POSTGRADUATE INSTITUTE OF SCIENCE
UNIVERSITY OF PERADENIYA

Master of Industrial Chemistry Degree Programme (SLQF Level 9)

Master of Science (M.Sc.) in Industrial Chemistry Degree Programme (SLQF Level 10)

1. INTRODUCTION

Chemical industry has grown rapidly in recent decades, not only in terms of the tonnage produced, but also in the diversity of the products. These products are of vital importance in our everyday lives and it is extremely difficult to think of anything in the modern society, which does not involve chemistry at some stage of its manufacture. Clothing, food, drugs and building materials are few such examples. Ever increasing demand for these products has resulted in both expansion and diversification of chemical industry. A great majority of undergraduates leaving the universities at the end of their period of study seek employment in industry. In addition to possessing sound background knowledge in Chemistry, they should be familiar with the special aspects of Industrial Chemistry and other allied subjects, which are useful to the industrialists in the field of chemical manufacture. Although some basic concepts in Industrial Chemistry are included in undergraduate courses they do not adequately meet the needs mentioned above. The Board of Study in Chemical Sciences has regularly updated the M.Sc. programme in Industrial Chemistry introducing new courses to suit national needs.

The Masters Programme by Course Work (SLQF Level 9) will provide necessary knowledge in Industrial Chemistry through course work (theory and laboratory work), and a five-credit independent study, which prepares the student to initiate a research project. The Masters Programme with Course Work and Research (SLQF Level 10) will train the student to gain research experience through a one-year research project, in addition to the knowledge gained by completing the requirements of SLQF Level 9. Thus, both these M.Sc. programmes will prepare a student to take the challenge of meeting not only national needs in diverse areas as stated above, but also to continue towards a higher degree anywhere in the world.

2. OBJECTIVES OF THE PROGRAMME

To provide

- An adequate coverage of important aspects of Chemical Industry including Chemistry, Basic Concepts of Chemical Engineering, Chemical Technology and Industrial Economics.
- The necessary practical training in areas relevant to Chemical Industry.
- effective presentation and communication skills.

3. PROGRAMME ELIGIBILITY

Applicants seeking admission to this programme must have one of the following degrees/qualifications from a recognized university.

(i) B. Sc. (Special) Degree in Chemistry or a B. Sc. Special/General Degree with Chemistry as a subject.
(ii) B. Sc. Degree in Chemical Engineering.
(iii) Any other qualification accepted to be equivalent to any of the above by the Postgraduate Institute of Science, University of Peradeniya.

Candidates who meet eligibility requirements shall be required to sit a selection examination where their knowledge of Chemistry, Mathematics and English will be examined. Successful candidates will be called for an interview at which the final selection for admission shall be made. The final decision on eligibility for admission to the Diploma and M.Sc. degree programmes will be determined by the Board of Study in Chemical Sciences of the PGIS.

4. PROGRAMME FEE

Category	Programme Fee	
	Master of Industrial Chemistry degree programme	M.Sc. in Industrial Chemistry degree programme
Local candidates	Rs 300,000/-	Rs 600,000/-
Foreign Candidates	Rs 400,000/-	Rs 800,000/-

Students registered for the Master of Industrial Chemistry degree programme shall pay the Programme fee in full or in two or in three installments. An additional payment of Rs. 100,000/- (or Rs 200,000/- from foreign students) should be made at the end of the first year to continue for the M.Sc. in Industrial Chemistry degree programme. Other payments including registration fee, medical fee, library subscription, examination fee and deposits (science and library) should be paid according to the procedure stipulated by the PGIS. (N.B. The Programme fees given above may be revised as per recommendation of the Board of Management of the PGIS.)

5. THE PROGRAMME STRUCTURE AND DURATION

This programme consists of three options for completion.

5.1 Masters Degree by Course Work (SLQF Level 9)

The Master of Industrial Chemistry degree can be obtained by completing course work only (without conducting any research project).

