

Department of Chemical and Process Engineering

Prospectus



Welcome to the Department

We offer a BScEng(Hons) degree programme in the field of Chemical and Process Engineering. Our graduates have the knowledge, understanding and skills required for the safe, sustainable and economical design, modification, operation, control and the effective management of small and large-scale physical, chemical and biological processing plants where the products from these plants are ranged from refined fuels, chemicals, processed food, composite and specialized materials to electronics and pharmaceuticals.

Further, graduates of the department are conversant in the knowledge and skills required for working with refrigeration and air conditioning technology, combustion and emissions technology, sustainable processing technology, energy technology and environmental pollution control technology along with the ability to use appropriate mathematical techniques, equipment, and pertinent software tools and appropriate programming languages.

Entry Requirements

Students who possess a higher GPA than the annual department cutoff GPA at the end of the general program offered to first year students of faculty of engineering are eligible to enroll in this program.

The Council of the Institution of Engineers, Sri Lanka accredits the B.Sc. Engineering Degree Programme of our department with full Washington Accord accreditation



Courses offered in the department are designed to prepare its graduates to be gainfully employed at petroleum refineries, chemical manufacturing facilities, pharmaceutical industry, food processing industry, biotechnology industry, process software development businesses, quality control and management authorities, industrial pollution control and environmental pollution abatement organizations, sustainable development initiatives and strategic development cells, and composite material using industries such as aerospace, automotive, biomedical, electronic, environmental and space industry.

Join with the legendary university ranked
in the world's top 500 universities



University of Peradeniya

 <https://eng.pdn.ac.lk/chemical/>

 <https://www.linkedin.com/in/scapes-peradeniya-bb2023147>

 <https://www.facebook.com/perachemical/>

 <https://www.youtube.com/channel/UCD1K9Wz8z-Ho1elwLVFdMsw/videos>

what you'll be studying

Following course are offered to students as core courses during our undergraduate program

1 st Year	2 nd Year	3 rd Year	4 th year
<ul style="list-style-type: none"> ▪ English I ▪ English II ▪ Computing ▪ Materials Science ▪ Engineering Mechanics ▪ Elementary Thermodynamics ▪ Engineering Measurements ▪ Fundamentals of Manufacture ▪ Engineering Drawing ▪ Calculus I ▪ Linear Algebra ▪ Basic Electrical and Electronic Engineering 	<ul style="list-style-type: none"> ▪ Chemical Engineering Fundamentals ▪ Selected Topics of Chemistry for Engineers ▪ Mechanics of Materials I ▪ Fluids Mechanics I ▪ Introduction to Electrical Engineering I ▪ Ordinary Differential Equations ▪ Probability & Statistics ▪ Separation Process Principles ▪ Chemical Reaction Engineering ▪ Materials Science I ▪ Numerical Methods for Chemical & Process Engineers ▪ Calculus II ▪ Applied Thermodynamics I 	<ul style="list-style-type: none"> ▪ Biological Process Engineering ▪ Sustainability Assessment and Eco-innovation ▪ Industrial Safety & Health ▪ Process Control Systems ▪ Applied Thermodynamics II ▪ Process Equipment Design ▪ Energy Systems Design ▪ Energy and Environmental Management in Process Industry ▪ Independent Study 	<ul style="list-style-type: none"> ▪ Process Engineering Research Project I ▪ Basics in Process Engineering Design Project ▪ Industrial Fluid Mechanics ▪ Industrial Engineering and Decision Sciences ▪ Advanced Process Engineering Design Project ▪ Process Engineering Research Project II ▪ Management Principles and Economics

Students should follow technical and general electives to cover 12 credits in each category during their third and final years of undergraduate program.

Technical Electives

- Advanced Fluid Mechanics
- Industrial Process Technology
- Industrial Pollution Control System Design
- Energy Technology for the Process Industry
- Food Process Engineering
- Nanotechnology for Chemical Engineers
- Industrial Process Control
- Polymer Science & Engineering
- Nuclear Technology for Chemical Engineers
- Modelling and Simulation of Simultaneous Transport Phenomena
- Alternative Energy Systems, Policies and Economics
- Advanced Analytical Techniques
- Sustainable Process Engineering

General Electives

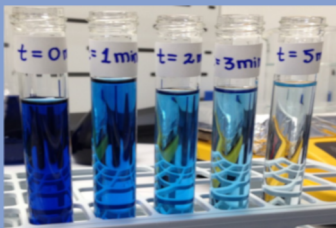
- Sustainable Development
- The Engineer in Society
- Engineer as an Entrepreneur
- Social Project
- Introduction to Music
- Painting and Sculpture
- Written English for Communication
- Effective Communication in English through Speech
- Intellectual Property
- Business Law
- Introduction to Digital Art
- Accounting and Finance for Engineers
- Business Communication
- Business Law and Intellectual Property
- Management of Technology
- Marketing for Engineers
- Economics for Engineers
- Engineer as an Entrepreneur
- Project Management
- Organizational Behaviour and Human Resources Management

Research Themes

Diverse research in the department offers solutions to engineering issues which comprise optimization, value addition, economic feasibility, sustainability, and many more.

