

## APPENDIX D

# POSTGRADUATE INSTITUTE OF SCIENCE UNIVERSITY OF PERADENIYA



## M.Sc. Programme in Industrial Mathematics 2009/2010

### 1. INTRODUCTION

Industrial Mathematics deals with developing mathematical models, finding solutions and interpreting the results of problems that come up in industry. The main objectives of this programme are to provide graduates with an adequate knowledge in Mathematics, Statistics, Operations Research and Scientific Computing, and to provide opportunities for research in applications of Mathematics to existing problems in industry. Although programmes of this nature are well-established in developed countries, it is not so in developing countries like Sri Lanka. Such programs are essential to narrow the gap that exists between scientists in industry and mathematicians.

### 2. PROGRAMME ELIGIBILITY

The minimum requirement for enrolment is

(a) a B.Sc. Special Degree in Mathematics or a B.Sc. Special/General degree with Mathematics as a subject

or

(b) any other equivalent qualifications acceptable to the Postgraduate Institute of Science (PGIS)

Candidates should be proficient in English as English will be the medium of instruction for the programme.

### 3. PROGRAMME FEE

	M.Sc. programme fee
local candidates	Rs. 60,000/=
SAARC countries	US \$ 2000/=
other countries	US \$ 4000/=

Programme fees shall be paid in two instalments (50% *at the registration and the balance 50% within six months from registration*). 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. Candidate will have to pay an additional fee of Rs. 2500/= for the preliminary courses.

#### 4. THE PROGRAMME STRUCTURE AND DURATION

This is a full-time programme consisting of course work and a research project. Course work will be conducted over a period of two semesters of 15 weeks, each which will involve about 12 months. The entire programme duration will be about 15 - 18 months inclusive of further 3 - 6 months for the research project. Satisfactory completion of a minimum of 24 credits of course work is required for the programme in addition to the six credits allocated for the full-time research project. Continuous attendance is compulsory during the period of research work.

##### Programme Summary

Course Code	Course	Lecture hrs.	Practical hrs.	No. of Credits
<b>Preliminary Courses*<sup>1</sup></b>				
MT 401	Preliminaries in Mathematics	30	-	-
MT 402	Statistics	30	-	-
MT 403	Computer Applications	-	30	-
<b>Semester I</b>				
MT 501	Differential Equations	45	-	3
MT 502	Statistical Quality Control	30	-	2
MT 503	Numerical Analysis	45	-	3
MT 504	Stochastic Process and Applications*	30	-	2
MT 505	Operations Research	45	-	3
<b>Semester II</b>				
MT 516	Control Theory*	45	-	3
MT 517	Topics in Computer Science	45	-	3
MT 518	Optimization Theory*	30	-	2
MT 519	Special Topics in Industrial Mathematics*	30	-	2
MT 520	Theoretical Fluid Mechanics*	45	-	3
MT 597	Seminar	-	-	1
MT 599	Research Project	(3 - 6 months)		6

\*<sup>1</sup> *Compulsory for those without sufficient background knowledge.*

\* *Optional courses. Students are required to obtain 9 credits from optional courses.*

#### 5. PROGRAMME CONTENTS

##### MT 401: Preliminaries in Mathematics

Linear Algebra: Orthogonal and orthonormal sets, orthogonal projection, Linear functionals, Adjoint, Unitary and normal operators, Hermitian forms, Spectral theorem.

Analysis: Complete metric spaces, Compactness, Fixed point theorems, Banach spaces, Hilbert spaces.

##### MT 402: Statistics

Variability in observations. Parameters and statistics. Measures of location and spread. Frequency distributions, Histogram, Stem and Leaf plots. Discrete data: Probability structure and cumulative distributions. Continuous data: Distribution functions, Family of Normal distributions. Simple linear regression and correlation. Probability: Properties, Conditional probability, Independence. Discrete random variables: Probability mass functions and cumulative distributions. Some common discrete distributions, Bayes' Rule. Expectations and Central Limit Theorem. Sampling from the Normal distribution. Point and interval estimation. Test of hypotheses: Simple and composite hypothesis. Tests on means and variances.