Course work, comprising of theory courses, and laboratory and/or fieldwork, shall be conducted over a period of two semesters of 15 weeks each. The total duration of the degree, including examinations, shall be about 12 months. Satisfactory completion of a minimum of 30 credits of course work with a GPA of not less than 3.00 is required for the successful completion of the degree - SLQF Level 9 (Students who do not satisfy the above criteria but obtain a GPA in the range 2.75 to 2.99 for course work of 25 credits are eligible for the Postgraduate Diploma in Industrial Chemistry - SLQF Level 8, and those who obtain a GPA in the range 2.75 to 2.99 for course work of 20 credits are eligible for Postgraduate Certificate - SLQF Level 7).

5.2 Masters Degree (SLQF Level 10)

In addition to Masters Degree with course work (5.1), the Masters Degree (Research) requires a research project. The duration of the entire programme shall be 24 months inclusive of 5.1. Completion of all the requirements of 5.1 with a GPA of not less than 3.00 is a prerequisite for the Masters Degree by course work and Research. The research project for this degree should be conducted on full-time basis, and completed during the second year. The research component is allocated 30 credits, totalling 60 credits for the entire programme. After successful completion of the research project, the student shall be eligible for the award of the M.Sc. in Industrial Chemistry degree - SLQF Level 10 (Students who do not complete the research project within the stipulated time period shall be awarded the Master of Industrial Chemistry degree - SLQF Level 9).

5.3 Extension of the programme for M.Phil. (SLQF Level 11) or Ph.D. (SLQF Level 12)

After conducting research for a period of six months in the M.Sc. degree (research) programme under 5.2, students who have demonstrated exceptional progress may apply for upgrading the degree status to M.Phil. The student should continue the research project and any additional research work/assignments recommended by the PGIS for a total of two years (60 credits of research) to qualify for the award of the M.Phil. degree (SLQF Level 11).

During the second year of research, students who have demonstrated exceptional and continuous progress may apply for upgrading the degree status from M.Phil. to Ph.D. The student should continue the research project and any additional research work/assignments recommended by the PGIS for another year on full-time basis (additional 30 credits to complete 90 credits of research total) to qualify for the award of the Ph.D. degree (SLQF Level 12).

Master of Industrial Chemistry Degree Programme (SLQF Level 9)
Master of Science (M.Sc.) in Industrial Chemistry Degree Programme (SLQF Level 10)

Programme Summary

Course Code	Course	Lecture hrs.	Practical hrs.	No. Of Credits
Semester I				
CH 529	General Analytical Chemistry	30	-	2
CH 530	Analytical Spectroscopy	45	-	3
CH 531	Chemical Engineering [1]	15	-	1
CH 532	General Chemistry [2]	15	-	1
CH 533	Catalysis and surface analysis	30	-	2
CH 534	Heat Exchangers, Unit operations in Chemical Engineering	45	-	3
CH 541	Pilot Plant Study(laboratory course I) [1]	-	30	1
CH 545	Environmental Management Systems	15	-	1
Semester II				
CH 546	Environmental Pollution Control	30	-	2
CH 547	Materials Science, R & D, New Product Development and Industrial Economics, Estimation of Physical Properties	45	-	3
CH 548	Quality Control	15	-	1
CH 549	Energy Management	15		1
CH 550	Industrial Hazards and Safety	15	-	1
CH 552	Optional Topics (3 courses 15 hrs each)*	45	-	3
CH 556	Physical Chemistry Practicals [2]	-	30	1
CH 596	Research Methodology and Scientific Writing	15	-	1
PHN 516	Applications of Nano materials in Local Industries *	30		2
CH 599	Independent Study II	500 notional hours.		5
CH 699	Research Project (one year) **	3000 notional hours.		30

[1] *Only for those who have no Engineering background*

[2] *Only for those who have no Chemistry background*

**Optional course - Students are required to obtain 3 credits from among CH 552 and PHN 516*

*** Compulsory for M.Sc. in Industrial Chemistry (SLQF 10)*

6. PROGRAMME CONTENTS for CH 599 and CH 699

Course code	CH 599
Course title	Independent Study
Credits	05
Compulsory/optional	Compulsory

