspect. Once a person starts a career in health and safety, the mindset is automatically developed to achieve production targets through safe production.

As a health and safety engineer in a world's leading cement manufacturing plant, I am exposed to key elements of industrial risks and I engage in implementing best practices to overcome such risks.

During my undergraduate life at the department, I was exposed to fundamentals concepts of safety in a chemical and process plant, which turned out to be the solid foundation of my career. "

Chinthaka Jayakody - BSc.(Hons) in Engineering (Chemical and Process)
Health and Safety Engineer
Holcim Lanka Ltd