**MT 403: Computer Applications**

Introduction to computers, Windows and Disk operating system and commands. Microsoft applications. Computer software applications depending on the requirements of the programme.

**MT 501: Differential Equations (3 credits)**

Ordinary differential equations: Existence and Uniqueness of solutions, Continuation of solutions, Linear and Non-linear systems of differential equations, Asymptotic behaviour, Limit cycles, Perturbation theorems, Stability and Control.

Partial differential equations: Envelopes, Characteristic strips, Legendre transformation, Complete integral and Eikonal function, Hamilton Jacobi equation, Finite - Element method, Pontryagin's minimum principle, Discontinuous solutions, Weak solutions, Burger's equation, Fourier series on the Quotient-group  $R / 2\pi Z$ , Series expansions and Fast Fourier transforms.

**MT 502: Statistical Quality Control (2 credits)**

Control charts for attributes, Control charts for variables, Single sampling planes for attributes, Acceptance sampling by variables.

**MT 503: Numerical Analysis (3 credits)**

Solution of system of linear equations, roots of non-linear algebraic and transcendental equations, System of non-linear equations, Polynomial interpolations, Numerical Integration (Quadrature), Gaussian quadrature, Solution of ordinary differential equations, Solution of partial differential equations, Parabolic equations, Elliptic equations, Hyperbolic equations.

**MT 504: Stochastic Process & Applications (2 credits)**

Recurrent events, Random walks, Markov chains, Transition probabilities, Limiting distributions, Discrete branching process, Markov processes in continuous time, poisson processes, Birth and death processes, Queuing theory, Epidemic processes, Competition and perdition.

**MT 505: Operations Research (3 credits)**

Convex analysis, Linear programming, Graph theory and Network optimization, Queuing theory, Dynamic programming, Integer programming.

**MT 516: Control Theory (3 credits)**

Linear Feedback control systems: Input-Output approach, Block diagrams and signal flow graphs, State space approach, Digital control systems: Digital systems, Sampling of continuous-time signals, Analysis of discrete-time systems, Digital PID controllers, digital polynomial controllers and state space, Introduction to advance digital controllers.

**MT 517: Topics in Computer Science (3 credits)**

Structured programming techniques, Data base management systems, System development strategies, Information processing systems, Intelligent systems.

**MT 518: Optimization Theory (2 credits)**

Kuhn-Tucker theory and nonlinear programming, Geometric programming, Direct search and gradient method; One-dimensional search, Multi-dimensional search.

**MT 519: Special Topics in Industrial Mathematics (2 credits)**

Topics selected will be based on the availability of resource persons.

**MT 520: Fluid Mechanics (3 credits)**

Viscous Fluid: Navier-Stokes equations, High Reynolds number flow, Low Reynolds number flow, Non-viscous Flow: Free streamline theory in discontinuous motions, Jets and currents in 2-D, Stokes stream function in 3-D, Axi-symmetric flows, Compressible Flow: Vortex motion in 2-D irrotational flow.

**MT 599: Research Project (6 credits)**

Each candidate is required to carryout a literature survey based on his/her research project and write a review article to be presented in a seminar at the end of the second semester. The candidate will carry out a research project that requires a fair amount of Industrial Mathematics. At the end of the research project the results of the research project should be presented at a seminar and submitted in the form of a dissertation on or before the deadline set by the PGIS.

## **6. PROGRAMME EVALUATION**

Programme evaluation will be as stipulated in the PGIS Handbook 2002.