Prerequisites	CH 501, which can be taken concurrently
Time allocation	500 notional hours
Aims	Aims: The overall aim is to familiarize the student with concepts and methods involved in scientific research **Specific aims:** 1. To explain the scientific process in the conduct of research. 2. To develop skills to write a review paper and a scientific research proposal. 3. To develop skills to make a presentation. 4. To master the application of statistical methods on quantitative scientific data.
Intended learning outcomes	At the end of the successful completion of the course, students will be able to, 1. Effectively use the scientific method to create new knowledge. 2. Conduct an independent review of literature on a selected topic in the area of Industrial Chemistry. 3. Write a formal scientific report conforming to the guidelines provided. 4. Transfer the knowledge gained through (2) and (3) above in the form of a presentation. 5. Complete a research proposal conforming to the guidelines provided. 6. Perform statistical analysis of quantitative data.
Content	*Review paper*: Review of literature; Development of the review paper in concise and professional manner and logical presentation of results that have been reported, writing the abstract, compilation of the list of references. *Proposal writing*: Interpretation and critical evaluation of results of published research; Formulation of a research problem: Concise literature review, justification, time frame, identification of resources, budgeting, etc. *Project*: Collection and statistical analysis of data on a topic associated with the review paper. *Seminar*: Presentation of literature and data collected on a given topic; Preparation of an abstract, preparation of slides.

Assessment criteria: Continuous Assessment

Component	Review paper	Proposal writing	Project	Seminar
% marks	20	10	40	30

Recommended Texts:

1. Backwell, J., Martin, J. (2011) A Scientific Approach to Scientific Writing, Springer.
2. Postgraduate Institute of Science (2016) Guidelines for Writing M.Sc. Project Report/M.Phil. Thesis/Ph.D. Thesis
3. Priyantha, N (2015) Measurements and Errors in Chemical Analysis, Science Education Unit, University of Peradeniya.

Course code	CH 699
Course title	Research Project
Credits	30
Compulsory/optional	Compulsory
Prerequisites	CH 599; GPA of 3.00 at M.Sc.(Course work)
Time allocation	one year (3000 notional hours)
Aims	Aims: The overall aim is to prepare the student to conduct a research independently. **Specific aims:** 1. To train students to apply scientific method in scientific research. 2. To train students to generate researchable hypotheses. 3. To train students to plan, design and conduct scientific research. 4. To gather reliable scientific data, analyse, and interpret. 5. To develop skills in scientific writing.
Intended learning outcomes	At the end of the successful completion of the course, students will be able to, 1. Apply the scientific method. 2. Design a research project. 3. Complete a research project. 4. Describe ethical issues in scientific research. 5. Explain the patenting process in research (. 6. Make presentations at national/international conferences. 7. Produce a thesis conforming to the requirements of the PGIS. 8. Write manuscripts for publication in refereed journals.
Content	The students will conduct sufficient amount of laboratory/field work on a chosen research topic under the guidance provided by an assigned supervisor/s, make a presentation of research findings at a national/international conference, and produce a thesis.

Assessment criteria:

Component	% marks
Research Progress Review	30
Oral Examination	20
Thesis	40
Conference Presentation	10

Recommended Texts:

1. Backwell, J., Martin, J. (2011) A Scientific Approach to Scientific Writing, Springer.
2. Postgraduate Institute of Science (2016) Guidelines for Writing M.Sc. Project Report/M.Phil. Thesis/Ph.D. Thesis
3. Priyantha, N. (2015) Measurements and Errors in Chemical Analysis, Science Education Unit, University of Peradeniya.

