

6. TOTAL PROGRAM FEE

Registration fee	Rs. 2,500
Course fee (Part 1)	Rs. 75,000
Course fee (Part 2)	Rs. 30,000
Library fees	Rs. 2,000
Examination fee	Rs. 10,000
Total	Rs. 119,500

The course fee can be paid in three instalments.

The first installment of the course fee (Rs. 40,000), the registration fee, the library fee and the examination fee must be paid upon registration. The second instalment of the course fee (Rs. 35,000) may be paid at the beginning of the second semester. The third instalment (Rs. 30,000) must be paid at the beginning of part II.

7. APPLICATION PROCEDURE

Application forms and course brochure can be obtained in person or by sending a self addressed stamped envelope to the Deputy Registrar, Academic and Publications Branch, University of Colombo, College House, Colombo 03. Application forms may also be obtained from the Department website or by sending an email to program coordinators.

Duly completed application form together with a paying-in-voucher for Rs. 500/= paid to the University of Colombo, Account No. 086-100121189662 (*this fee also can be paid to the shroff counter, University of Colombo before 3.00 p.m. on week days*) should be sent to the Senior Assistant Registrar, Faculty of Science, University of Colombo, Colombo 03, **on or before 15th November 2008.**

8. FURTHER INFORMATION

Further information regarding the M.Sc. Program can be obtained by contacting the program coordinator or from the Department of Physics web page <http://www.cmb.ac.lk/physics>.

Contact details of the program coordinator are as follows:

Prof. Upul Sonnadara,
Department of Physics,
University of Colombo,
Colombo 03.
Telephone: 011 2584777
Email: upul@phys.cmb.ac.lk

Centre for Instrument Development

The Centre for Instrument Development (CID) at the Department of Physics was established primarily to acquire modern technologies available in the world and make use of them to fulfil industrial and societal needs in the country. Important ingredients in the programme are the stimulation and development of new collaborative projects between the university and industry, modernization of existing technologies, and human resource development through the dissemination of modern technological know-how to masses.

Some of the courses conducted by CID:

- *Microcontroller programming and its applications*
- *Certificate course in Electronics and automation technology (Intended for school leavers)*
- *Workshop in free open source software*

Master of Science Degree and Postgraduate Diploma in Applied Electronics 2008



Centre for Instrument Development
Department of Physics
University of Colombo

1. INTRODUCTION

In the modern world, electronics is considered a very important field due to its applications in almost every aspect of life. For example, electronic instrumentation is used in medical diagnostic and therapeutic systems, industrial control systems, communication systems, office equipment such as photocopiers and in domestic appliances such as washing machines. Due to such wide applications, the country now needs a large number of well trained and skilled personnel for the design and development, operation, and maintenance of modern electronic equipment.

Being one of the best academic departments in Sri Lanka with resources and expert knowledge to offer postgraduate training in Electronics, Department of Physics, University of Colombo has initiated this program with an objective of contributing to the national development.

2. PROGRAM STRUCTURE

The M.Sc. program will consist of two parts (Part I and Part II) and the contents will include lecture courses, guided reading, practical work and a optional research project. The duration of the complete program will be 24 months.

Students who maintain a GPA of not less than 2.50 by the end of part I will be allowed to proceed to part II. Those who are unable to progress to part II may be awarded the postgraduate diploma based on their performance in part I. The M.Sc. degree and the postgraduate diploma will be awarded according to the general guidelines of the Faculty of Science.

3. COURSE CONTENTS

Part I

1. **MEL 5101** Analogue and Digital ICs, and their Applications (30 hours, 2 credits)
2. **MEL 5502** Circuit Analysis, Simulations and Modelling (30 hours, 2 credits)
3. **MEL 5110** Electronics Laboratory (60 hours, 2 credits)
4. **MEL 5503** Sensors, Transducers and Data Acquisition Techniques (30 hours, 2 credits)
5. **MEL 5204** Microcontrollers and Programmable Logic Devices (30 hours, 2 credits)
6. **MEL 5210** Automation Laboratory (60 hours, 2 credits)
7. **MEL 5505** Data Communication Techniques and Digital Signal Processing (30 hours, 2 credit)
8. **MEL 5506** Engineering Mathematics and Statistics (30 hours, 2 credits)
9. **MEL 5305** Guided Reading (60 hours, 2 credits)
10. **MEL 5310** Computational and Simulation Laboratory (60 hours, 2 credits)

Part II

11. **MEL 5401** Project Management (15 hours, 1 credit)
12. **MEL 5402** Electronic Instrumentation Laboratory (30 hours, 1 credit)

Optional: 8 Credits

13. **MEL 5403** Automation and Monitoring (4 credits)
14. **MEL 5404** Industrial Electronic Processes (4 credits)
15. **MEL 5410** Research project (8 credits)

4. ELLIGIBILITY AND ADMISSION CRITERIA

The required qualification for registration will be a B.Sc. degree with Physics or Electronics as a subject or any other equivalent qualification acceptable to the Senate of the University of Colombo.

5. EXAMINATION STRUCTURE

The performance of students in theory and practical course modules under part I will be evaluated through 10 papers. Evaluations in the theory courses may include in-class assignments in addition to the written examinations. The written examinations will be held at the end of each semester. Each written paper will be of two hour duration. In the practical courses, the assessments will be carried out on a continuous basis. The students will be evaluated according to their performance in the laboratory and the quality of the written reports. Those who fail the examinations will be allowed to repeat each paper once, at the next available opportunity.

In the guided reading course, each student will be required to gain a thorough knowledge on a given topic through a literature survey, under the guidance of a supervisor appointed by the department. The assessment will be based on the display of the knowledge acquired, through written reports and/or oral presentations.

In part II, students are initially required to take two course modules. Once the two course modules are completed, each student will be given a choice of selecting two more course modules or a research project which will be conducted under the guidance of a supervisor appointed by the department. At the completion of the two course modules/research project, students will be required to submit a technical report/dissertation. The evaluation of the two course modules/research project, which will be based on the technical report/dissertation and viva-voce examinations, will be carried out according to the general guidelines of the faculty.