## **7. TEACHING PANEL**

- Dr. W.B. Daundasekera, Dept. of Mathematics, Faculty of Science, Univ. of Peradeniya *B.Sc.(Perad.), M.A.(Alabama), Ph.D.(Alabama)*
- Prof. U.N.B. Dissanayake, Dept. of Mathematics, Faculty of Science, Univ. of Peradeniya *B.Sc.(Cey.), Ph.D.(Alberta)*
- Dr.H.M. Nasir, Dept. of Mathematics, Faculty of Science, Univ. of Peradeniya *B.Sc.(Jaffna), M.Eng. D.Sc.(Japan)*
- Dr. A.A.I. Perera, Dept. of Mathematics, Faculty of Science, Univ. of Peradeniya *B.Sc.(Perad.), M.Sc.(Oslo), Ph.D.(Melbourne)*
- Dr.A.A.S. Perera, Dept. of Mathematics, Faculty of Science, Univ. of Peradeniya *B.Sc.(Perad.), Ph.D.(SUNY/Albany)*
- Prof. S.B. Siyambalapitiya, Dept. of Eng. Mathematics, Faculty of Engineering, Univ. of Peradeniya *B.Sc.(Cey.), M.Sc.,Ph.D.(NSW)*
- Mr.D.J.C. Suriyaarachchi, Dept. of Computer Science & Statistics, Faculty of Science, Univ. of Kelaniya *B.Sc.(Cey.), M.Sc.(Manchester)*
- Dr. L. Samaranayake, Dept. of Electrical & Electronic Engineering, Faculty of Engineering, Univ. of Peradeniya, *B.Sc.Eng.(Perad.),Tek.Lic. (Sweden), Ph.D. (Sweden)*

## **PROGRAMME COORDINATOR**

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**POSTGRADUATE INSTITUTE OF SCIENCE**  
**UNIVERSITY OF PERADENIYA**



# **M.Sc. in Science Education**

## **2009/2010**

### **1. INTRODUCTION**

The postgraduate programme of study in Science Education seeks to provide an opportunity to students to achieve a perspective of science and science education. An understanding and a suitable adaptation to the future which is becoming more and more complex daily is what science education must strive at. The advancements in science and technology have changed the life style patterns of humans and, the nature of society. Science has come to be viewed as an aspect of human culture and, hence as an essential component in the school curriculum. Science plays a significant role in all human activities and therefore knowledge and the ability of its application would lead to greater effectiveness and fulfillment in our personal and social lives. Science educators should be competent to guide themselves, their colleagues and, above all their students to cope with the rapidly changing world. This programme will take into consideration the nature of the learner, the processes of learning and teaching and, the characteristics of the domain-Science. It will further stress the importance of orientation towards the future.

The course leading to the Degree of M. Sc. in Science Education is a full-time programme. It is designed especially for the science teachers, educationists and those who could contribute to the development of science education in Sri Lanka. The programme consists of two semesters of coursework, which include the professional general component of **Science Education**, and a special component which could be one of the four subject areas - **Biology Education, Chemistry Education, Mathematics Education** and **Physics Education**. In addition, practicals, a research project and a seminar in the special component are also included in the programme.

### **2. AIMS AND OBJECTIVES OF THE PROGRAMME**

The programme is designed to provide students an opportunity to develop their teaching competency, to explore disciplines providing a theoretical framework for professional work and to extend individual interests, skills, talents, and career opportunities. The special component provides guidance and common experiences, which are flexible enough to meet the individual student's needs and career goals.

The students who follow the programme will be able to:

- \* develop competencies to "Learn to Learn" along with the other competencies
- \* develop concern for the betterment of oneself and of others
- \* engage in scientific activities deriving joy and satisfaction
- \* inculcate a "Habit of Mind" continuously to be sensitive, alert and curious
- \* develop intellectual attitudes such as open mindedness, whole heartedness and social responsibility
- \* develop personal and professional confidence of "Knowing about Knowing" to meet the challenges in the 21st century.

### **3. PROGRAMME ELIGIBILITY**

The candidates possessing the following educational and professional qualifications are eligible to apply

for the Master of Science programme in Science Education:

- I. (a) Bachelor's Degree in Science (B.Sc.) or  
(b) Bachelor's Degree in Education (B.Ed.) with a strong science background acceptable to the Postgraduate Institute of Science**
- and
- II. (a) Postgraduate Diploma in Education or  
(b) Any other equivalent qualifications/experience acceptable to the Postgraduate Institute of Science**

*Candidates who meet eligibility requirements and successful at the selection test (aptitude, English and subject component) will be called for an interview.* Employed candidates who are eligible for admission should produce evidence of leave granted to follow the programme and a letter of release from the relevant Heads of the Department/Institution.