Note: The format of the Thesis is available in the PGIS website

Contents of Other Courses

CH 529: General Analytical Chemistry (2 credit, 30 hrs)
Statistics and chemometry: statistical calculations; confidence limits; tests of significance; methods ofanalysis; correlation coefficient; propagation of error; Sampling methods: representative samples, automation of sampling, and sample treatment; experimental design; quality control and assurance, interlaboratory testing; Fourier transformation methods in data analysis (15 h)
Method of analysis: working curve, standard addition and internal standard methods; volumetric and gravimetric methods; quantitative aspects of colorimetry; theory of different types of titrations: acid-base, precipitation, redox, complexometric, nonaqueous, etc.; use of analytical and quality control methods in industry. (20 h)

CH 530: Analytical Spectroscopy (3 credits, 45 hrs)
A broad treatment of the interaction of electromagnetic radiation with matter, emphasizing atomic, molecular, rotational, vibrational and electronic spectra and selection rules. Atomic absorption, emission & fluorescence spectroscopy: Principles of atomic spectroscopy; instrumentation of flame and electro-thermal atomization; atomic emission based on plasma, arc and spark atomization, and their analytical applications. (10 h)
Molecular spectroscopy: ultraviolet and visible spectroscopy; fluorescence, phosphorescence, and chemiluminescence spectroscopy; vibrational (IR and Raman) spectroscopy; analytical applications. (10 h)
X-ray methods: Principles of x-ray powder/single crystal diffraction (XRD).
Reciprocal lattice constructions, and the rotating crystal method. JCPDS and other database and their applications; Principles of X ray fluorescence spectroscopy (XRF), wave dispersive and energy dispersive x-ray fluorescence spectroscopy, treatment of matrix effects and quantitative methods of XRF analysis. (10 h)
Electron-matter interactions: scanning electron microscopy (SEM), magnetic electron lenses, electron optical systems, sample preparation, thin foil techniques, and photography. Electron probe microanalyzer; introduction to next generation x-ray analytical methods. (5 h)
Nuclear magnetic resonance (NMR) spectroscopy and mass spectroscopy in chemical analysis. (10 h)

CH 531: Chemical Engineering (1 credit, 15 hrs)
(Only for those who have no Engineering background)
Selected topics in Chemical Engineering, Flow sheet analysis, transport phenomena (mass transfer, fluid flow and heat transfer).

CH 532: General Chemistry (1 credit, 15 hrs)
(Only for those who have no Chemistry background)
Introduction to General Chemistry, Calculations involving chemical formulae and equations, stoichiometry, states of matter, kinetic molecular theory, thermochemistry, reactions in aqueous solutions, phase equilibria, chemical kinetics and chemical equilibria.

CH 533: Catalysis and surface analysis (2 credits, 30 hrs)
Principles of homogeneous and heterogeneous catalysis, parameters important in determining catalytic activity, industrially important catalytic processes, modern techniques for characterizing catalysts (5 hrs).
Design of homogeneous and heterogeneous catalytic reaction systems, flow reactors and continuous stirred tank reactors (10 hrs)
Surface Analysis Theory, instrumentation and applications of modern surface spectroscopic techniques such as X-ray photoelectrion spectroscopy (XPS), Ultraviolet Photoelectron Spectroscopy

(UPS), Auger Electron Spectroscopy (AES), Low-energy Electron Diffraction (LEED), Electron Energy Loss Spectroscopy (EELS) Employment of GC for monitoring of catalytic reactions. Surface characterization methods for the catalysis.(15 h)

CH 534: Heat Exchangers, Unit Operations in Chemical Engineering (3 credits, 45 hrs)
Boilers, Energy and energy conservation, Concept of unit operations, Heat and mass balances, distillation, extraction, drying, crushing, grinding, absorption, cooling, evaporation, boiling and condensation and equipment theory.

CH 541: Pilot Plant Studies (Laboratory Course I) (1 credit, 30 hrs)
(Only for those who have no Engineering background)
Bubble cap tray, Cooling tower, Winklemann's experiment, Vapour-liquid equilibria, Absorption column, Distillation column, Filter press, Drying experiment, Evaporator

CH 545: Environmental Management Systems (1 credit, 15 hrs)
(Same as the second unit of CH 518)
Cleaner Production: introduction, advantages, waste audit procedure, pre-assessment, material balance, synthesis, economic evaluation of alternatives, waste audit, process data, environmental data, financial data, searching for cleaner production options, waste reduction options and action plan, databases, selected examples, life cycle assessment, calculations for actual examples.
Environmental management and sustainable development: Standards, trade and the environment, purpose of environmental management, ISO 140001 in organizations, environmental code, laws and ethics.