Water Engineering

- Industrial wastewater treatment
- Textile waste water treatment
- Research on chronic kidney disease of unknown etiology
- Analysis and treatment of landfill leachate



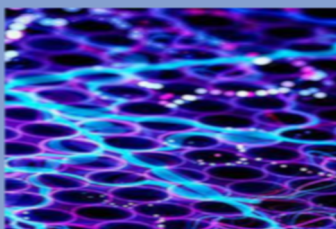
Food Process Engineering

- Sri Lankan cinnamon
- Towards virgin sesame oil
- CAD Simulation of heat and mass transfer
- Therapeutic property analysis of endemic fruits
- Bitter chocolate - Sri Lankan made



Nanocomposites

- Nanotechnology for smart agriculture
- Nanofood engineering
- Nanodielectrics for energy storage
- Nanotechnology for environmental remediation
- Crystal engineering



Material Development

- Waste material recycling
- Utilization of rice husk ash
- Quality improvement of ceramic tiles
- Synthesis of value added products from dolomite lime in Sri Lanka
- Natural fibres



Energy

- Combustion
- Gasification
- Fluidisation
- Drying of solids and solutions
- Renewable energy technologies



Environment Management Engineering

- Modelling of air pollution in Kandy city and health impact assessment
- Composting
- Solid waste management

Lab Facilities

Pilot Plant Laboratory

Analytical Chemistry Laboratory

Analytical Instruments Laboratory

Food Engineering Laboratory

Energy Engineering Laboratory

Bio-chemical Engineering Laboratory





Since 2003, my teaching experience at the department is always a pleasure. The small team of lecturers are very supportive and through a series of curriculum revisions took place throughout the years considering all our experience, teaching and learning at the department is becoming more and more exciting.

Dr. Anushka – Senior Lecturer at DCPE

Finally, I stopped at the world's best place and found the best job. Learning a lot of new things, making great friends, teaching to awesome students and challenging challenges. It is not only about Chemical and Process Engineering, but also the passion of living life....



Prof. Maheshi – Professor at DCPE



Stepping into the field of Chemical and Process Engineering made me the delightful person I imagined in my childhood. The working environment at the department paved the way to withstand challenges and explore new trends in the world.

Geshani – PhD student at University of Virginia

I felt Chemical and Process Engineering as one of the widest fields of Engineering in the world. Also the evaluation methods helped me to improve myself to express everything confidently and present myself properly.



Asanka – PhD student at University of Virginia

Choose your career

We are living in a time of unprecedented change. New career possibilities are emerging, and the ways in which we work continue to evolve. With the knowledge and skills gained from the BSc, your career opportunities are not limited to any one industry, approach or pathway.

To meet the challenges of the future workplace, employers need well-rounded people who can communicate effectively and adapt to change. They look for people who can show initiative, make good judgements, and solve problems. The degree cultivates adaptability, exploration, questioning and self-expression. It gives you distinctive opportunities to develop critical and creative thinking, written and oral communication skills, problem-solving abilities, cultural competency and empathy. Our graduates have careers in fields as diverse as:

- Coal/Petroleum
- Plastic, Polymer and Glass
- Food and Beverages
- Chemical Manufactures
- Pharmaceuticals
- Consumer products
- Cement
- Health and Safety
- Ceramics
- Textile
- Beauty products
- Environmental Engineering
- Steel
- Research and Development



Visit [Chemical and process Engineering Career spectrum](#) to know more about career pathways

Interested in further studies?

After your BSc there are many opportunities for advanced study and research. The department has been providing research supervision for higher degrees such as PGDip, MSc, MScEng, MPhil and PhD in chemical engineering and related fields. The department conducts research in computer aided design, food engineering and control in Chemical Engineering and Biochemical Engineering.

We also offer postgraduate programs in Environmental Pollution Control Engineering (EPCEng) leading to Postgraduate Diploma, MSc and MScEng in EPCEng. Further our department offers MPhils and PhDs in diverse chemical engineering branches.

Click here to read more about our post graduate programs [Postgraduate | Department of Chemical & Process Engineering \(pdn.ac.lk\)](#)

"There are no secrets to success. It is the result of preparation, hard work and learning from failure"

-Colin Powell

Our Staff



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*Great learning begins
with great teachers*

Student Life at DCPE

In our department, students are blessed with a conducive environment to nurture rich human qualities, to broaden their horizon by interacting with fellow students of all the communities while enjoying student life. We organize several events such as symposium, field visits, get-togethers, and cricket matches. Symposium is a main event of the department. This event creates a platform to share the innovative ideas of all three groups: students, academics, and the industrial experts and to demonstrate the capacity of the Department of Chemical and Process Engineering in producing highly qualified graduates. In addition, the Society of Chemical and Process Engineering Students (SCaPES) is an ideal platform for students not only to participate, but also to form an active part of the University.