#### 4. PROGRAMME FEE

	M.Sc. programme fee
Local candidates	Rs. 60,000/-
SAARC countries	US\$ 2,000/-
Other countries	US\$ 4,000/-

Programme fee shall be paid in two instalments (*50% at registration and the balance 50% within six months from registration*). 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.

#### 5. THE PROGRAMME STRUCTURE AND DURATION

This is a full-time programme consisting of coursework and a research project. Coursework will be conducted over a period of two semesters, each of 15 weeks (*during weekends and/or weekdays*). The entire programme duration will be about 15-18 months inclusive of a 3-6 month period for the research project. Satisfactory completion of a minimum of 24 credits of coursework (with a GPA of not less than 3.00) is required for the programme in addition to the six credits allocated for the full-time research project (*If the student obtains a GPA in the range 2.75 to 2.99, then he/she is eligible for the Diploma in Science Education but not for the M.Sc. Degree*). Continuous attendance is compulsory **throughout the programme of study**. After successful completion of the research project, the student is eligible for the award of the M.Sc. Degree. Based on the **overall** performance of students, PGIS may upgrade the registration of such students to M.Phil. or Ph.D. programmes.

##### Programme Summary

The programme of study consists of 225 lecture hours and 15 practical hours (15.5 credits) in the general component and 105 lecture hours (7 credits) and 45 practical hours (1.5 credits) in the special component. Credit value (6 credits) of the 3 - 6 month research project will not be counted in computing GPA.

	Lecture hrs.	Practical hrs.	No. of Credits
General Component (Science Education)			
Coursework	<b>225</b>	<b>15</b>	<b>15.5</b>
Special Component (Biology/Chemistry/Mathematics/Physics Education)			

Coursework	105	45	8.5
Research project (3 months)			6.0 *
<b>Total</b>			<b>24.0</b>

\* These credits will not be counted in computing GPA

### General Component - Science Education

Course Code	Course	Lecture hrs.	Practical hrs.	No. of Credits
SE 501	Science in the Past, Present and Future *	15	-	1
SE 502	Science Teaching and Learning *	45	-	3
SE 503	Qualitative Research Methods in Science Education **	45	-	3
SE 504	Quantitative Research Methods in Science Education **	30	-	2
SE 505	Science Curriculum	30	-	2
SE 506	Science and Society	30	-	2
SE 507	Science and Information Technology *	15	15	1.5
SE 508	Measurement and Evaluation	30	-	2
SE 509	Philosophical Foundations of Education	15	-	1
SE 510	Psychological Foundations of Education	15	-	1
SE 511	Educational Management	15	-	1
SE 512	Action Research	15	-	1
SE 513	Energy and Environment	15	-	1
SE 514	School, university and industry relationships	15	-	1

\* Compulsory courses

\*\* One of the courses in Research Methodology (SE 503 or SE 504) is compulsory

In addition to the compulsory courses each student must follow optional courses to meet the requirement of 15.5 credits.

### Special Component

The students are expected to select **one** of the following special subjects:

- (i) **Biology Education**
- (ii) **Chemistry Education**
- (iii) **Mathematics Education**
- (iv) **Physics Education**

All the special subjects have a theory component of 105 lecture hours (7 credits: compulsory 4 credits and optional 3 credits), a practical component of 45 practical hours (1.5 credits), a three month research project (6 credits).

### Research Project

Every student should undertake a research project on a topic related to teaching/learning of the special subject. The students may seek guidance from their supervisors at the beginning of the academic year. The results of the project should be presented at a seminar and submitted in the form of a written report.