CH 546: Environmental Pollution Control (2 credits, 30 hrs)
*Noise pollution (3hrs):*Sources, measurement, regulations and control.
*Air pollution (9 hrs):*Types of air pollutants and there sources, measurements, regulations
Control techniques such as gravity settlers, cyclone separators, scrubbers, incinerators, filters.
*Water pollution (9 hrs):*Types and sources of water pollutants, Measurement and control techniques.
*Solid and hazardous waste (9 hrs):*Types, sources, minimization of generation, storage, handling and transportation, regulations.

CH 547: Material Science R& D, New Product Development and Industrial Economics, Estimation of Physical Properties (3 credits, 45 hrs)
Material Science: Classification and properties of solids, preparation and reactions of solid materials, characterization techniques, chemistry of semiconductors and superconductors, corrosion and protection of solid materials, electrical and optical properties of materials, mining and metallurgy. (1 credit, 15 hrs)
R & D, New Product Development and Industrial Economics:
Industrial research and development, organization, chemical intermediates, patents, technology licensing, project selection, new product development, new products, elements of cost, materialism energy and labour, variable and fixed costs, overheads, marginal costs, contribution, profitability, process integration, capital cost estimation, dependence on process and scale of operation, contracts, pricing of new products, measurement of performance, value added, assts, cash flow, project evaluation, payback time, sensitivity and risk analysis, standards of profitability, dealing with inflation. (1.4 credits, 21 hrs)
Estimation of Physical Properties: Estimation of physical properties of compounds – Density, viscosity, thermal conductivity, specific heat capacities, latent heat, vapour pressure, diffusion coefficient, surface tension, critical constants and phase equilibrium data. (0.6 credit, 9hrs)

CH 548: Quality Control (1 credit, 15 hrs)
Basic concepts of quality and quality control; Relationship between quality and productivity, costs and value; Quality control and process management; Introduction to statistical quality control; The basics of Total Quality Management
.

CH 549: Energy Management (1 credit, 15 hrs)
Renewable and non-renewable sources of energy in industry (1 hr); Conservation of energy and waste heat recovery (3 hr); Energy planning and management (5 hr); Principles of energy auditing with practical examples (6 hr)
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CH 550: Industrial hazards and safety (1 credit, 15 hrs)
General hazards in the industry, methods for minimizing risk, safety in chemical process, plant design and operation, chemical safety in R & D, employee responsibility, identification and assessment of hazards.
CH 552: Selected Topics in Industrial Chemistry (3 credits, 45 hrs, each course 15 hrs)
Three courses from the following topics have to be taken. Only 5 of these topics will be offered in any one year. Topics available will be announced at the start of the programme.
1.Ceramic Industry
2.Crop Processing Technology
3.Fermentation Technology
4.Food Technology
5.Paint and Varnish Industry
6.Paper and Wood Technology
7.Petrochemical Industry
8.Pharmaceutical and cosmetic Industry
9.Polymer Industry
10.Textile Industry
11.Leather Industry
12.Laboratory Management
13.Coconut Industry
14.Tea Industry
15.Rubber Industry

CH 556: Physical Chemistry Practicals (Laboratory Course II) (1 credit, 30 hrs)
Only for those who have no Chemistry background
Kinetics of homogenous and heterogeneous reactions, Sorption of gases at catalyst surfaces, separation techniques, water quality measurements, electroplating.

CH 596: Research Methodology and Scientific Writing (1 credit, 15 h)
The nature and concepts of research, types of research and tools of research, research design and conceptualization, operationalization measurement and causality, survey research and data collection techniques, strategies for data analysis and their applications, scientific writing and writing research reports/thesis, preparation of bibiliography, information gathering through internet and use of electronic resources.