### SPECIAL COMPONENT - MATHEMATICS EDUCATION

Course Code	Course	Lecture hrs.	Practical hrs.	No. of Credits
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SE 546	Mathematics Education in Sri Lanka*	15	-	1
SE 547	Methods of Teaching Mathematics*	15	-	1
SE 548	Fundamental Concepts in Mathematics*	15	-	1
SE 549	Laboratory & Field Work*	-	45	1.5
SE 550	History of Mathematics*	15	-	1
SE 551	Complex-variable Theory	15	-	1
SE 552	Mathematical Modelling	15	-	1
SE 553	Metric Spaces and their Applications	15	-	1
SE 554	Linear Algebra	15	-	1
SE 555	Measure Theory	15	-	1
SE 556	Differential Equations	15	-	1
SE 557	Computer Mathematics	15	-	1
SE 558	Probability and Statistics	15	-	1
SE 559	Numerical Methods	15	-	1
SE 599	Research Project (3 months) *			6

\* *Compulsory courses*

Masters students are required to select any **three** optional courses from SE 551 - SE559.

## 6. PROGRAMME CONTENTS

### *MATHEMATICS EDUCATION*

#### **SE 546: Mathematics Education in Sri Lanka** (15 hrs; 1 credit)

Role of mathematics in everyday life, Teaching mathematics in schools, teacher-training colleges, technical colleges and universities, Critical evaluation of the mathematics syllabi of the G.C.E. (O/L), G.C.E. (A/L) and the first year (G.S.Q.) levels at universities, Bridging the gap of mathematics knowledge between different levels of mathematics teaching as mentioned above, Assessment and evaluation in mathematics, Career opportunities for mathematics graduates, Use of mathematical skills in other disciplines, Postgraduate studies in mathematics, Research and frontier developments in mathematics education.

#### **SE 547: Methods of Teaching Mathematics** (15 hrs; 1 credit)

Student-centered method, Teaching through problem solving, group discussions and presentations, Teaching through home-work problems, quizzes and traditional examinations, observations and understanding of nature related to mathematical theories, Model - building in mathematics, Mathematics clubs and quiz-competitions, Computer assisted learning and software packages, Audio-visual aids, Use of library facilities, Writing course-texts, Identification of mathematical problems in the industry.

#### **SE 548: Fundamental Concepts in Mathematics** (15 hrs; 1 credits)

Mathematical logic, Baby set theory, ZF+C Model, Construction of the real number system via Dedekind's cuts, Topics in Geometry, Algebraic structures (groups, rings, modules, fields, vector-spaces), Topology of  $\mathbb{R}^n$ , Transfinite numbers, Rigid-body dynamics, Validity of Newtonian mechanics, Four-vectors and Tensorial geometry.

#### **SE 549: Laboratory and Field Work** (45 hrs; 1.5 credit)

Designing and preparation of simple instruments and models related to G.C.E. (A/L) mathematics teaching, Data collecting and methods of representation, Identification of problems in teaching mathematics at school levels, Usage of software packages, Computer-aided teaching.

#### **SE 550: History of Mathematics** (15 hrs; 1 credit)

Origin of numbers, Role of numbers in the society, Euclidean geometry with original proofs, Cubic and quartic equations, historical approach to calculus, historic period from the eighteenth century covering the work of Brook Taylor, Colin Maclaurin, J.D'alembert, Augustine-Louis



Cauchy, E.F. Gauss, J. Jacobi, Riemann, Lebesgue, Karl Weierstrass, J.W.K. Dedekind, George Cantor and Albert Einstein.

**The following optional courses (SE 551 - 559) are designed to stimulate and motivate Masters students to the excitement of the subject and to enhance their career opportunities.**

**SE 551: Complex-Variable Theory** (15 hrs; 1 credit)

Geometry of complex numbers, Riemann's sphere, Cauchy's Theorems (four), Winding number and homotopy, Rouché's theorem and its applications.

**SE 552: Mathematical Modeling** (15 hrs; 1 credit)

Dimensional analysis, Averaging (mean, median, mode), Curve fitting, Model-testing, Rational models, Optimization via calculus Optimization via linear programming, Income determination models and models related to banking sector.

**SE 553: Metric Spaces and their Applications** (15 hrs; 1 credit)

Distance functions, Diameter of a set, Open and Closed sets, Complete metric spaces, Fixed point theorems and their applications to differential and integral equations.

**SE 554: Linear Algebra** (15 hrs; 1 credit)

Vector spaces and linear transformations, Characteristic values, Functions of matrices, Stochastic matrices, Non-homogeneous linear systems; mechanical systems; Biological systems, Inner-product spaces, Linear functionals and dual spaces.

**SE 555: Measure Theory** (15 hrs; 1 credit)

Measurable sets and Lebesgue measure, Measurable functions, The Lebesgue integrals, Differentiation and integration,  $L_p$  - spaces, Probability measures and Random-variables, Stochastic independence.

**SE 556: Differential Equations** (15 hrs; 1 credit)

ODE : Second order differential equations and their practical importance, Autonomous systems, Limit cycles, Non-autonomous systems, Perturbation, theorems, Stability.

PDE :Eigenvalue problems, Hamilton-Jacobi equation, Finite-difference approximations and numerical methods.

**SE 557: Computer Mathematics** (15 hrs; 1 credit)

Binary number system, Computer codes, Algorithms, Flowcharts, Boolean algebra, Combinational analysis, Graphs and multigraphs, Finite state machines, Strings, Finite automata theory.

**SE 558: Probability and Statistics** (15hrs; 1 credit)

Probability spaces, Bayes' Theorem, Random variables, Distribution functions, Regression, Limit theorems, Sampling, Estimations, Testing Hypotheses.

**SE 559: Numerical Methods** (15hrs; 1 credit)

Solving Non linear equations: iteration method, Newton Raphson method, secant method, convergence concept.

Solving simultaneous equations: Gauss elimination method, iterative methods, Jacobi & Gauss sequential method, Diagonal dominant Interpolation.

Approximations: Taylor method, Least square method.

Integration: Solving Differential equations, forward difference method, Euler & Runge Kutta method.

**SE 599: Research Project** (3 – 6 months, 6 credits)

Each student is required to carry out an independent research project on a suitable topic in Mathematics Education under the guidance of a supervisor and write a project report.

## 7. PROGRAMME EVALUATION

Evaluation of students' performance will be on the course evaluation system stipulated by the Postgraduate Institute of Science.

## 8. TEACHING PANEL

### General component -Science Education

- Dr. R. M. W. Amaradasa, Deputy Director, National Science Foundation  
*B.Sc. (Perad.), Ph.D. (Wollongong)*
- Mr. K. R. A. Bandara, Deputy Director, Dept. of Meteorology, Bauddhaloka Mw., Colombo 07  
*B.Sc. (Perad.), M.Sc. in Meteorology (Reading), M.Phil. (Col.)*
- Prof. K. Dahanayake, Dept. of Geology, University of Peradeniya  
*B.Sc. (Cey.), Ph.D. (Nancy)*
- Dr. H. A. Dharmagunawardena, Dept. of Geology, University of Peradeniya  
*B.Sc. (Perad.), M. Phil. (Perad.), Ph.D.*
- Prof. R. D. Gunaratne, Dept. of Philosophy & Psychology, University of Peradeniya  
*B.A. (Cey.), M.A. (Calif.), Ph.D. (Camb.)*
- Dr. S. Karunaratne, Secretary/Board of Study - Sc.Ed., Science Education Unit, University of Peradeniya  
*B.Sc. (Cey.), Dip. in Ed. (Perad.), M.Sc. Agric. (Perad.), M.Ed. in Sc.Ed. (Bristol), Ph.D. in Sc.Ed. (Michigan State)*
- Mr. R. P. Liyanage, Retired Professor and Head, Dept. of Education, Univ. of Peradeniya  
91, Dharshanapura, Kundasale *B.A. (Cey.), Dip.in Ed.(Cey.), M.A. (Cey.)*
- Dr. K. Liyanage, Faculty of Engineering, University of Peradeniya  
*B.Sc. Eng. (Perad.), M. Eng., Ph.D. (Tokyo)*
- Dr. D. D. Mallikarachchi, Director/External Examinations, Faculty of Arts, University of Peradeniya  
*B.A., M.A. (Cey.), Ph.D.*
- Mr. R. S. Medagama, Director General/Educational Reforms, Ministry of Education  
*B.A., Dip. in Ed. (Cey.), Master of Professional Studies (University of Philippines), M.Sc. (Sheffield)*
- Prof. Lal Perera (Director/NEREC, Faculty of Education, University of Colombo)  
*B.A. (Cey.), Dip.in Ed. (Cey.), M.A. (Cey), Ph.D. (Moscow)*
- Dr. K. K. C. K. Perera, Dept. of Mechanical Engineering, University of Moratuwa  
*B.Sc. (Moratuwa), M.Sc. (Calif.), Ph.D. (Calif.)*
- Dr. A. Senaratne, Department of Geology, University of Peradeniya  
*B.Sc. (Perad.), PgDip., M.Sc. (London), Ph. D. (Mainz)*
- Dr. N. P. Wijayananda, Director/Geological Bureau  
*B.Sc. (Cey.), Ph. D. (London)*