CH 597: Seminar (1 credit)
Each student is required to conduct an independent study on a topic in Industrial Chemistry assigned to him/her, submit a report and make an oral presentation.

PHN 516: Applications of Nano materials in Local Industries
Applications of nanoscience and nanotechnology in Sri Lankan industries: Garment industry: Smart textiles with antimicrobial properties, stain-resistant properties, mosquito-repellent properties, nanosensors to detect body temperature, pressure, pulse rate, and so on. Rubber industry: Clay-rubber nanocomposites, carbon nanotube-rubber nanocomposites. Activated carbon industry: Applications of activated carbon nanostructures in supercapacitors, gas separation, catalysis. Local minerals for advanced industries: Graphite, ilmenite, quartz, mica, rutile, zircon, feldspars, gems etc. Electronics industry: Solar cells, electronic components, light-emitting diodes, liquid-crystal display devices, electronically conducting polymers, ionically conducting polymers, batteries, fuel cells.

7. PROGRAMME EVALUATION

Evaluation of course work is done as per guidelines stipulated in the PGIS Handbook. Scheme of evaluation of the five-credit independent study (CH 599) and the Research Project (CH 699) is given in Section 6 above.

8. PANEL OF TEACHERS

	Name, qualifications and affiliation	Area of Specialization
1.	Dr. Abeyratne, S.G. B.Sc. Eng. (*Perad.*), M.Sc. (*Gifu, Japan*), Ph.D. (*Gifu, Japan*) Dept of Electrical & Electronic Engineering, University of Peradeniya.	Electrical & Electronic Engineering
2.	Prof. Bandara, B.M.R. B.Sc. (Perad.), Ph.D. (*Australian National University*) Dept of Chemistry, Faculty of Science, University of Peradeniya.	Organic Chemistry
3.	Prof. Bandara, H.M.N. B.Sc. (*Perad.*), Ph.D. (*Aston*) Dept of Chemistry, Faculty of Science ,University of Peradeniya.	Inorganic Chemistry & Instrumentation
4.	Dr. Bandara, W.M.A.T. B.Sc. (*Perad.*), Ph.D. (*TIT*) Dept of Chemistry, Faculty of Science, University of Peradeniya.	Surface Science & Spectroscopy
5.	Prof. Chandrajith, R.C.L. B.Sc. (*Perad.)*, M.Sc. (*Shimane, Japan*), Ph.D. (*Erlangen, Germany*) Dept of Geology, Faculty of Science, University of Peradeniya.	Geochemistry
6.	Dr. Daundasekera, W.B. B.Sc. (*Perad.*), M.Sc. (*Alabama*), Ph.D. (*Alabama*) Dept of Mathematics, Faculty of Science, University of Peradeniya.	Mathematics
7.	Prof. Dissananyake, M.A.K.L. Visiting Professor, Institute of Fundamental Studies, Kandy	Solid State Physics
8.	Mr. Ekanayake, S. B.Sc. (*Perad.*), M.Sc. (*Mysore*) Food Scientist, Food Research Division, Department of Agriculture, University of Peradeniya.	Agriculture(Food Science)
9.	Dr. Gunathilake, S. S. B.Sc. (*Perad.*), Ph.D. (Dallas). Dept of Chemistry, Faculty of Science, University of Peradeniya.	Polymer Chemistry
10.	Dr. Hemachandra, S.D.S. B.Sc. (Perad), M.Sc. (*Perad*), M.A. (*Hawaii*), PhD. (*Hawaii*)	Agriculture Economics