### Mathematics Education

- Dr. W B Daundasekera, Dept. of Mathematics, University of Peradeniya  
*B.Sc. (Perad.), M.A. (Alabama), Ph.D. (Alabama)*
- Mr. J P D Dharmadasa, Dept. of Mathematics, University of Peradeniya  
*B.Sc. (Cey.), M.Phil. (London)*
- Prof. U N B Dissanayake, Dept. of Mathematics, University of Peradeniya  
*B.Sc. (Cey.), M.Sc. (Alberta), Ph.D. (Alberta)*
- Dr. C J Jayawardene, Department of Mathematics  
*B.Sc. (Col.) M.Sc. (Ohio), Ph.D. (Memphis)*
- Dr. M U Mampitiya, Dept. of Mathematics  
*B.Sc. (Kelaniya), Ph.D. (Ottawa)*
- Dr. A A I Perera, Dept. of Mathematics, University of Peradeniya  
*B.Sc. (Perad.), M.Sc. (Oslo), Ph.D. (Melbourne)*

Dr. A A S Perera, Dept. of Mathematics, University of Peradeniya  
*B.Sc. (Perad.), Ph.D. (SUNY/Albany)*

Dr. S M N A Senanayake, Dept. of Computer Science & Statistics, Univ. of Peradeniya  
*M.Sc. Eng. (Havana), Ph.D. (Linz.)*

Mrs. K M S Senanayake, Dept. of Computer Science & Statistics, Univ. of Peradeniya  
*M.Sc. Eng. (Havana)*

Prof. H H G Seneviratne, Dept. of Mathematics, University of Peradeniya  
*B.Sc. (Cey), Ph.D. (London)*

Dr. K S Walgama, Dept. of Engineering Mathematics, University of Peradeniya  
*B.Sc. Eng. (Moratuwa), M.Eng. (Netherlands), M.Sc. (Alberta), Ph.D. (Lulea)*

Dr. P. Wijekoon, Dept. of Computer Science & Statistics, University of Peradeniya  
*B.Sc. (Kel), Ph.D. (Dortmund)*

### **PRINCIPAL COORDINATOR**

Dr. S. Karunaratne  
Science Education Unit  
Faculty of Science  
University of Peradeniya

### **SUBJECT COORDINATORS**

***Biology*** - Dr. P. Saravanakumar  
Department of Botany  
Faculty of Science  
University of Peradeniya

***Chemistry*** - Dr. C. Vithana  
Department of Chemistry  
Faculty of Science  
University of Peradeniya

***Mathematics*** - Prof. U. N. B. Dissanayake  
Department of Mathematics  
Faculty of Science  
University of Peradeniya

***Physics*** - Dr. V. Seneviratne  
Department of Physics  
Faculty of Science  
University of Peradeniya