	Dept of Agricultural Economics and Business Management, Faculty of Agriculture, University of Peradeniya.	
11.	Dr. Hettiarachchi, C.V. B.Sc. (*Perad.*), Ph.D. (*TIT*). Dept of Chemistry, Faculty of Science, University of Peradeniya.	Crystallography
12.	Prof. lleperuma, O.A. B.Sc. (*Cey.*), Ph.D. (*Arizona*) Dept of Chemistry, Faculty of Science, University of Peradeniya.	Inorganic Chemistry
13.	Dr. Jayasundera, A. C. A. B.Sc. (*USJP*), Ph.D. (*St Andrews, UK*). Dept. of Chemistry, Faculty of Science, University of Peradeniya.	Solid State Chemistry & Environmental Chemistry
14	Dr. Jayasundara, K. B. B.Sc. (*Perad.*), Ph.D. (Purdue). Dept of Chemistry, Faculty of Science, University of Peradeniya.	Analytical Chemistry & Chromatography
15.	Dr. Kalpage, C.S. B.Sc. Eng. (*Moratuwa*), Ph.D. (*Birmingham*) Dept. of Chemical and Process Engineering, Faculty of Engineering, University of Peradeniya.	Chemical and Process Engineering
16.	Prof. Karunaratne, B.S.B. B.Sc (*Cey.*), Ph.D. (*Warwick*). Dept of Physics, Faculty of Science, University of Peradeniya.	Physics
17.	Dr. Karunaratne, D.G.G.P. B.Sc. Eng. (*Perad*), Ph.D. (*Lisbon*) Dept. of Chemical and Process Engineering, Faculty of Engineering, University of Peradeniya.	Chemical and Process Engineering
18.	Prof. Karunaratne, D.N. B.Sc. (*Colombo*), Ph.D. (*Brit. Columbia*). Dept of Chemistry, Faculty of Science, University of Peradeniya.	Organic Chemistry and bio chemistry
19.	Dr. Kumara, J.R.S. B.Sc. Eng. (*Perad.*), M.Phil. (*Perad.*), Ph.D. (*Chalmers*) Dept of Electrical & Electronic Engineering, Faculty of Engineering, University of Peradeniya.	Electrical and Electronic Engineering
20.	Dr. Manipura, A. B.Sc. Eng. (*Perad*), MEng. (*Moratuwa*), Ph.D. (*Rhodes*) Dept. of Chemical and Process Engineering, Faculty of Engineering, University of Peradeniya.	Chemical and Process Engineering
21.	Dr. Menike, J.M.S.J. B.Sc. (*Perad*), PhD (Kansas) Dept of Chemistry, Faculty of Science, University of Peradeniya.	Organic Chemistry
22.	Prof. Priyantha, H.M.D. N. B.Sc. (*Perad*), Ph.D. (*Hawaii*). Dept of Chemistry, Faculty of Science, University of Peradeniya,	Electrochemistry & Analytical Chemistry
23.	Prof. Rajapakse, R.M.G. B.Sc. (*Perad*), Ph.D. (*London*) Dept of Chemistry, Faculty of Science, University of Peradeniya. *Field of specialization: Physical Chemistry*	~~:~~Physical Chemistry
24	Dr. Ranatunga, R. J. K. U. B.Sc. (*Perad.*), Ph.D. (Dallas). Dept of Chemistry, Faculty of Science, University of Peradeniya.	Computational Chemistry
25.	Mr. Wickramasinghe, W.RM.U. B.Sc. Eng. (*Perad.*), MIE., C. Eng. Industrial Training and Carrier Guidance Unit, Faculty of Engineering, University of Peradeniya	Chemical and Process Engineering

26.	Prof. Weerahewa, J. B.Sc. (*Perad*), M.Sc.(*Perad*), Ph.D. (*Guelph, Canada*) Dept of Agricultural Economics and Business Management, Faculty of Agriculture, University of Peradeniya.	Agriculture Economics
27.	Prof. Weerasooriya, S.V.R., B.Sc. (*Perad.*), Ph.D. (*Perad.*) Dept. of Soil Science, Faculty of Agriculture, University of Peradeniya.	Geochemistry
28.	Dr. Udugala-Ganehenege, M. Y. B.Sc. (*Perad.*), Ph.D. (*WSU, USA*) Dept of Chemistry, Faculty of Science, University of Peradeniya.	Inorganic Chemistry

9. PROGRAMME COORDINATORS

Dr. Maheshi Danthurebandara
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